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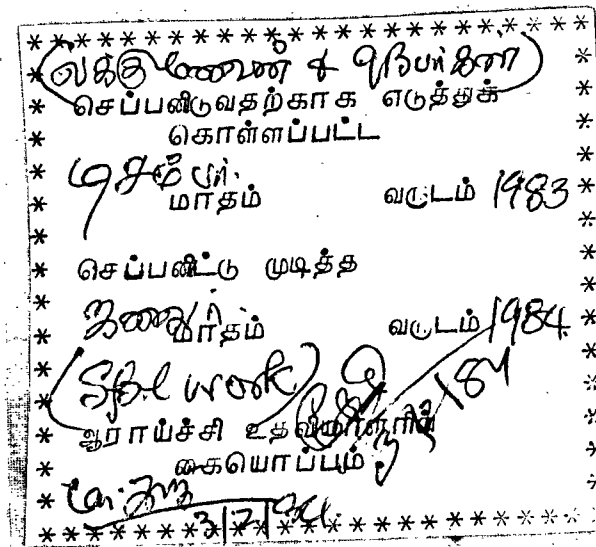
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CHARLES ALFRED ELLIOTT, C.S.I.,

BENGAL CIVIL SERVICE



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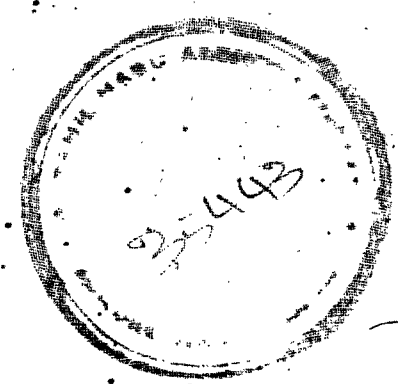
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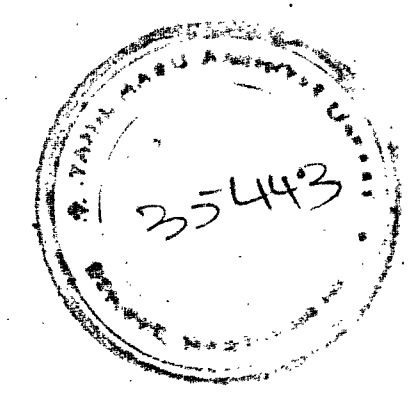
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MINUTE.

MR. C. A. ELLIOTT'S Report upon the Mysore Famine will be laid before my honourable colleagues in the Government of India; it will be forwarded to Her Majesty's Government; and it will be published as soon as possible. When I directed the preparation of this report, there was ground for fearing that parts of Northern India might be afflicted by severe famine in 1878-79; and I was desirous that a history of the difficulties, failures, and successes in the Mysore Famine should be in hands of authorities who might have to deal with a similar calamity in Upper India. The rainy season of 1878 has, however, ended much more favourably than it began. I hope that in no part of India will famine have to be combated in the year 1879. But I believe the present history of the Mysore Famine will be of the greatest use to Indian authorities who may hereafter have to contend against a similar calamity.

2. The country of Mysore contained, at the census of 1871, a population of 5,055,000, nine tenths of whom live by the land. In ordinary years it produces about 25 per cent. more food than its population can consume; its land is held by a body of well-to-do peasant proprietors, who in average years have a comfortable surplus income; 15 per cent. of its cultivated land is irrigated, mainly from tanks; it is connected with the coast by a railway, and it is traversed by a net-work of fairly good roads; it had prospered for many years, although either the early or the latter rainfall was occasionally scanty over a part of the province. Mysore had not been visited by famine for fifty years. It seemed, therefore, as if the province and the people were in as good condition for withstanding a famine as any Indian province or population can ever be. In one respect, however, Mysore was at a disadvantage; it possessed only 60 miles of railway, passing through a corner of one district and into the heart of another; six districts out of the eight, into which the province is divided, had thus no railway communications at all. The beginning of the recent calamity was the partial failure of the rains in 1875; the rainfall was from one-third to two-thirds of the average; much of the food-crop was lost; but the stocks of food in Mysore have always been large; and this failure caused only temporary or occasional distress, for the price of food did not rise to double the ordinary rates. In the year 1876 the rainfall again was very short; barely a third of the ordinary harvest was reaped; matters were aggravated by the fact that crops had failed in the adjacent districts of Madras and Bombay; and by the middle of December 1876 famine had begun. In the months of April and May 1877, the usual spring showers came, and hope revived. But the early rains of 1877 also failed; famine increased in the land; and it was not until the bountiful latter rains of September and October 1877 that the

pressure of famine began to abate. During the eight months of extreme famine, no crops were reaped; the price of food ranged from three to six times the ordinary rates; and for the common people there were no means of earning wages outside the relief-works. Even in 1877-78, though some relief was felt, the yield of the harvest was less than half the food-crop of an ordinary year. From November 1877 till the present time of writing, the price of food has ranged at nearly three times the ordinary rates. Thus, during the past three years, the people of Mysore have suffered from failure of harvest and famine prices, and at one time a water-famine was apprehended: but from that additional calamity the province has been spared.

3. Mr. Elliott's report shews how famine affected the country and the people of Mysore, and how the British Government of Mysore attempted to mitigate its evils. Early in the autumn of 1876, when the first year of drought was nearly over, symptoms of the coming disaster were reported to the Local Government. The poorer classes of the population began to lose heart, and multitudes moved off towards the coffee districts in the western hills, where the people of Mysore had been wont to find employment and wages for many years past. In times of famine, it has been the custom of the Indian Government to give employment and wages on public works to the destitute poor, to afford gratuitous relief to those who are unable to labour, and to make small loans to petty landholders, so as to enable them to tide over the hardest time. In one exceptional famine the Government had imported food from a distance to feed the people of the stricken province. In September 1876 relief-works were opened in parts of Mysore. In October pressure on the people increased; more relief-works were opened. The Government, after reviewing the situation and prospects, decided that private enterprise must be left to import food for the replenishment of the exhausted food-stocks, but that the State would open relief-works, would assist in giving gratuitous aid to the helpless, and would postpone its demand for land-rents. These orders unfortunately, as was proved by subsequent events, favoured recourse to small works scattered over the country, and served to support the Chief Commissioner's action in a direction that ultimately led to results not contemplated at the time when they were issued.

4. By the month of December severe famine had declared itself over an area containing about $3\frac{1}{2}$ millions out of the 5 millions which constitute the population of Mysore. The Government adhered to the programme of October, which was good so far as it went. But there was a distinct failure to realise, or even to estimate, what would be the full effect of the famine on the country; and how much would have to be done and spent before favourable harvests in 1877 could give appreciable relief to the people. The objective of the Government efforts being thus undefined and indistinct, no system was devised, and no sufficient organisation was created, for conducting relief operations on the necessary scale. Judging after the event, and by the light of the present report, we can see that, even if imported food and old stocks sufficed to feed the people, there must have been from 500,000 to 800,000 people of the labouring classes who could not procure food at famine prices, unless the Government paid them wages on relief-works, or otherwise provided them with the means of living, until employment in the fields was again available. The Mysore Government and its officers were, at the beginning of the crisis, much

swayed by a desire to restrict expenditure as far as possible,—a sentiment which in a poor country like India is always praiseworthy, and which, in the present case, derived additional weight from the desire to transfer the province of Mysore to its Native Prince with uncrippled resources.

5. The absence of any careful forecast of the troubles that were coming upon Mysore caused the Government to attempt to meet the difficulty with the same staff and the same organisation that sufficed for ordinary times. In India, operations for the relief of famine in rural tracts have to be begun and carried on, down to the minutest detail, by the Government and its agents. The labour involved in such an undertaking is enormous, and the ordinary staff of the Mysore province was, without special aid and special supervision, quite unable to meet the requirements of the occasion. One most serious consequence was that the Government and its superior officers remained to some extent in ignorance of the condition of the country and the people, and misunderstood some of the phenomena that were reported. For instance, when it was reported that people would not come to the relief-works in a particular district, the Government did not learn until it was too late that mismanagement of the relief-works had caused the famine-stricken people either to wander off and die, or to go home and starve. An inadequate organisation and an inefficient system were unfortunately prolonged by that insufficiency of information which was their natural result. The situation required that the whole power of the Government in all departments throughout the province, aided by a largely increased organisation, should be directed to the relief of famine, on a system pre-arranged down to details, but with sufficient scope for personal discretion. Had this been done in December 1876, as it afterwards was done in September 1877, the facts of the Mysore Famine would have been earlier ascertained, and the necessary measures of relief could have been taken from the first. More money would indeed have been spent; but disorganisation and waste would have been avoided; while many thousands of lives would have been saved.

6. Chapter III of Mr. Elliott's report tells the history of the famine from the autumn of 1876 to April 1877. From December till March matters grew worse; 500 tons of food (enough to support 900,000 people) were imported daily by railway: yet the price of food ranged, during those months, at from 13 to 15 Rs a rupee; that is to say, at four to five times the ordinary rates. When Sir Richard Temple visited Mysore, on behalf of the Supreme Government, and conferred with the Bangalore authorities, the real condition and prospects of the people had not been gauged by the Local Government. Statistics of the relief operations, which were then of old date and which now appear to have been incorrect, were placed before him; Sir Richard Temple advised in accordance with the information furnished him; and the chief change of system and organisation which he then advocated was the immediate institution of a village-to-village, house-to-house relief, throughout the famine districts, in order to ascertain the real condition of the people, and prevent them dying at their houses. Orders were issued by the Local Government for acting on this suggestion; but, partly in consequence of absence of detailed instructions, and mainly because no sufficient staff for accomplishing the task was sanctioned, the village enquiry was extremely imperfect and village relief was not actually attempted.

7. During the months of December to March the numbers of people relieved were—

	On relief and other works.	By gratuitous relief.	Total.
January	31,012	6,498	37,510
February	63,348	22,462	85,810
March	69,564	23,295	92,859

But the relief given was not sufficient: the people took to wandering aimlessly from their homes where they had no food; the death-rate increased terribly; and deaths from starvation occurred. No change in the system had been made up to the month of April, when the usual spring showers fell; and it was hoped that the end of the famine had come. This hope, for which indeed there was up till the month of June some good ground, may have deterred the Local Government from reforming and strengthening the relief organisation. During the months of April and May, the relief given on public works was materially contracted; while at the same time gratuitous relief was given in the shape of cooked food, at scores of central places in different parts of the province, to rapidly increasing numbers of people. As the month of June 1877 wore on, and as July came, it was apparent that the early rains were going to fail again, and for the third year in succession. Panic and mortality among the people increased. The numbers who received employment on the relief-works continued to decrease; but multitudes thronged the relief-kitchens where food was given to the poor. By the middle of August 1877, the famine was at its worst; the numbers relieved by the Government had been—

	On relief and other works.	By gratuitous relief at the food-kitchens.	Total.
May	69,563	102,399	163,962
June	56,781	110,805	167,586
July	47,609	137,560	185,169
August	49,200	194,083	243,283

Among the poor creatures who were wandering over the country in quest of food, the mortality was very great. During those five months there died at the relief-kitchens tens of thousands to whom help came too late; and in the streets of Bangalore, the chief city of the province, the bodies of those who had died during the night, were picked up morning after morning by the score. Money was by that time being spent on relief at the rate of nearly £100,000 a month; but the organisation had not been strengthened; the expenditure had not been systematised; and the Government officers of Mysore, many of whom worked zealously to relieve the distress, and to make the Government aid go as far as possible, were unable to cope with the gigantic dimensions of the calamity. The concluding pages of Chapter IV of the report shew how and why the relief-works, which in Indian famines are and ought to be the backbone of the relief system, failed to furnish any appreciable aid to the distressed population. I am afraid that the ill-success of the Mysore relief-works must be attributed mainly to mismanagement; and I feel that the Government of India must accept its share in the responsibility for that mismanagement in a province that was under its own control, inasmuch as it did not appreciate in their proper force the facts that underlay the reported results, and did not at an earlier date insist on the application of a sufficient remedy.

8. Before passing from the consideration of the period when the famine was at its height, I would observe that, even at the worst time, private trade poured into Mysore as much grain as the railway could carry, and would have sent much more if additional means of carriage had been available. At the same time supplies of food were carried by traders up the steep ascents of the Western Ghât mountains from the Malabar coast districts into Mysore. Food was dear, to a point beyond the memory of living men; but still food was to be had by those who could pay for it. And whatever may have been the shortcomings of the relief organisation, the present history of the Mysore Famine does not shake the opinion of the Government of India,—acted upon throughout 1877,—that it is best to leave private traders to import food into a famine-stricken country while it has means of communication with distant markets.

9. Chapter V of Mr. Elliott's report gives an account of the arrangements made to carry out an improved relief system on the lines laid down by the Government of India during the visit of myself and my colleague Sir Alexander Arbuthnot to Southern India in August and September 1877. In measuring the success of those operations, it must be remembered that, at the time of their commencement, there was a most favourable change in the weather; and that, after September 1877, the gloom of that great calamity which up till September 1878 continued to overshadow Mysore, was never without some gleams of hope; gleams which, with one dark interval in February 1878, gradually brightened as the season advanced.

The first step taken in September 1877 was to reinforce the Mysore staff with trained civil officers and volunteers, officers from Her Majesty's army, whose duty was to direct relief operations; with Engineers to manage relief-works and organise famine labour; with medical officers to arrange famine hospitals and tend the sick. The next step was to gather all the threads of famine administration into one hand, and to lay down detailed rules for the guidance of famine officers of all grades. And the last step, which followed close upon the others, was to effect a thorough and intelligent inspection of all the famine operations throughout the country. It is now only too clear that all this ought to have been done in December 1876. The report tells of the many difficulties which were met in the management of the relief-works; in getting the people to come to these works; in employing persons in different stages of weakness, so as not to overtask them, whilst giving them some incentive to live and work; in clearing the relief-kitchens and carrying the inmates, with their consent, to the works if they were fit for labour, or to their homes if they were past work; in establishing and working a system whereby house-ridden folk were relieved at their homes; in preventing speculation; in securing for the province a moderate outturn of useful work in exchange for relief given to the able-bodied; and lastly, in helping the ryots, to recover their position and independence, by a judicious distribution of the alms sent from Great Britain, Ireland, and the British Colonies, for the aid of the famine-stricken people of Southern India. I cannot forbear acknowledging here the munificent liberality shewn by the people of England and her colonies in sending so great a sum of money, within a few months, to aid their Indian fellow-subjects. I believe that any of the generous contributors to the famine fund, who may read paragraphs 107 to 111 of this chapter of the Mysore report, will

feel that their charity was judiciously administered, and that it did vast good to an important class of their fellow-subjects.

10. Mr. Elliott shews that the famine has cost the province of Mysore from 800,000 to 1,000,000 lives; that it *must* cost the Mysore treasury at least 1 million sterling, and *may* cost nearly 1½ millions or a full year's revenue; whilst the loss of produce, live-stock, and other property during these three disastrous years cannot have been much less than 9½ millions sterling. I accept, subject to such further light as the Famine Commission may throw on this difficult question, the conclusion that a somewhat larger expenditure on relief, judiciously administered, might have saved a large number of the lives that have been lost, and that such further expenditure should have been incurred in the material interests of the province, irrespective of other considerations. But I cannot but feel that in great famines there must be a limit to the expenditure which is practically possible for the relief of distress. The interests of the country, of the survivors, and of future generations, require that this fact should be recognised. And I fear that, when great famines come, it will not be practically possible to prevent a serious increase to the normal mortality, or so to alleviate all distress as to prevent very extreme suffering to the people. It would be premature for me to draw conclusions for guidance in future famines from Mr. Elliott's report. The Famine Commission will, no doubt, weigh fully the facts recorded therein, and I commend the report to their careful consideration.

I am deeply indebted to Mr. Elliott for his excellent report, which tells truthfully and graphically the story of much human suffering, borne with the patient endurance characteristic of the people of India, and gives a faithful account of the early failure and subsequent success in relieving a great population from the dreadful effects of prolonged famine. I recognise that Mr. Elliott, when reporting on the Mysore Famine, as he was instructed to do so with fearless frankness, has been obliged to reflect upon the conduct of some of the officers who afterwards proved his valued coadjutors. But in so doing, he has, I conceive, discharged the unpleasant duty which lay upon him with much impartiality, and with all possible consideration to the persons concerned, avoiding as far as possible all matter that had not a direct and important bearing on the very painful series of events with the close of which he was deputed to deal, and of which he has become the narrator.

11. The thanks of the Government of India are due to Mr. Elliott for the ability and energy with which he carried out their famine policy in Mysore. Though the province and its people were new to him, he promptly mastered the position; he organised and directed relief operations with a patience and good sense that overcame all difficulties, and with the fullest tenderness for the people in dire calamity. To Major Scott Moncrieff, the Chief Engineer, and to Mr. Wingate, the Famine Secretary, I tender the hearty acknowledgments of the Government for the skill, knowledge, and zeal they brought to bear on the difficult questions connected with the conduct of relief-works and the organisation of gratuitous relief. But these three officers could have done little if they had not received full support and co-operation from Mr. Saunders, the Chief Commissioner, from the Members of the Mysore Commission, and from the many officers who

were lent by other local Governments, and by His Excellency the Commander-in-Chief, for relief-work in Mysore. If there was failure during the early months of the famine, all ranks of the service throughout the province took their share in the relief operations of the later months, when those operations were adequately directed on a proper system. The thanks of the Government are especially due to

Lieutenant-Colonel A. C. Hay,	Commissioner.
Captain E. S. Ludlow,	Deputy Commissioners.
Mr. B. Krishna Iengar, C.S.I.,	
Captain Gordon Cumming,	of the Survey Department.
Mr. Meiklejohn,	
Captain Macintire,	of the Bombay Civil Service.
M. L. C. Ozanne,	
Mr. C. Madaiya,	Assistant Commissioner.
Mr. C. Srinivas Iengar,	Munsiffs.
Mr. Anaji Rao,	
Mr. B. Marri Gangya,	volunteer relief officers of Bangalore.
Mr. Vaidyalingam Modeliar,	
Captain Bowen, R.E.,	Superintending Engineer.
Mr. Penny,	Executive Engineers.
Lieutenant Kensington, R.E.,	

The thanks of the Government of India have already been conveyed to Mr. J. D. Gordon, C.S.I., and the Members of the Bangalore Central Relief Committee; and also to the military officers who volunteered for, and did excellent service in, the campaign against the Mysore Famine.

LYTTON.

The 14th November 1878.

No. 1367* (Famine).

From

C. BERNARD, Esq., C.S.I.,

Officiating Secretary to the Government of India,

To

C. A. ELLIOTT, Esq., C.S.I.,

Secretary to the Famine Commission.

Simla, the 10th May 1878.

SIR,

ON your return from active duty in Mysore, the Viceroy directed you to prepare a history of the Famine in that Province, and of the relief operations undertaken in aid of the distressed population, a task for which His Excellency considered that your position and experience peculiarly qualified you.

2. The Viceroy believes that a detailed history of this Famine, dealing with it from its commencement to its close, and setting forth clearly the actual difficulties contended with, the measures adopted, and the amount of success or failure which attended those measures, will be of great service to the Government of India, and to all authorities who may hereafter have to contend against a similar calamity. But the value of such a history will necessarily depend mainly on the fullness and impartiality with which the question is treated in all its details and bearings, and His Excellency desires me to say that he reckons confidently in your dealing with it, in that spirit of fearless frankness which such a review requires.

3. I am to request that your report may be prepared and passed through the press as rapidly as possible, because the experiences of the Mysore Famine, as portrayed in a full and faithful report, may be of much use if relief operations should have to be undertaken during the coming season in any part of India.

I have the honour to be,

SIR,

Your most obedient Servant,

C. BERNARD,

Officiating Secretary to the Government of India.

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REPORT ON THE FAMINE IN MYSORE.

CHAPTER I.

INTRODUCTION.

1, Geographical description of Mysore—2, System of rainfall and prevalent winds—3, Soils and crops—4, Agriculture; absence of rotation—5, Irrigation—the tank system—6, Produce of irrigated land—7, Agricultural life easy and comfortable—8, Emigration to coffee plantations—9, Ryotwari tenure—10, Assessment in the taluks not yet settled—11, Assessment in the taluks settled by the Settlement Department—12, Prosperity of the ryot—13, Drawback to his prosperity; alienation of landed rights—14, Village officials—15, Precariousness of their tenure—16, Territorial division of the province into eight districts—17, Division of each district into taluks—18, Roads—19, Telegraphs—20, Priests—21, Commerce—22, Course of trade.

THE area of the Province of Mysore is estimated at 27,000 square miles (or about half the size of England and Wales), and the population, according to the census of November 1871, was a little over five million persons, giving an average over the whole area of 186·7 persons to the square mile. In form it is a triangle, the apex of which is the grand mass of the Nilgiri Mountains in the south. From that apex two arms or spines are thrown out, which form the ranges called the Eastern and Western Ghâts, and which enclose between them the elevated and undulating plateau of Mysore. The general height of the plateau in the east is about 3,000 feet above the sea; the central tracts are at a lower level, and the basins of the Cauvery, Hemavati, and Tunga-Bhadra are about 2,000 feet above the sea. Westward of this central portion the country rises rapidly again to the Western Ghâts, the highest peaks of which are over 6,000 feet, and the general average over 4,000; from their watershed they drop precipitously towards the Arabian Sea, which is from 10 to 50 miles west of the boundary of the province. Mysore is thus divided into two tracts of very different character, commonly known as the Maidán and the Malnád. The "Maidán" or level country is the rolling plateau towards the east, comprising about two-thirds of the entire area of the province, cultivated for the most part where the soil is good, yielding pasturage mixed with scrub jungle where it is poor, bare and stony where the rocky ridges stand out. The "Malnád" or hill country is the highland to the west, covered with rich forests of teak and bamboo, and receiving the heavy downpour of the south-west monsoon when it breaks upon the crest of the Ghâts. It is scantily populated, and grows little food-crop except rice, but coffee cultivation is slowly creeping up from the south. In the Wynád and in Coorg, which are the names of the more southern portion of the hilly range called the Western Ghâts, the cultivation of coffee is well established as the main industry, but the only part of the Mysore Province where it prevails extensively is in the Manjarabad taluk of the Hassan District, and a few plantations have lately been formed north of Manjarabad in the Koppa taluk of the Kadur District.

The "Maidán" was the part of Mysore in which the famine of 1876-78 prevailed. The "Malnád" only enters into the subject-matter of the report so far as the inhabitants were affected

by the high prices, and so far as the residents of the plains emigrated into it to seek employment for themselves and pasturage for their cattle.

2. The ordinary rainfall of Mysore is somewhat complicated in its character. The south-west monsoon usually sets in soon after the middle of May, and continues till the end of September, the rainfall being generally heaviest at the beginning and end of this period, and intermittent during the intervening time. Clouds sweep constantly across the sky, dropping their moisture here and there in partial and local showers, but the rain does not usually fall in one continuous and general downpour during July or August. In October the wind changes to the north-east or east, a change which is commonly accompanied by great atmospheric disturbance and heavy storms of thunder, lightning, and rain. As the month goes on, the wind becomes less and less charged with moisture, and showers are rare in November. Throughout the winter months the north-east wind is cold and extremely dry, and is generally considered the cause of the fever which prevails at this season. In March and April it drops, and between the time when it ceases and the south-west wind sets in again, there is usually a succession of thunder-storms and showers, partial and varying in their extent but very beneficial to agriculture. The statement

Month.	Bangalore (Square of Col- nel Puckley), average of 20 years.	Bangalore, average of 8 years, record of Observatory.	Kolar, average of 4 years, gauged by Lieutenant Ken- nington, R.E.
January	0.26	0.103	0.000
February	0.18	0.093	0.263
March	0.65	0.438	0.293
April	1.48	0.980	0.704
May	5.06	5.116	5.577
June	3.21	3.691	2.950
July	3.71	4.358	2.485
August	6.11	6.277	4.471
September	6.33	7.390	7.999
October	5.81	6.290	5.835
November	1.67	1.133	1.689
December	0.81	0.456	0.460
TOTAL	55.28	36.380	32.734

in the margin shews the figures gauged over certain periods of years for each month at Bangalore and in the southern part of Kolar where the Executive Engineer established and carefully superintended a set of rain-gauges. In each column the rainfall is large in May, it is light again in June and July, and heavy in August, September, and October, very little falling after that time; or, in other words, the periods of heavy rainfall are usually coincident with the atmospheric disturbance which accompanies the setting in of the south-west monsoon in May, and with its expiry and the establishment of the north-east monsoon in September and October. The rainfall due to the south-west monsoon is heaviest in the west, and becomes gradually lighter as the clouds drift eastward. That due to the north-east monsoon is on the contrary heaviest in the east, and diminishes towards the west. The range of hills which runs north and south from the Nandidrug and Devaroydrug Ranges to Sawandrug and the Kankanhalli taluk acts often as an obstruction to either of the rain-bearing winds, so that east of this, in the Kolar and Bangalore Districts, there is always less rain gauged in the south-west, and always more in the north-east, monsoon than

DISTRICT.	Average of 39 years, 1837-75. (Figures col- lected by Colonel Puckley.)	Average of 5 years, 1871-75.	Average recorded in the Gazetteer.
Bangalore	55.3	35.0	36.0 (1837-74)
Kolar	...	25.4	29.0 (1868-74)
Tumkur	20.2	27.4	32.0 (1837-74)
Mysore	28.1	24.3	28.9 (1837-74)
Hassan	...	34.4	36.0 (1868-74)
Kadur	...	35.7	30.3 (1869-74)
Shimoga	27.6	38.4	30.0 (1837-74)
Chitaldrug	...	23.5	24.0 (1837-74)

in the districts of Tumkur, Mysore, Hassan, and Kadur. Chitaldrug, the most northerly district, is the least favoured of all, and most akin to the dry districts of the Deccan. The average rainfall of the different districts, as calculated over varying periods of years, is shewn in the margin. How irregular the rainfall usually is in quantity, how uncertain in its time of falling, and how seldom

is that a rainy season approaches the ideal of a ryot's hopes, will be seen from a succession of extracts from the Administration Reports of different years* :—

"1855.—In the Chitaldrug and Nagar Divisions, the season was rather more favourable than in the preceding year. In the Ashtagram Division it was less so, and in Bangalore there was a total failure of the early rains. As, however, there was a fair average fall throughout the country in July, August, September, and October, and as a fourth disastrous season in succession was hardly to be expected, all were sanguine that we were once more to be blessed with an abundant harvest. In this we were doomed to be disappointed; for in November, when a few showers are absolutely necessary for watering the dry crops, there was a total failure of rain."

"1856.—The season commenced auspiciously, and the rains of the south-west monsoon were for the most part steady and regular. There was, however, a partial failure of the north-east monsoon, in consequence of which the dry crops in some taluks of the Ashtagram Division were withered up, and the yield of the rice crops in all the divisions, more particularly in Bangalore, was much less than in the preceding year."

"1857.—The season has been the sixth bad season in succession with which Mysore has been afflicted. In the Ashtagram Division it is true that it was less unfavourable than it had been in the two preceding years, but in the other three divisions it was worse, if possible, than the previous ones. The south-west monsoon came down in scattered showers, and was altogether insufficient and partial. The north-east monsoon was more copious, but still not what it usually is, and altogether insufficient to make up for what had been wanting from the south-west."

"1858.—The south-west monsoon almost totally failed, and gave rise to the apprehension that another bad season was about to follow the five highly unfavourable years which immediately preceded the past; later in the year, however, copious rain fell."

"1859.—On the whole, the past season commenced more favourably than the four seasons immediately preceding, the copious showers of the south-west monsoon giving the promise of an abundant crop of dry grain. But unfortunately the hopes then formed were to a great extent disappointed by a considerable defalcation of the rains of the north-east monsoon, on which the wet cultivation chiefly depends, and which are required to bring the dry grain to maturity."

"1860.—The season was not a good one. It was not quite as bad as some that have preceded it since 1853, but the almost entire failure of the latter rains caused a very serious loss both in the quantity and quality of the crops. In the Malnad taluks even the south-west monsoon did not pour down with its usual abundance, and the consequence has been a failure both in garden produce and rice. In the Chitaldrug Division the rains ceased abruptly at the end of August, and not a single shower fell in that district during September or October, the most critical period of the season for the crops. Two reasons exist for the non-appearance of actual famine in some parts. The first being the habit which prevails in this country of storing the surplus ragi in underground pits, from which it is withdrawn in times of scarcity, as the grain will keep sound and good for forty or fifty years. The second reason was the extraordinarily high prices which all kinds of produce realised."

"1861.—The season was decidedly the best for some years past; and had the latter rains been as copious as those of the early part of the season, the ryots would once again have begun to think that the days of abundant harvests which they knew prior to 1853 were about to return. But the Nagar Division did not fare so well as the others."

"1862.—In Bangalore the season was considered generally favourable. In Kolar, though the rains were irregular, the outturn of the crops was considered superior to that of any harvest for ten years. In Tumkur the season began favourably with showers in May, but owing to the failure of the rains anticipated in June and July, and the prevalence of boisterous winds, some loss was experienced, and the land had in many places to be re-sown. The season throughout the Nagar Division, as compared with that of the

* The following extracts down to that for 1861 are copied from the Mysore Gazetteer.

4 previous year, was generally more favourable, notwithstanding a diminished rainfall, but it varied much in the three districts, and cannot be pronounced to be a good year."

"1863.—The dry cultivation in the Nandidrug Division was extensive, and the ragi crops were generally good, though, consequent on the failure of the latter rains, the prospect of an unusually heavy crop was not realised. The north-east monsoon in November and December completely failed, and the cultivation of wet lands was therefore limited. In Ashtagram the season is reported to have been on the whole very similar to that of the preceding year. The whole wet crop throughout the division was that of a good average year, but the dry crops, except in the taluks bordering on the Malnad, were as a rule unfavourable, and failed from want of rain, or rather from unseasonable weather, partial showers, and sometimes heat, destroying the plants. In Nagar the season generally was unfavourable, the rains being scanty and for the most part unseasonable. The latter rains almost entirely failed."

"1864.—In the Nandidrug Division the season was on the whole a favourable one. After the first showers in April, a small, smooth brown caterpillar made its appearance in a portion of the division, and in a few days ate up every green thing, the grass assuming the appearance of having been burnt up."

"1865.—The almost complete failure of the latter or autumn rains upon which the prospects of a good harvest are largely dependent, had a disastrous effect upon the dry crops, the outturn of which was for the most part very deficient."

"1866.—The immediate cause of the distress was undoubtedly the failure of the early rains of 1866 succeeding upon the scanty harvest obtained in the previous autumn. The effects of the drought, which continued till the month of September, when rain fell copiously, were felt in a greater or less degree in every district, and caused much misery and suffering among the poorer classes."

"1867.—The season has been on the whole favourable for agriculture, notwithstanding a partial failure of the north-east monsoon."

"1869.—The season in the Nagar Division was more or less unfavourable, and the absence of rain in the early part of the year caused the gravest apprehensions among the ryots."

"1870.—The rainfall of the year was fully equal to the ordinary average, and was generally seasonable throughout the province. The harvest was generally a most luxuriant one, and the price of grain of all kinds fell to a point which brought a full supply of food within the means of the poorest classes."

"1871.—The rainfall of the year was about 23½ inches or 6½ inches below the average. There was a deficiency of rain in the early part of the monsoon, in some taluks of the Hassan District, and in other parts, especially on the eastern frontier, causing a failure of the grain and forage crops. The harvest was generally good, except in the taluks where there was a deficient rainfall."

"1872.—The average rainfall was 36¼ inches during the south-west monsoon the rainfall was copious. The season may be said on the whole to have been good."

"1873.—The year was on the whole not favourable for the crops. During June and July there was a almost total failure of rain. In August and until October rain fell in abundance, but the late rain was also deficient."

3. The prevailing soil in Mysore is of a red colour, formed of decomposed gneiss, poor and dry in character when compared with the rich loam of Hindostan Proper, or the black soil of the Deccan. When the crops are off the ground it looks grey, hard, and unproductive: but after it has been tilled under influence of the April showers, it assumes a warm purp

tone; and when the crops on it are green and the undulating landscape is flecked with patches of light and shade from the drifting clouds, it reminds one much of the scenery in Devonshire. The main exception to this red soil is the north part of Chitaldrug, which abuts on the Bellary District of Madras, and consists mostly of black cotton soil (decomposed laterite), and there are tracts of the same black soil in many other parts of the province. In this red soil the crop that is mainly grown where there is no irrigation is ragi (*Eleusine corocana*, or *Cynosurus corocanus*), the favourite food throughout Mysore: it is known in Upper India as mandwa or marwa. Other crops are also cultivated, either in conjunction with ragi, or in inferior lands; but their area is small and the produce is of little account compared with ragi. The best land is devoted to raising this crop: the fields are well tilled and highly manured, as much as ten tons of manure being sometimes placed on an acre. Ragi is a singularly delicate plant to be so completely the staple crop of the country. Sown usually late in June or early in July (though both the sowing time and the maturity are earlier in the western than in the eastern districts), after the heavy rainfall which should usher in the south-west monsoon has soaked the ground, it then requires occasional but light showers; a fall of from half an inch to an inch every ten or fifteen days is what the cultivator likes best; heavy rain during July and August, when it is young, would destroy the plant, and a month's cessation of rain withers it up. When it approaches maturity, it requires the abundant downpour which marks the change of the monsoon to fill the ear, and fine weather to ripen it. It is cut in November and December, but not immediately threshed: the ear clasps the tiny grains so tight that they can hardly be separated from it till the plant has been thoroughly dried, and it is therefore piled in small stacks for a couple of months and then spread out, dried, and trodden with cattle or threshed with sticks in the months of January to March. Along with the ragi a bean called ballar or avaré (*Dolichos lablab*) is sown in lines about six feet apart: this, when the ragi is cut, has room to spread over all the field: it ripens and the pods are picked in January and February. The only other dry crop of any importance is the small bean called colthi or hurali (*Dolichos uniflorus*), which is known by the English as "horse gram," though largely used as a food by the people. It is sown in September generally, for the most part in fields not considered good enough for ragi, and never manured, and ripens in December and January; and it and the "ballar" are threshed or trodden out at once.

4. It follows from this description that as far as the dry cultivation is concerned (that is, about 85 per cent. of the arable area), there is but one crop in the year, and there is no rotation of crops. Ragi is sown year after year in the same field, and colthi in the same field. Colthi cannot be sown if the north-east monsoon fails, and the production of ragi depends on the occurrence of both monsoons and on their downfall being seasonable and suitable. There is little or nothing corresponding to the alternate rotation of rabi and kharif in Northern India. All the cultivators' eggs are in one basket; and if agriculture has been prosperous, it is due to the large surplus of produce above home consumption which remains over in ordinary years, and to the fact that, while the people are thoroughly inured to local and partial failures, there has hitherto been no prolonged or general drought, and no complete and catastrophic disturbance of the normal atmospheric phenomena. Rain may have failed here or been excessive there, but only over limited areas: in a country so near to the sea as Mysore is, the climate has not the same monotonous uniformity which is characteristic of a great continental plain like that of Hindostan.*

* An extract from that acute observer, Dr. Buchanan, bears on this point: "Although almost every year the scarcity of rain, and the partial nature of that which comes, occasions in some part of the country above the Ghâts a greater or less scarcity of grain, yet in the time of peace, famine seldom comes to such a height that many die of absolute want. From those parts of the country that have

30 years, and the ryot who "occupies" it pays that revenue whether he cultivates or not. He can resign it by giving due notice at the proper time, and any one can then apply for it and take it up.

10. In its main outlines, the native system established by Dewan Purnia at the beginning of the century agrees closely with this, and that system is still in force wherever the new settlement has not been introduced. But there are no village maps; the areas of the fields are known traditionally, but are very inaccurate, and no one but the village accountant, here called the "Shanbhog," can tell how and under what number any particular field or plot is recorded in the village papers.

11. The demand fixed in Purnia's time has been unaltered till now, except where the Settlement Department has introduced its new assessment, and that Department has wisely abstained from exacting any considerable increase. A sum which was fair 70 years ago must necessarily be easier now: and thus the province enjoys the inestimable blessing of being on the whole extremely lightly taxed. Dry land pays from a few annas to Rs. 2 an acre, and Re. 1 may be taken as a fair average rate. Wet land pays from Rs. 3 to Rs. 10, and probably Rs. 4 per acre will be the average, except for the land irrigated by the Cauvery channels, where the perennial supply of water increases the value. It may safely be said that the land tax does not exceed one-tenth or one-eighth of the value of the gross produce at ordinary prices.*

12. So far the condition of the ryot is extremely advantageous; and on the whole I have no hesitation in saying that I consider the Mysore ryot to be, or to have been, better off than any class of cultivators in any province of India that I am acquainted with. The evidences of his prosperity were visible in his well-built, roomy tiled house, with its cattle-shed and stack-yard adjoining, in his capacious grain-pits, in his numerous flocks and herds. Had he not been well-to-do, stout-hearted, and self-reliant, and possessed of a beneficial interest in his land, the ryot would not have held out through the first year of failure, and would not have passed through the terrible calamity of the second as little scathed as he has been.

13. There is one drawback to the material well-being of the ryot, which is important enough to deserve mention here. A custom has grown up (not, as far as I could learn, confirmed by any legal authority) under which he possesses a transferable interest in the land he cultivates, and this right of sale and mortgage is being followed by the same baneful results as in other parts of India. The ownership of the land is fast passing out of the hands of those who are directly interested in it. Any one who, in technical language, "tests the jama-bandhi," — that is, who takes the village papers and walks over the fields to compare the actual with the recorded facts, — will learn that this field belongs to a Brahmin at Seringapatam, and that to a revenue official at the headquarters of the district, and the third perhaps to a trader in Bangalore. Not single fields only but large blocks of land, and sometimes whole villages, are alienated in this way; and the actual cultivator, the old owner, remains on the worst and most precarious of tenures, a métayer tenancy-at-will, paying half the crop to the distant proprietor. In this way the glory of the ryotwari system, the union of cultivating and proprietary rights in one person, is departing from it, and a zemindari system is growing up without a traditional basis, without historical justification, and without the careful protection of subordinate rights which the experience of three generations has introduced to remedy the evils inherent in the less simple tenure which prevails in Upper India. Repeated enquiries have shewn that cultivators on this métayer ten-

* I take the average return from dry land at 320 seers of ragi per acre, which at 40 seers per rupee gives Rs. 8 value of grain a Rs. 1 revenue. In wet land I take the average return at 640 seers of rice per acre, which at 16 seers per rupee are worth Rs. 40 revenue is Rs. 4. The straw is worth something besides.

have been far less able to resist the stress of famine than proprietary ryots; and of the lands left untilled in 1877-78, a large proportion belonged to this class.

14. The village officials are the Patel and the Shanbhog; the latter is the village accountant and keeper of the register of landed interests; the former is the most influential of the ryots, the man to whom Government looks to carry out all its orders within the limits of his village. Where the new settlement has been fully introduced, these officials are remunerated by a percentage on the revenue of the village, which appears to be sufficiently liberal; they receive it generally in the form of a reduction in the assessment of their own fields. Under the old native system they were supposed to receive some land free of assessment, and a remuneration called "Aya," consisting of a portion of grain paid to them direct by every ryot: but it appears that much of the free land has been alienated improperly, and there is some uncertainty about the receipt of the "Aya," so that the remuneration of the Patel and Shanbhog in unsettled districts varies extremely and is seldom considerable. Moreover, as soon as the Settlement Department begins its operations, an order is issued stopping the "Aya," and from that time till the assessment is given out (and sometimes for a couple of years after) the Patel receives nothing at all. It unfortunately happened that during the famine time many taluks were passing through this intermediate stage, and their remuneration being gone, it is easy to understand that the Patels were both unwilling and unable to exercise the influence and occupy the position which theoretically belonged to them, and which the Government earnestly desired to utilise.

15. Other causes, too, and causes less easy to remedy, combined to weaken the position of the Patel and to undermine his usefulness. The post is theoretically hereditary in one or two families, and when it becomes vacant the most capable male has to be selected to fill it. To do this well requires from the District Officer close and confidential communication between himself and the people. If the selection is left to native subordinates unchecked, it becomes matter of bargain and of barter. If the Patel is frequently punished or lightly dismissed, the post loses its value and influence. A good Patel is the father of his village, the connecting link to prevent the disintegration of the ryotwari system and the dispersion of the ryots, the man to whom the ryot looks for a loan if he is unable to pay his revenue, and the labourer for an advance of food if employment is slack and his stock has run out. Many Patels have performed their duty in this respect in a signally creditable manner, and their names have been honourably reported on by their district officers. But these duties, which are not too onerous in ordinary years, became an intolerable weight to most men in the time of famine. They were called on to become the agents of Government in all kinds of relief, to prevent any death from starvation, to report every case of emaciation, and to send in the sick and famished to hospitals. The reports of any dereliction in obeying these orders were commonly followed by "fine the Patel," "dismiss the Patel." And all this was coincident with the loss of their own crops and the stoppage of their official remuneration. There is little cause for wonder, therefore, if the Patel receives the order of dismissal with gladness, and if no one can be induced to fill the vacant post.

16. The province is divided into three divisions and eight districts, as follow:—

Divisions.

NANDIDRUG (Head-quarters at Bangalore)

ASHTAGRAM (Head-quarters at Mysore)

NAGAR (Head-quarters at Shimoga)

Districts.

angalore.
olar.
umkur.
ysore.
assan.
adur.
nimoga.
bitaldrug.

To each division there is a Commissioner, to each district a Deputy Commissioner, with a certain number of Assistant Commissioners. The three Commissioners and five of the Deputy Commissioners were at the time the famine began military officers, one Deputy Commissioner was in the Uncovenanted Service, and two were natives of Mysore. One of the native gentlemen retired on pension in October 1877, and his place was taken by a military officer. The ordinary complement of Assistant Commissioners is three to each district, one for general duty, one a Police Assistant, and the third a Judicial Assistant, who is generally kept at head-quarters and has also charge of the Treasury and Jail. The more important districts, Bangalore, Kolar, and Hassan, have two general Assistants, Shimoga three, and Mysore four. Tumkur, on which the heaviest brunt of the famine fell, had only one, and, after the death of Mr. Woodcock from cholera, none. Of these general Assistants, two were officers in the Army, and the rest natives of Mysore or Madras. No European officer has been appointed to the Commission since 1866, except one gentleman of the Uncovenanted Service, the Judicial Assistant of Bangalore, whose appointment dates from 1869. There were also two temporary officers of the Bombay Civil Service, over and above the usual complement of the province; they were lent by the Bombay Government for a time to assist in introducing and explaining the system of village records which prevails in that presidency. The districts are all rather large in size to be supervised by a single Deputy Commissioner; they vary from 2,200 to 4,400 square miles in area, the average being about 3,000. It is the practice to place portions of the districts under the special charge of the general Assistants, who are called sub-divisional officers, and usually conduct all the business of their sub-divisions in subordination to the Deputy Commissioner, but in only two or three cases do these officers reside away from head-quarters. The population of the districts is in no case very large, varying from 500,000 to 900,000; and the land revenue to be collected is usually from 9 to 10 lakhs of rupees. Compared with the general run of districts in India, these figures do not imply a heavy burden of official work: but the distances are considerable, and it needs a good deal of physical activity for an officer to be well acquainted with and frequently to visit all parts of the district. Unfortunately but few of the native Assistant Commissioners are in the habit of riding: the ordinary conveyance of the country is the bullock-coach, and it is in these vehicles that most of them make their tours and carry on the duties of inspection.

17. Every district is divided into taluks, there being generally from 8 to 10 of these sub-divisions in each, with an average of 300 villages apiece. The chief officer in each is called the Amildar, and he is the local Magistrate, the collector of the revenue, and in all administrative matters the right hand of the Deputy Commissioner. He has under him a deputy called the Peshkar, a chief clerk called the Serishtadar, and the usual staff of writers. Each taluk is again sub-divided into eight or ten smaller tracts called hoblis, of from 30 to 40 villages each, over each of which is a Sheikhdar. The Sheikhdar is to the Amildar what the Amildar is to the Deputy Commissioner, but he has no magisterial powers; his duties are mainly the collection of the revenue and the carrying out of general administrative orders. He is an official of inferior calibre, receiving from Rs. 10 to Rs. 20 a month, and hopes in time to be a Peshkar or Serishtadar: some of the young men in this post are useful and active, and when they are not constantly changed, they can acquire considerable local knowledge. The Amildars are natives either of Mysore or of Madras, and are paid according to their grades from Rs. 100 to Rs. 250 a month. According to the local custom, they are neither selected nor even nominated by the Deputy Commissioner, but receive their appointments from the Commissioner or the Chief Commissioner himself. And thus a District Officer may have and frequently has given to him, as his mainstay in executive matters, a person in whom he has no confidence, and of whom he knows nothing, or knows only what is bad. The old class of Amildars were uneducated but men of strong will,

common sense, and much intelligence, who know how to govern and to make themselves obeyed. It is a general complaint that the new men who pass from a school education and a University degree to a clerk's post in a Bangalore office and thence to the office of Amildar are found wanting in practical knowledge and governing power; and it is a phrase indicating bitter scorn in Mysore to call a man a B. A.

18. There is no water communication in Mysore, but it is famous for its good and abundant roads. Of these there is a well-planned and complete net-work connecting together all principal towns and most taluk head-quarters. Some of them are only fair-weather roads, embanked and covered with gravel, which, however, often turns to red mud in the rains; but the chief roads are constructed of broken stone (quartz, granite, or laterite) covered with a layer of gravel and capable of bearing a great deal of heavy traffic. The main lines run from Bangalore westward to Mysore and on to Coorg, and north-westward to Tumkur, and thence dividing, one road goes to Hassan and Shimoga in the west, the other to Chitaldrug and Bellary in the north: two other main arteries run from Bangalore northwards to Cuddapah, and eastward through Kolar to Madras, but the latter has been mostly superseded by the railway. This branch line takes off from Jollarpet on the Madras and Beypore Railway and runs up the Eastern Ghats through the south of the Kolar District to Bangalore, which is thus placed in direct communication with Madras, at a distance of 216 miles. Upon the traffic carried along this single iron thread throughout 1877 hung the lives of a million of souls.

19. The only telegraphic communication that exists in the province is between Bangalore, Mysore, and Coorg. A wire runs from Bangalore through Tumkur to Bellary, but there are no intermediate stations in the province. In the case of a recurrence of such famine as that of 1877, the first thing to do should be to open communication with Tumkur and Chitaldrug.

20. The general run of prices has always been low, and food, being produced in quantities considerably above the local demand, has been cheap. The ordinary price of ragi was from 30 to 40 seers (or 60 to 80 lbs) per rupee, the higher price prevailing in large towns and in the western districts where ragi is less grown. Rice, for which a greater export demand exists, retailed much higher, from 12 to 15 seers (27 to 34 lbs) per rupee. The seer, it should be mentioned, is in Mysore for almost all food-articles a measure of quantity, not of weight; its cubical contents being, according to the Government standard, 74.8 inches. Thus the weight differs according to the specific gravity and the close packing of the article measured. A seer of rice weighs 2½ lbs generally, a seer of ragi about 2 lbs. The result of these low prices was naturally to lower the rate of wages. When a man could live comfortably on 12 annas worth of ragi for a month, he could not expect or receive a high rate of pay. From this cause the Public Works Department were able to get their earth-work done at very low prices, and a cubic yard of earth for an anna became a kind of general standard in the mind—a fact which will be found not without significance in the events recorded later on.

21. The country abounds in active and enterprising traders. In ordinary years, salt, piece-goods, and metals are brought to Bangalore by rail and distributed by country carts, all over the province, ragi, rice, coffee, cocoanuts, and arecanuts being exported in return. The food-supply is usually in excess of the local consumption: every ryot raises more produce than his household requires, and as he was seldom so much in debt as to have mortgaged it beforehand, he usually took it off to the market town to sell at the best advantage. An active habit of trafficking in grain is encouraged also by the frequent recurrence of local scarcities: in almost every year some depleted localities have to supply themselves from neighbouring and more prosperous parts. Nor is this traffic entirely in the hands of a guild or caste; the ryots themselves are constantly in the habit of clubbing together and sending off one or two of their number to buy

grain at any convenient market or fair. The carts are good, with light well-made wheels, and the bullocks are of a famous breed and capable of much exertion; the ordinary load of a cart is more than half a ton, and the ordinary day's march 18 to 20 miles. Thus all things have combined to encourage commerce and to make trade brisk and active. The good effect of this was visible in 1877, when the great net-work of roads groaned under the endless trains of travelling carts, and every grain of ragi and rice seen alike in the largest and the remotest market was either carried from the railway terminus or brought up the Western Ghâts, and distributed throughout the province by the unaided efforts of local enterprise.

22. Under a system of old standing, a record is kept up by the village Accountants and Sheikhdars of the sales which take place at every market, and from this is compiled a statement of the yearly imports and exports of the province. No great reliance can be placed on these statistics, but they are useful as shewing in a general way the course and the amount of trade. According to these figures, the average annual value of the imports during a period of 10 years, 1866-1876, was 189 lakhs of rupees, or £1,890,000, and the average annual value of exports was 128 lakhs, or £1,280,000, taking the rupee at two shillings: in other words, the country produce which remained over above the local consumption was exported at an annual profit of 60 lakhs, or £600,000, a sum equal to about five-sixths of the land revenue of the province. The following table shews the principal heads of merchandise:—

ARTICLE.	AVERAGE OF 1866-76.		1876-77.	
	Imports.	Exports.	Imports.	Exports.
	Rs.	Rs.*	Rs.	Rs.
Arecanut	...	10,76,423	...	8,185
Cocoanut	...	1,41,763	...	35,505
Coffee	...	14,86,151	...	22,03,343
Sugar	...	4,80,333	...	3,98,513
Piece-goods	16,63,018	...	39,39,367	...
Coarse cloth	6,26,521	...	5,58,427	...
Cotton and cotton thread.	7,80,081	...	4,60,232	...
Gold and silver	24,10,381	...	14,30,128	...
Paddy	...	12,11,287	...	15,55,000
Rice	4,88,147	...	93,08,005	...
Wheat	4,60,889	...	21,12,482	...
Ragi	...	9,24,610	73,44,490	...
Other food-grains	8,767	...	38,87,243	...

This table shows forcibly the change in the course of trade effected by the famine. Whereas in ordinary years the export of luxuries, arecanuts, cocoanuts, coffee, and sugar amounted to 32 lakhs, it fell in 1876-77 to 26½ lakhs: the import of cotton and materials for clothing fell from 61 lakhs to 40 lakhs; ragi, which used to be exported to the value of 9 lakhs, was imported to the value of 73 lakhs; and the import of other food-grains rose from 9½ to 153 lakhs. Altogether, 226 lakhs worth, or a little over 2½ millions worth, of food was imported into the province in 1876-77 by reason of the local failure of produce.

CHAPTER II.

HISTORY OF EVENTS PRECEDING THE OUTBREAK OF FAMINE.

1, Records of earlier famines—2, Famines of 1824 and 1833—3, Famine of 1866-67—4, Season of 1874—5, Failure of the rainfall of 1875—6, First alarm given, Chitaldrug, October 1875—7, Report from the Sira taluk of Tumkur and from Kolar, January 1876—8, Colonel Hay's reports on the Mandia, Naga Mangala, Attikupa, and Chanraipatan taluks in Mysore and Hassan—9, The Chief Commissioner's tour in Tumkur and Chitaldrug—10, Resolution of 25th March on the condition and prospects of the country—11, Correctness of Mr. Dalryell's anticipations; state of the country till the autumn of 1876—12, Failure of the rainfall in 1876—13, Establishment of all the conditions necessary to a great famine.

NO record exists of any considerable famine due to drought having visited the province of Mysore before the present time, though there are many references in Buchanan* to the dreadful famines which followed on the devastation committed by the armies in the invasions of Parasram Bhao and of Lord Cornwallis, at the end of the last century:—

"It is when war is joined to scarcity, and interrupts the transportation of grain, that famine produces all its horrors. These were never so severely felt before as during the invasion of Lord Cornwallis, when the country being attacked on all sides and penetrated in every direction by hostile armies, or by defending ones little less destructive, one-half at least of the inhabitants perished of absolute want. I do not mean by this to reflect on the noble leader of the British army; the people, everywhere that it came, seem sensible that he avoided, as much as was practicable, doing them any injury."—I, 390.

Of the country north of Madgiri he says:—

"Ever since the devastation committed by Parasram Bhao and the subsequent famine, it has been nearly waste, and many of the fields are overgrown with young trees."—II, 4.

Speaking of the Naga Mangala taluk:—

"On the approach of the British army, the Sultan laid waste the whole country between this and the capital, and forced the inhabitants to retire to the hills. A large proportion perished of hunger and of the diseases following too scanty a diet, and in the whole Naga Mangala country one-half of the inhabitants are now wanting, although they have had eight years to recover. This is the calculation of the officers of Government. To judge from the desolation that I see around me, I should conclude the loss to be greater."—II, 63 (see also II, 165-226).

2. In the present century, periods of scarcity have occurred in 1824 and 1833; but the traces of them in the official records are but slight. In 1824 the distress in Madras appears to have been very severe, and a remonstrance was made by the Government with the Rajah of Mysore who, it was reported, was putting hindrances in the way of export. When the early rain shewed signs of failing (in June and July 1824), the Rajah directed his officers to have prayers offered in the most important temples for rain, and to feed Brahmins. On these relief measures Rs. 3,434 were spent, and the results were apparently favourable, for the late rains were full and abundant. In 1833, again, the Madras districts adjoining Mysore suffered very severely, and the loss of life in the Guntoor District was so great that it was known as the Guntoor famine; but Mysore seems only to have shared in these sufferings in a more limited degree. Relief works were started by the Commissioner, whose orders were that each male labourer should be paid in grain one seer of ragi, each female and child over ten, three-quarters of a seer. Works were to be selected so as to keep people near their villages, and large numbers were not to be allowed to concentrate in one place. The estimated cost of the relief works was Rs. 32,000, but I have not found any record of the actual expenditure. Prices (according to the Administration Report of 1866-67) did not go higher than 30 seers of ragi and 16 of rice per rupee, which does not indicate severe pressure. In September abundant rain fell and all relief works were closed.

3. Mr. Dalryell's report on the Madras famine of 1866 contains some account of the scarcity

* Taken from Madras through Mysore, Canara, and Malabar in 1800-1801. Published 1807.

prevailing in these years in the adjoining districts of the Madras Presidency, which seem to have suffered more severely than Mysore. In this province there was serious alarm, and, for a short time, severe distress, due to the failure of the early rain in 1866 supervening upon reduced stocks and a scanty harvest in 1865, but it was confined for the most part to the Chitaldrug District and the taluks on the north-eastern borders of the province, in Tumkur and Kolar. The tanks were generally dry, and the early or Kartik crop of rice was a failure, involving a loss of 3 lakhs out of a land revenue of 75 lakhs. Grain had been largely exported to Bellary and Dharwar, where the cultivation of cotton had to a great extent superseded that of food-crops, and the stocks in the country were consequently low. Common rice rose to 6½ seers, per rupee, and ragi to 10½, or nearly four times the usual prices, and in the most distressed parts they were considerably dearer: in Sira in August the price of ragi was 7 seers, and of rice 5 seers per rupee. In June 1866 the distress was very severe; it was reported that many people were subsisting by grinding the kernels of tamarind fruit and the cotton seed to flour; and by feeding on leaves and roots, especially the root of the aloe. Villages were deserted by their inhabitants, who emigrated in search of food, and some cases of starvation were reported. The later rains of September and October, however, were very plentiful, agriculture revived, and the acute symptoms of famine at once passed away.* Mr. L. Bowring was at this time Chief Commissioner (Mr. C. B. Saunders officiating in that post after the 10th September, when Mr. Bowring went on leave), and under his orders active measures were taken throughout the year 1866 to relieve the distress. Feeding-kitchens for the distribution of cooked food were opened in many places by private charity, and in Bangalore as much as Rs.15,000 was subscribed to feed the poor who flocked into the town, an equal sum being added by Government. Here cooked food to the amount of 1½ seers of flour (say 2 lbs) was given to each adult, plus half an anna in cash. Altogether, 391,000 persons, or rather over 2,000 a day, were relieved gratuitously in Bangalore. Relief works were set going at the cost of the Local Funds, and of a special grant of 2 lakhs of rupees made for the purpose; and these were mostly located near large towns so as to supply labour to the poorer inhabitants, and also to make it easier to distribute grain instead of money wages if necessary. It was, however, left optional to the district officers to pay wages in money or in grain, according to the circumstances of each locality. It was enjoined on all officers to exercise no interference with the market prices, or with the free exportation of grain; and when a Committee was formed at Bangalore to buy grain cheap and sell it retail at cost price, the Chief Commissioner refused to assist their object by any grant of public money, or to allow any Government officer to hold a place in the Committee for fear of violating the principles of free trade.† No separate record, however, was kept of the numbers thus relieved on works and fed in kitchens; but it is stated that in the northern parts (*i. e.*, the most distressed parts) of the province, very few people came to the works. Crime increased considerably, the number of thefts reported in the year rising from 4,000 to 7,600. Fever was very prevalent in the cold weather, and cholera appeared as usual in the wake of scarcity. The mortality returns gave a death-rate of 12·6 per mille, as against about 6·5 per mille in the year preceding, and 7·5 per mille in the year following: the rates in Chitaldrug and Tumkur were 16·9 and 16·5 respectively, indicating a mortality in those districts of about 48,000, as directly or indirectly due to the drought and the high prices. The feeding-kitchen in Chitaldrug was closed in December; those in Bangalore in January.

* Colonel Hay mentions (report of 4th July 1877) that in Hassan, where the season had been very abnormal, the rainfall of 31st October 1866 brought down the price of ragi from 3 to 17 seers in one day.

† The Administration Report for the year states, however (p. 2, para. 6), that "in the more afflicted districts it became necessary for Government to import grain in large quantities, which was sold to the people at cost price." This probably refers to Chitaldrug, but no records have been found shewing to what extent grain was thus imported. The only papers I have seen on this subject refer to the transport of 26 khandies (nearly 4 tons) of paddy, and jowar which was bought in the Kunigal taluk of Tumkur, and sold in Chitaldrug at a considerable loss to Government.

4. In the year 1874 the rainfall was unusually heavy, the average over the whole province

MONTH.	Bangalore (Observatory).	Kolar (gauged by Lieutenant Kensington).
April	0·7	...
May	15·5	8·1
June	1·7	2·8
July	6·5	3·1
August	8·3	1·9
September	10·0	13·7
October	6·5	8·7
November	1·2	1·2
December	...	0·2
TOTAL FOR YEAR	56·6	40·3

being about 43 inches.* The table in the margin shews the downfall for nine months in Bangalore and Kolar. The rains began with a heavy cyclonic storm on the 5th and 6th May, and then continued fairly normal through June, July, and August; but in September and October the south-west monsoon broke up and the north-east set in with a tremendous downpour which raised the water-level throughout the country so much that a great number of ragi pits were flooded and the grain spoiled. The crop of the year was indeed fairly good, and the late or Vaisakh rice-area extremely large, owing to the fact that all the tanks were full. But every Mysore ryot dates the beginning of trouble from this flooding of the pits; for the export of ragi had already been

dangerously large, and now by this misfortune stocks were reduced to an unprecedentedly low condition. Thus the Commissioner of the Nagar Division reported (6th December 1875):

"The ragi and cholam (jowar) crop last year was unfortunately not a specially heavy one, on account of excessive rain. I everywhere met with the complaint that a large portion of what the people were able to retain was destroyed by their grain pits being flooded with water. This was the invariable answer of the ryots whenever I assumed in conversation with them that they had no reason to complain of last year's harvest."

5. In 1875 the rainfall was extremely deficient, the quantity gauged for the whole province being between 20 and 22 inches against an average of 34 inches in ordinary years, and against about 43 inches in 1874. Nor was this quantity equally or normally distributed, for over the greater part of Mysore the south-west monsoon began well, but rain ceased to fall in July, and the north-east failed altogether. In Bangalore 17·1 inches fell during the south-west, and only 5 inches

after the end of August. The table in the margin shews for the Bangalore and Kolar Districts the quantity registered monthly at head-quarters, and also the average of six gauges carefully kept by Lieutenant Kensington, R.E., the Executive Engineer of the Kolar District. The early rains, though light, were not unusually so, and ploughing and sowing went on satisfactorily, and the crops, though they suffered from the scanty rain of July, were still in fair condition up to the end of August; but during September and October the rains almost entirely failed, the one or two inches registered in September were made up of scanty showers hardly sufficient to moisten the soil; there was no good downpour between the 28th August and the 22nd October, and that came too late in most places to save the crop. The consequence was that the ragi was almost universally lost, and there was no Vaisakh rice crop, as the tanks were empty; but in these eastern districts the

* The difficulty of getting accurate rain statistics is illustrated by the discrepant figures for 1874 given in two different parts of the same book, the Administration Report for 1874-75. They relate sometimes to the head-quarters rain, sometimes to the average rainfall gauged at all taluks:—

AUTHORITY.	Bangalore.	Kolar.	Tumkur.	Mysore.	Hassan.	Kadur.	Srinagara.	Chitaldrug.
Report, page 37	40·6	38·1	62·4	30·9	60·7	41·3	45·9	35·1
Appendix, page 11	56·7	37·7	36·6	29·9	47·6	39·9	42·4	35·1

other dry crops did not suffer as much as the ragi. In Tumkur, the head-quarter gauge registered 24.2 inches,* but it was very irregular, and in some parts, especially in the Sira taluk, there was very little. In Chitaldrug 8.77 inches only were recorded. In Mysore itself the rain-gauge marked 20.2 inches, but the following table shews that some taluks of that and the Hassan District suffered from a serious deficiency:—

Month.	WEST MYSORE.			EAST MYSORE.		EAST HASSAN.	
	Gundalpet.	Chamrajnagar.	Nanjangod.	Mandia.	Naga Mangala.	Attikrupa.	Hassanalli.
	1	2	3	4	5	6	7
March	...	...	...	...	1.1	...	...
April	1.9	0.4	0.3	0.5	0.2	0.6	...
May	4.1	0.8	3.1	2.8	0.8	2.1	3.6
June	0.5	1.8	0.7	0.6	1.0	0.5	4.8
July	1.1	0.5	0.5	6.7	...	1.7	0.4
August	0.2	0.3	0.3		1.2	...	...
September	1.4	2.1	2.2		4.8	2.0	1.2
October	8.8	4.7	5.3		2.7	2.6	2.4
November	3.1	0.2	0.5	...	...	1.2	...
December	...	...	0.5		...	...	1.4
TOTAL	21.1	10.8	13.4	10.6	11.8	10.7	13.8

These figures indicate an almost complete failure in both monsoons. The drought of July and August withered up the early crops, and the rainfall of September and October was not sufficient (except perhaps in Gundalpet, Chamrajnagar, and Nanjangod) to carry the later-sown crops to maturity, or to fill the tanks.

6. Mr. Dalyell of the Madras Civil Service was at this time officiating as Chief Commissioner of Mysore. The first note of alarm was struck by the Deputy Commissioner of Chitaldrug (Major Armstrong), and on the 26th October 1875, Mr. Dalyell directed the Commissioner (Colonel Campbell) to go at once to that district and report on its condition and the prospects of failure both of crops and of water. His reports of the 18th November and 6th December were not alarming, though he wrote that the ryots considered the state of things then worse than it had been in 1866. There was no village in the district where the crops had not varied from full productiveness to absolute barrenness; no tract in which there was anything like uniformity of failure over a large area. Ragi varied from 23 to 28 seers, and jowar from 20 to 24 seers per rupee, or not quite double the usual prices. The remedies that he proposed were: (1) the stoppage of "Hulbanni" sales, i. e., that the grazing right in the unoccupied lands in a village should not be put up to auction, but the people permitted to pasture their cattle on them gratis; (2) the utilisation of district funds on the repairs of tanks and the deepening of wells; (3) the appointment of inspectors to supervise relief works, and the strengthening the district establishments of surveyors by transfer from other districts; (4) the postponement or remission of revenue in cases of entire loss of crop. On the 8th January he further asked for a grant of Rs. 15,000 from Local Funds for carrying on these

* This and the Chitaldrug figures are taken from the Chief Commissioner's Report to Government of India dated 3rd October 1876. The figures given in the Administration Report for 1875-76 are as follows. For Tumkur 36.9 inches were returned at head-quarters (this was probably a mistake) and 16.5 is the average of the 8 taluks. Sira returned only 5.02.—

AUTHORITY.	Bangalore.	Kolar.	Tumkur.	Mysore.	Hassan.	Kadur.	Shimoga.	Chitaldrug.
Report, page 34	14.2	16.5	36.9	20.2	23.4	26.5	22.5	12.2
Appendix, page 3	22.2	16.5	16.5	20.2	22.6	26.5	22.9	11.1

relief works on wells and tanks. These proposals (except No. 4, which was not adverted to) were sanctioned by the Chief Commissioner on the 18th December 1875 and 17th January 1876.

7. On the 5th of January the Deputy Commissioner of Tumkur, Major C. Pearce, sent in a report on the state of the Sira taluk which he had recently visited. The dry crops had only produced a quarter of the average amount; the tanks were dry, hardly any pasturage existed, and prices had risen and were rising. But the country was peculiarly suited for the excavation of Kapile wells (that is, wells in which the water is brought to the surface by a bucket drawn up by bullocks), which are here great pits rather than wells, about 100 feet square, sunk through the rock till water is reached, at a general depth of 24 feet. He advocated the grant of Rs. 20,000 to start such wells as relief works, and also to execute repairs to a few tanks; and the remission of the grazing or "Hulbanni" revenue. These requests were granted (22nd January), except that only Rs. 10,000 was allotted in the first instance; and the Deputy Commissioner was also directed to carry out some road-works, for which Rs. 18,000 had been allotted in the local budget. About the same time the Deputy Commissioner of Kolar, Mr. B. Krishnaiengar, reported that the crops in his district varied from four to nine-sixteenths of an average produce, and asked for Rs. 5,000 with which to start relief works (tank repairs) wherever the crop had been less than a fourth. In reply, he was told that there were only five hoblis or sub-divisions of a taluk in which the crop was reported to be below a quarter, and he received a grant of Rs. 1,000 for relief works there.

8. The Commissioner of Ashtagram (Colonel Hay) sent up in January and March 1876 a set of careful and elaborate reports on the parts of the Mysore and Hassan Districts which had suffered most severely from the failure of the rain. He shewed that the crop, both the early and late sown, had almost entirely failed, especially in the Mandia and Naga Mangala taluks; the prices of ragi and rice had risen to 17 and 10 seers respectively; the number of persons who had gone to seek employment in the coffee plantations was double the usual figure, and cholera had appeared in some villages in Mandia. But he considered that there were sufficient stocks in the country to feed the people and keep off severe distress till the next harvest, and all that was necessary was to remit the grazing sales, postpone the collection of past revenue, and start some relief works from Local Funds in the Mandia taluk.

9. In the meanwhile Mr. Dalyell, determining to judge for himself what the condition of affairs really was, made a rapid tour through the Tumkur and Chitaldrug Districts and part of Shimoga, and recorded the results of his impressions in two Resolutions, dated 25th January and 5th February 1876. The tone was reassuring. He satisfied himself that serious scarcity was confined to the Sira taluk in Tumkur, to six out of the eight taluks in Chitaldrug (Kankuppa and Pagarh being well off), and two taluks, Honnali and Chenagere, in Shimoga, and that it did not by any means prevail over the whole of those taluks, but only in a few well-defined tracts. Few people complained of absolute want of food-grain or water, and the chief request was for remission of the revenue. Pasturage was scanty, and many people had taken their herds to the Malnad. Prices were high, ragi selling at 18 to 20 seers per rupee. But relief works had been started on roads, tanks, and wells, and all that was necessary was that the condition of the country should be carefully watched, and fortnightly reports sent in. A grant of Rs. 10,000 from Local Funds was also made for the relief of the two taluks of Shimoga which had not been provided for in the order quoted above.

10. On the 25th March a further Resolution was issued, summing up the results of the reports received and the experience gained up to date. The Chief Commissioner stated that his impression that actual scarcity of food was limited to a few particular localities where the crops had been exceptionally bad and the stocks were known to be low, had been confirmed by the event. Poor

as the harvest had been, it had brought prices down lower than they were in December. No actual distress or suffering was visible even in Sira, and there was no demand for employment on the relief works that had been opened. "On the whole," he summed up,

"it appears that the present condition of the province (with the exception, perhaps, of the Mándia taluk in the Mysore District) is more satisfactory than it was expected it would be at this period of this year. . . . It seems clear that no severe scarcity is to be apprehended in the province, unless there should be a failure of the early rains of the present year; and there appears to be a general impression that the fall will be both early and copious. At the same time it must be expected that the present prices, which are high, will rise still higher during the next three months, and much difficulty must necessarily be felt among the poorest classes of the people. It will, however, probably meet all the requirements of the case if relief works are opened wherever pressure is felt."

And accordingly the Government of India was asked to give, and gave, a grant of a lakh of rupees to carry out such works.

11. Mr. Dalryell's appreciation of the circumstances of the country seems to have been sound and accurate, and his procedure suited to the requirements of the case. That the country possessed large resources and was able to support itself in spite of the considerable loss of the year's produce without suffering any extremity of distress, is abundantly proved by the reports of all district officers up to the month of September 1876, and further by the fact that, without any unusual pressure being exercised, almost the whole land revenue of the year 1875-76 was realised. The total demand for the year under all heads, including 17 lakhs of balances outstanding, was 127 lakhs (or £1,270,000), and of this, up to the end of June 1876, 124½ lakhs had been collected, leaving 2½ lakhs of land revenue due. Out of this, 1½ lakhs were paid up in July 1876. Two points, however, stand out in this correspondence as ominous of future evil. One is the vagueness of the reports sent in, the want of precise and minute local information, and the lateness of the time at which the district officers (except Major Armstrong) took the alarm. Considering that the rains which had been so deficient ceased altogether in November, it seems strange that any one should have waited till January, and even till March, to report the failure of the crop. The other point is the inability to utilise the grants made for relief works. In Chitaldrug, up to the 31st March, only Rs.2,525 had been expended, and nothing at all in Shimoga, while in Tumkur only Rs.2,149 were spent up to the end of August. That the ryot class for whose benefit those works were specially projected declined to avail themselves of this form of relief has already been noticed, but that district officers with *carte blanche* to carry out useful local improvements could not get more money expended than this, seems to shew weakness of establishments and want of direct supervision and personal influence.

12. The anticipation that the rainfall of 1876 would be both early and copious was not about to be realised. It was very similar in character to that of 1875, but even scantier in quantity. The average for the whole province was only 17½ inches, or about half the ordinary amount, and this, as in 1875, fell at irregular intervals and unseasonable times. The statement that follows shows the amount registered during each month at the head-quarters of the different districts. The south-west monsoon began not unfavourably; the fall of May, June, and July, was not materially deficient, but after that time it dwindled and ceased, and the north-east monsoon failed entirely. In Bangalore the rain was good in May, there being five days, each of which had more than half an inch of rain; in June there were two such days, 13th and 26th; in July none; in August two, the 3rd and 18th; in September, the most important month of all, only one, the 4th; in October and November none. In Kolar, again, according to Mr. Kensington's register, in May there was no good rain; in June three days had over half an inch (the 12th, 13th, and 14th); in July three, 8th, 21st, and 31st; in August one, the 2nd; in September none; in October only one, the 6th. A full breadth of land was sown with fair prospects, but the crops withered in July and August and came almost to nothing. On the red soil there was hardly a blade of

anything green left by November; but where the soil is sandy the other dry crops (ballar, colthi, &c.) yielded some produce. No tanks filled and few received any water at all, hence there was very little of the early rice and none of the late or Vaisakh crop. In Tumkur the rain-gauge shewed 19·7 inches against 24·2 in 1875; in Chitaldrug 10·0 against 8·77. In all the other districts it was slightly lower than it had been in the preceding year. The main cause of the famine was therefore the almost complete failure of the rainfall of September and October, and further that this calamity followed upon a year of almost equally severe drought.

Statement shewing the Rainfall at Head-Quarters Towns in the year 1876.

No.	Head-Quarters Districts.	March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total.	
		In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.	In.	Cents.
1	Bangalore.	1	31	0	51½	4	35½	2	33	1	82	4	0	1	72	0	71½	0	85	...	...	17	27
2	Kolar.	0	41½	0	7	1	00	4	44	2	89	1	11	0	80	0	34	1	45	...	...	13	20½
3	Tumkur.	0	39	0	72	3	50	2	90	4	44	4	08	2	73	...	...	0	4	...	...	19	75
4	Mysore.	1	22½	...	...	3	3½	1	0	1	44	7	55	2	72	0	80	0	25	...	...	22	2
5	Hassan.	0	02	0	95	3	24	1	52	5	31	1	98	2	45	0	36	...	...	...	...	16	73
6	Nader.	3	11	2	06½	2	60	2	71½	6	07½	1	65	1	6	0	70	0	60	...	...	22	59½
7	Shimoga.	1	50½	2	25	0	20	2	73½	7	01½	1	06½	2	45½	0	78½	...	...	...	...	13	79½
8	Chitaldrug.	0	49½	1	60	1	70	1	90	2	59½	0	60	0	90	...	...	...	...	...	...	9	87
TOTAL		8	06½	9	36½	23	62	19	54½	33	39½	23	73½	14	80½	4	70½	2	02	...	...	141	33½
Average		1	12	1	17	2	38	2	44	4	17	2	27	1	58	0	69	0	36	...	...	17	87

13. Thus, with its stocks exhausted, with prices double the usual rate, with its main crop almost wholly lost, with its people already reduced to distress through the failure of the crop of the preceding year, with tanks empty and dry, with its staff of Assistant Commissioners weak, with a body of native subordinates generally inefficient, and with its village system disorganised and out of gear, the Province of Mysore entered on the memorable famine of 1877.

CHAPTER III.

BEGINNING OF THE FAMINE.

FROM THE AUTUMN OF 1876 TO THE END OF MARCH 1877.

Personnel of the Administration—2, Warning from Chitaldrug, June 1876—3, Application for relief from Kolar, 21st August—4, First report of famine from the Sira taluk in Tumkur, 29th August—5, Chief Commissioner's Circular, 12th September—6, Reports from Tumkur and Kolar—7, First appearance of the controversy between large and small relief works—8, First report to Government of India regarding the province, 3rd October—9, Remarks on the information conveyed in this letter—10, First report from the Bangalore District—11, Reports from the three districts of the Nandidrug Division—12 and 13, The Chief Commissioner's orders thereon, being the first general Resolution on the Famine, 27th and 31st October—14, Letter to the Government of India, 8th November—15, Reply of the Government of India, with orders condemning a policy of large works—16, Further report from Tumkur, 1st November—17, Report on Mysore and Hassan, 3rd November—18, Report on Kolar, 21st November—19, Further report from Tumkur, 7th December—20, Change of the course of trade in the Malnad—21, Instalments and remissions of land revenue—22, Grazing in Government forests—23, Special arrangements for the cattle in the Mysore jungles—24, The public meeting of 2nd November, and the appointment of the Central Relief Committee—25, Special reports on the condition of each taluk—26, Inaccuracies and deficiencies in these reports—27, Estimate of the proportion borne by the crop produced in 1876 to that of an ordinary year—28, Interpretation of the above figures—29, Half the produce of an average year sufficient to feed the people—30, Estimate of the actual crop at about one-third of an average for the whole province—31, Forecast deducible thence as to the extent of relief measures necessary—32, Incidence of the distress and failure in different parts of the province—33, Area and population of the tracts affected—34, Resolution of the Government of India on the special reports—35, Captain Ludlow's proposal to start road work—36, Emigration reported to Madras districts in January 1877—37 to 40, Correspondence with the Government of Madras about this emigration—41 and 42, Cessation of the emigration into Cuddapah and Bellary—43, Minutes by Sir R. Temple on the subject, 2nd and 6th April—44 and 45, Revival of emigration subsequently, and method of dealing with it—46, Sir R. Temple's visit to Bangalore—47, His estimate of the position—48, Comparison of this estimate with the one given in paragraphs 30 and 31—49, Amount of old stocks available—50, How far the purchasing power of the country required to be supplemented by relief given as wages for labour—51, Difficulty of grasping the necessity of measures to relieve so great a multitude—52 and 53, Want of opportunity for seeing the defects in the system of small relief works—54, Condition under which Sir R. Temple recommended the adoption of large relief works—55, Sir R. Temple's opinion as to the condition of the people—56, Extracts from his Minute—57, System of house-to-house village inspection introduced at his suggestion by Resolution of February—58, Criticisms on the Resolution—59, Results of the village inspection—60, Mortuary returns—61, Issue of periodical provincial returns as to famine relief—62, Increase of crime—63, History of prices and importation of grain—64, More detailed account of relief works and kitchens—65, Sparing grants of money for relief works—66, Chief Engineer's circular of 27th October on co-operation of his department with civil officers—67, The first expostulation against the uncertain system of granting money—68, Explanation of the system of relief works—69, First attempt to lay down a scale of relief wages—70, Grant to Nandidrug Division on 29th November—71, Instructions issued by the Commissioner to his district officers—72, Works proposed by the Commissioners of Ashtagram and Nagur—73, Reasons why so few people came to the relief works—74, Example: The Mannaloddy road—75 and 76, Reasons alleged by officers in the Ashtagram Division—77, Circular of 11th January by Chief Engineer on the reasons alleged to him—78, Censure on Mr. Ricketts for starting a work on his own authority—79, Kolar relief works; tank works considered too large—80, Refusal to sanction works in Bangalore—81, Colonel Pearce's report on the state of the division and on the relief works in progress, 27th January—82, His visit to Dod Ballapur; interviews to amildars—83, Colonel Pearce asks for a fixed permanent grant of money for relief works—84 and 85, Result of the refusal to alter the system—86, Resolution of 28th February, fixing scale of wages on relief works and reducing the task—87, Objection of the Public Works Department officers to reduction of task—88, Theory that the able-bodied only should be employed on Public Works Department works, and the less able on civil relief works—89, Explanation by the Deputy Commissioner of Bangalore of the ill-success of relief works—90, Relief works under Public Works Department; opening of the road from Chikmagalur—91 and 92, Timanahalli tank—93, Relief works in Bangalore Town; the Alsur and Dharmambudi tanks—94, Numbers on relief work at time of Sir R. Temple's visit—95, Numbers during different weeks to end of March—96, Origin of relief "kitchens"—97, Early steps taken by Government to assist private charity in supporting them—98, Numbers in the relief kitchens up to end of March—99, First attempt to organise the distribution of food at the Bangalore kitchens—100, Institution of road-side kitchens to check influx of paupers into Bangalore—101, Deportation of immigrants and multiplication of kitchens—102, Difficulty of carrying out the policy of deportation—103, Failure of the attempt to carry it out—104, Reduction of numbers fed in Bangalore, consequent on stricter organisation—105, Opening of the first enclosed relief camp, 26th February—106 and 107, Fixing of the ration of cooked food, 29th March—108, Increase in the number of kitchens—109, Colonel Pearce's opposition to this increase. Order of the Chief Commissioner, 29th March, abolishing 27 kitchens—110, Increase of the number of people fed—111, Numbers on all kinds of relief at end of March—112, Reports by Commissioners on condition of the country up to 15th March—113 and 114, Sir R. Temple's Minute on the progress of the famine and the administration of relief, 6th April.

IN June 1876 Mr. C. B. Saunders, C.B., relieved Mr. Dalryell in the post of Chief Commissioner. He had been acquainted with the province ever since 1861, both as Judicial Commissioner and also for considerable periods of time as Officiating Chief Commissioner; but he

now returned to it from Hyderabad much broken in health and spirits, and affected by the shadow of a great domestic sorrow. Mr. J. D. Gordon, C.S.I., was Judicial Commissioner, and officiated for Mr. Saunders for about a month in December and January, when the latter was summoned to Delhi on the occasion of the proclamation of the assumption of the title of Empress by Her Majesty the Queen.

2. On the 30th June Major Armstrong expressed his alarm at the prospects of the season in Chitaldrug, where the rain had already shewn signs of stopping. He said that there were as yet no symptoms of severe distress, though the people were pinched for food; but he warned the Government that the out-look was extremely gloomy, and that if the rain failed the famine must be severe. He proposed in that case to employ the villagers in petty works at their own doors, filling up pits, removing manure and filth, improving streets and lanes, clearing outside drains. The Commissioner supported this, and the Chief Commissioner (18th July 1876) sanctioned the proposal, "provided care was taken to ensure that the parties receiving relief give a fair equivalent for their labour." It was not apparently foreseen that on works of this kind, scattered through every village, it would be impossible to carry out this proviso. At this time grain was being imported into Shimoga from Dharwar.

3. On the 21st August the Deputy Commissioner of Kolar applied for a grant of Rs. 6,000 for the construction of a road as relief work in the Gumnaikpalyam taluk, the most remote and least known part of the district, and one in which much distress was reported to exist. The money was granted him on the 31st August.

4. On the 29th August the Deputy Commissioner of Tumkur, Captain Ludlow, sent in an alarming but valuable report on the state of the Sira taluk. The dry crops, which had been sown and withered and sown again, were almost hopelessly lost. Rain in September and October might make it possible to sow gram and rice, but unless such rain fell, there would be no crop at all to support the people. The cattle were reduced to extreme weakness for want of pasture, and the mortality among them had already begun to be great. The condition of the people of the lower orders was bad, and they shewed signs of great want; women and children turned out in several villages *en masse* to beg for food; many were stated to be living on roots and leaves of wild plants; a case of starvation was reported, but this appears to have been a mistake. The well-sinking which had been sanctioned as a relief work demands skilled labour, and is not suitable work for ryots and agriculturists. The Deputy Commissioner concluded by asking for permission to make *takavi* advances free of interest, and for a grant of Rs. 10,000 to be employed in repairing tanks. The Chief Commissioner in reply (4th September) granted Rs. 6,000 for this purpose, but declined to make the advances, as he considered that "a liberal remission of assessment" was a preferable measure. By the beginning of September, forty-two tanks had been taken in hand, a measure which afforded a sensible amount of relief: labourers were paid at piece-work rates, at 12 cubic yards per rupee for earth-work.

abrogated, assuring the Chief Commissioner that no delay should be allowed to occur in his office. The answer was, that the permission to apply direct, and not through the prescribed channel (*i. e.*, through the Commissioner) referred only to great and sudden emergencies, and was not intended to supersede the usual practice. The result was unfortunate. As a matter of fact, great delay did frequently occur in forwarding letters through the Commissioner's office, some important references being kept back for a whole month; and even if this had not been so, subsequent experience has shewn that so long as the Commissioner was burdened and tied to his desk by the task of trying sessions cases, he could hardly exercise efficiently the duty of carrying on famine relief operations.

6. This letter of Colonel Pearce's, dated 15th September, also forwarded two reports from Tumkur and Kolar. Captain Ludlow gave a bad account only of two taluks, Sira and Honawalli, and said that the others might yet recover if rain should fall. His hopes were sustained by the occurrence of several local and partial showers. There were plentiful supplies of (local) ragi in the great Tiptur market. Feeding places had been opened by charitable persons in eight places, but they were not well managed, since strong as well as infirm people were fed there. Mr. Krishnaingar reported all the Kolar District to be in a state of distress, and that relief works were wanted everywhere: in this district also "kitchens," or feeding places, had been started by private subscriptions, which he himself had headed and encouraged. The Commissioner, in forwarding these letters, applied for grants as follows to be spent on relief works: Rs.10,000 each for Tumkur and Kolar, and Rs.5,000 for Bangalore. The Chief Commissioner remarked (19th September) that Tumkur and Kolar had still some unexpended funds, but granted Rs.15,000, which Colonel Pearce was to allot to his three districts as he thought best; at the same time he warned him that "no large projects should be taken in hand which will make it incumbent on the people to travel long distances to their work, and which would occasion inconveniently large assemblages."

7. This is the first appearance of the controversy between large and small works which afterwards played such an important part in the famine administration. Colonel Pearce, whose practical experience made him alive to the impossibility of properly supervising a large number of small operations, was throughout a consistent advocate of the system of large works under professional superintendence. But on this occasion he did not press his views; and reading, as it seems, between the lines of the Chief Commissioner's orders and perceiving his grave fear of unnecessary expenditure, he did not at once allot the Rs.15,000 granted him to the different districts, but wrote that they had sufficient funds at their disposal to meet emergencies, and that he would await further requisitions.

8. Meanwhile, on the 27th September, the Government of India had telegraphed for information as to the state and prospects of the country, and on the 3rd October Mr. Saunders submitted his first report. It began by referring to the failure of rain in 1875, and then gave the corresponding figures for five districts in 1876,* and a list of prices showing that ragi stood at 10 to 11 s. to 16 seers per rupee, or about three times its usual price, and common rice at 10 to 11 s. about half as dear again as usual. The worst parts were believed to be the whole of C and large tracts of Shimoga and Kadur: after them in point of distress the five cast of Kolar, the Sira and Honawalli taluks of Tumkur, and the eastern taluks of Hassan less degree of Mysore. In Bangalore it was said severe distress prevailed, but it not suffered in the same degree. It was still hoped that rain might save the standing crops, enable gram and rice to be sown, and revive pasturage, for

* Bangalore is not among the five, and the figures in every case differ from those given in the 12th para.

thousands of cattle had died. Three thousand rupees had been given to one district, Kolar, for feeding the poor gratuitously; but all the rest of the allotments, amounting to Rs.1,07,000, had been made for relief works of a permanently useful character. The letter concluded by asking for another lakh of rupees, which was granted by telegram on the 20th October.

9. The report was, perhaps, as complete and accurate as could have been composed at the time from information based chiefly on the scanty official reports before the Government, which have been summarised in the foregoing paragraphs; but the subsequent events shewed that the area and the relative severity of the distress had been much misunderstood. The Tumkur district as a whole suffered more than any other, and the intensity of famine there was only equalled by the east and south portion of Chitaldrug and the northern and north-western taluks of Bangalore. Next in order of severity of loss came the rest of the Bangalore district (except the neighbourhood of the town itself), all the north part of Kolar, the Mandia taluk of Mysore, and the eastern half of Hassan, the Banawar taluk of Kadur, the two eastern taluks of Shimoga, and all the rest of Chitaldrug except Davangere. Here the famine was very severe, but not as dreadful as in Tumkur. In the western taluks of Mysore and in the Malnad there was no famine, except among those who emigrated there in the vain hope of finding food and employment.

10. On the 15th September the Deputy Commissioner of Bangalore sent up his first official report. He described the condition of that district as very bad, and stated that unless rain fell, famine must supervene. He considered the Dod Ballapur and Hoskotta taluks as the worst off, and proposed certain relief works to be executed, both there and in other parts of the district, aggregating in cost about Rs.35,000. One of the works was a tank estimated to cost Rs.15,000, which was characterised in the Chief Commissioner's office as a "gigantic project," too large to be undertaken as a relief work; and on the letter generally Mr. Saunders remarked that "the funds of the province would soon be exhausted if every district officer were to send up equally extensive pecuniary demands to carry out to completion all their contemplated works." The result of this report was sanction to spend Rs.1,000 in the Hoskotta taluk alone. On the 28th September, and 3rd and 7th October, the Deputy Commissioner expressed his apprehensions in greater detail, after paying a visit to the two taluks specified. A local shower of rain had revived the crops* in part of Hoskotta, but the general condition of things is painted as one of absolute failure and imminent famine. In consequence of these reports, the Irrigation Department was requested to start work on a series of tanks near Hoskotta (the Kadgod series), for which they had the project prepared and complete; and the Chief Commissioner (14th October) granted a sum of Rs.10,000 to the Commissioner of the division for allotment to his three districts according to their needs. At the same time Mr. Saunders gave instruction that in the taluks where the pressure of want was severely felt, no time should be lost in laying in stocks of ragi for issue to the labourers at the rate of 8 seers per rupee, and also in providing an ample stock of working tools. Colonel Pearce, in forwarding this letter, enforced the first part of it with instructions that "payment in kind should be started without a moment's delay wherever practicable," but cautioned his officers against doing anything to weaken the time-honoured custom by which labourers were bound to bring their tools with them. The latter caution was not unneeded at the time, though the want of tools was afterwards found a great hindrance in giving employment to those who were not professional labourers; but the suggestion

* How wonderfully a crop of ragi can recover under the influence of rain is exemplified by an instance which occurred at Tumkur where the Deputy Commissioner had sown ragi in some land adjoining his house. In September, thinking it hopelessly lost, he allowed villagers to turn their cattle in to graze on it. Next day rain fell, the ragi revived, and the yield ultimately was 1½ khandi per acre, or almost an average crop. This instance helps us to understand why the people did not lose heart till the crop was past all saving. By the end of September they began to think the case was desperate. Then superstition began to shew itself; the gods had done this and they must be appeased. A favourite idol was dragged in procession through the country. A Brahmin vowed to propitiate the Deity by standing all day, for ten days consecutively neck deep in the Tumkur tank with his hands raised to heaven, facing the sun and gradually turning so as to follow its course from sunrise to sunset. On the ninth day he gave in and died shortly afterwards of fever.

to make payments in grain was certainly premature, and it would have been unwise to take such a step unless there were reasons to fear that the local stocks would fail—a contingency which, though possible in remote localities, could hardly be looked on as probable so close to Bangalore. The district officers, however, with one exception, put the order by and paid no attention to it. The Deputy Commissioner of Tumkur alone reports having purchased Rs. 3,000 worth of grain for the use of his feeding-kitchens and for payment to the labourers on relief works.

11. No further letters seem to have been sent up till, on the 23rd October, the Commissioner of Nandidrug called on his three Deputy Commissioners to submit within 24 hours' time reports on their districts, and these were reviewed by the Chief Commissioner on the 27th and 31st October. The reports thus hurriedly prepared are not, perhaps, so careful and complete as they might have been made, but they are on the whole clear and valuable, and show that the writers had taken a good survey of the situation. The hope of rain was over now, and it was known that the crops were for the most part irremediably lost, and that the land could give no employment to the agriculturist until next June. Mr. Ricketts (Bangalore) estimated the ragi crop at one-eighth of the usual produce. Captain Ludlow said that in the Kunigal taluk the produce was from one-fourth to half the average, and elsewhere was totally lost except in the lands irrigated by wells. The Deputy Commissioner of Kolar confined himself to the general statement that the outturn would be extremely scanty. The letters contain no direct reference to the state of the people, to prices, to beggary, or starvation, but in all there is mention of kitchens at which gratuitous food was given. In Bangalore they had been established at many of the towns, and thousands had been fed, but some were being closed for want of funds; and Government was asked to give sums equal to those contributed by private charity. In Kolar it is said that the people can hardly support the kitchens any longer out of their private resources, and that Government will have to give Rs. 200 per mensem to each taluk or Rs. 2,000 to the district. In Tumkur there were ten Government kitchens and eight private ones. The remedies proposed were mainly relief works. Mr. Ricketts asked for Rs. 2,000 or Rs. 3,000 in each taluk (say Rs. 25,000 a month for the district); and Captain Ludlow for Rs. 32,500 a month for Tumkur. The Deputy Commissioner of Kolar does not specify the anticipated cost. Mr. Ricketts and Captain Ludlow also mentioned that crime is on the increase, and that grain robberies are taxing the energies of the police to the utmost. Mr. Krishnaiengar drew attention to the weakness of the civil establishments and the impossibility of getting a number of scattered relief works managed by the amildar in addition to his ordinary duties, and proposed to relieve him to some extent by giving his magisterial work to the munsif. Mr. Ricketts proposed to sink wells everywhere in order to ward off the horrors of a water famine, and, if possible, to raise some crops by irrigation and both he and Captain Ludlow strongly urged that the State Railway from Bangalore to Mysore and to Tumkur should be started, so as to provide relief on a great scale.

12. All these proposals were warmly supported by the Commissioner, who also asked for a grant of Rs. 43,500 monthly for relief works in Bangalore and Kolar, besides Rs. 32,500 in Tumkur, and for permission to purchase grain, if necessary, at Madras or elsewhere, to be laid down wherever a large relief work should be started. The Chief Commissioner in reply (27th and 31st October) approved the proposals to dig wells and to stimulate irrigation by offering low rates of rent, but demurred altogether to the idea of the railway and to the grant of such large sums as were asked for to carry on relief works. As to the railway he said:—

"This proposal has much to recommend it, in affording employment for large bodies of those who are willing to work, and concentrating relief works to a great extent. But even if the preliminary difficulties to such an undertaking be removed, the Chief Commissioner entertains considerable doubts whether it will give relief to the

who are more specially in need of it, i. e., the ryot classes, who will not leave their villages and fields and seek work at a distance."

The subject was, however, transferred to the Department of Public Works. The Chief Commissioner stated that the Government of India had been applied to for a lakh of rupees, and when that was granted appropriations would be made "on receiving some detail of the manner in which it was proposed to expend them." He demurred to the proposal to buy grain (though it would seem that the order of the 14th October not only sanctioned Colonel Pearse's proposal, but even rendered its repetition unnecessary) on the ground that food-grains were being imported into Bangalore at the rate of 700 to 1,000 tons per diem,* and that markets were well stocked. Tenders, however, might be invited for delivery of certain specified quantities at taluk centres or in proximity to large relief works, but nothing must be done to create the impression that Government intended to interfere with the free course of trade or to import grain for the purpose of lowering the market prices. The Chief Commissioner approved the proposal to close the Munsifs' Courts and to utilise them in taking charge of relief works, and made a grant of Rs. 1,000 to each district for the cost of gratuitous feeding to supplement private subscriptions. Finally, the police were to be strengthened by placing parties of the sillidars (or local cavalry) in certain well-selected spots, to overawe the criminal population and to repress disorder. The principles laid down in these instructions were declared applicable to all districts of the province.

13. Thus on the one point on which the three district officers and the Commissioner were unanimous and urgent, the necessity of liberal expenditure on relief works, the head of the Government gave a doubtful and discouraging reply, and fettered their liberty of action. It is here that the exaggerated spirit of economy and the dread of spending the invested Mysore surplus first shewed itself:—

"The proposed allotments, amounting for two districts only to Rs. 43,500 monthly, are altogether excessive, and the Chief Commissioner is satisfied that such sums if granted would not be properly expended."

This forecast was entirely falsified by results. Even with the limited allotments which were obtained with difficulty by the pertinacious demands and the assumed independence of the Deputy Commissioners, these two districts spent by the end of August Rs. 4,10,000, or an average of Rs. 41,000 monthly on relief works; and it is unquestionable that, if double or treble the money had been spent in this way, it would have been an excellent investment for the country, and would have saved innumerable lives. For every rupee that was refused to the relief works, two rupees had later on to be spent in the feeding-kitchens.

14. The orders of the 27th and 31st October which have been summarised and commented on above were forwarded to the Government of India on the 8th November with a report on the further development of the season. The rainfall from the north-east monsoon having altogether failed, the dry crop had been universally lost, except in a few isolated patches where from one-eighth to one-fourth of the ordinary produce had been raised. The area affected by famine had largely increased and might now be said to include the entire province, except the Malnad taluks, where a fair rice harvest was anticipated, the parts of the Mysore and Hassan Districts which are watered by irrigation channels from the rivers, and the south-west portion of the Mysore District where the ragi crops had fared better. The tanks were dry and pasturage altogether deficient; but the Chief Commissioner believed that there was a fair quantity of grain stored by the wealthier ryots and available for purchase by Government for distribution in lieu of wages to labourers on relief works. Funds were being allotted to these works out

* This seems to have been a mistake; the importation of November was 330 tons a day: see paragraph 63.

of the lakh of rupees recently granted. Compensation for dearness of prices had been granted to Government officials whose pay did not exceed Rs. 15 a month and to the local troops. All "hulbanni" sales had been stopped; or, in other words, the right of grazing on Government waste lands had been thrown open to all. The periods for paying the Government revenue had been put back, and interest would not be demanded on arrears.

15. The Government of India replied to this on the 27th November, the Governor General being at that time absent on tour. The President in Council approved generally the orders given by the Chief Commissioner, and particularly those relating to the purchase of grain and to interference with private trade. With regard to relief works, a subject on which the Chief Commissioner appears to have been undecided, his order of the 19th September being in favour of small works only, while that of the 27th October leaned towards the concentration of labour on large and centralised works, an impulse was unfortunately given in the direction which after-events shewed to be the wrong one:—

"The President in Council considers it undesirable to concentrate large bodies of labourers on works at a distance from their homes, and would much prefer that minor works should, as far as practicable, be carried on at numerous places throughout the distressed localities."

These instructions were circulated on the 13th December to the officials of Mysore for information and guidance.

16. On the 1st November the Deputy Commissioner of Tumkur sent up a more careful report on his district, meant to supplement the hurried one written on the 26th October at 24 hours' notice. The distress among the poorer ryots and the field labourers was increasing; many had left for the coffee districts, and 14 villages* in Sira were entirely depopulated through this emigration, but no case of absolute starvation was yet reported. Eleven Government kitchens had been opened and many relief works, no less than 45 of them in the Sira taluk. The number of the labourers on these works is not stated, but an estimate is made that 1,300 persons in each taluk, or 10,400 in all, would seek for relief in this form. Not only were the stocks in the district considerable, but large quantities of grain were coming in and trade was active. In reply to this, the Chief Commissioner (10th November) observed that such a multiplicity of relief works as had been allowed in Sira was objectionable, since efficient supervision could not be maintained, and the course pursued would lead to great waste. Relief works ought not to exceed two or three in number in each taluk, and should be of sufficient size to employ all people desirous of relief, as able-bodied persons in real want of work would not hesitate to seek for it even at a distance of 10 miles from their homes. This important ruling, the first and only one in which a leaning to large works and to the enforcement of something like a distance test is to be observed, does not seem to have been communicated to other district officers.

17. On the 3rd November the Commissioner of Ashtagram forwarded some useful reports on the condition of the Mysore and Hassan Districts. In the town of Mysore rice had risen to 4 seers per rupee, and the local stocks were quite exhausted. Shops were shut up, and the apprehension of grain riots was so strong that it had been thought necessary to patrol the streets with cavalry. A meeting of the local merchants was called by the Commissioner, their alarms were quieted, the state and prospects of the country and of supplies were discussed, and orders were despatched by them for grain to Madras, Bangalore, and Tellicherry on the western coast. Ragi could still be got in small quantities in the local markets, but more was being imported from Bangalore. Subscriptions had been raised for the relief of the poor, and about 2,000 people a day were fed gratuitously in the town alone. The crops in most part of the district except

* They were not small villages. Ten of these had contained a population of 1,191 at the last census.

near the Cauvery, where the channel irrigation had not failed, and in the south and south-west corners where rain had been more plentiful, were either very poor or an entire failure. No coltub, or Mysore gram, could be procured for the Palace horses, and they had to be fed on Bengal gram imported by railway. In Hassan affairs were even worse. The Deputy Commissioner had just visited the Haranhalli taluk and reported (26th October) an almost total loss of the dry crop, the most favoured localities having obtained only three-sixteenths of the usual produce. The tanks were all dry. Rice was selling at from 6 to 8 seers and ragi at 8 to 12 seers per rupee, and the people were generally eking out their scanty stores with leaves and roots of wild plants. The bones scattered about the villages testified to the mortality among the cattle, and epidemic disease had appeared among the sheep. Emigration was going on with extraordinary activity.

"A continuous stream of men, women, and children, bullock-carts and droves of miserable cattle, pass Mysore by day and night, both from the Hassan District and from the Sira, Kunigal, and other taluks of Tumkur. Some go because they have relations already employed on the coffee estates, others in hopes of getting employment, and many are simply wandering about because they hear grain is to be had."

The Commissioner proposed as a remedy for this state of things to open certain relief works (tanks and roads) on and near the roads which these emigrants were travelling, in order to tempt them to stop and earn their livelihood, and to give up their pursuit of the imaginary El Dorado which they never would reach. There was no need for Government to purchase grain to pay wages in, as Colonel Hay was satisfied that local trade would be equal to the requirements of any relief work that might be opened. The Chief Commissioner (13th November) considered the measures taken for encouraging trade judicious, promised to give a sum equivalent to the amount privately subscribed for gratuitous relief, and approved of the relief works generally, observing that Rs. 10,000 had already been allotted to the division, and more would be given as projects were matured.

18. On the 21st of November the Deputy Commissioner of Kadur submitted a report on the affected parts of his district which he had then visited for the third time. In the eastern half, comprising the taluks of Banawar, Terikere, and part of Chikmagalur, the dry crop had totally failed; common rice sold at 6 or 6½ seers, and ragi at 7 to 8 seers per rupee. Much distress prevailed: crowds had gone to seek employment in the Malnad, and many were returning unable to find it there. Cholera had broken out in one or two villages. Feeding-kitchens had been opened in three places, but closed for want of funds. At the head-quarters of the district a committee of merchants had been formed to import Rs. 10,000 worth of rice from Canara and sell it at cost price. A monthly subscription of Rs. 300 had been raised there for a kitchen, and at another place Rs. 1,500 had been subscribed for the same purpose. The Rs. 6,000 formerly given (in September) for relief works had been nearly all expended. In conclusion, the Deputy Commissioner asked for a monthly grant of Rs. 500 towards his kitchens, and an allotment of Rs. 24,900 for certain specified relief works. The Commissioner granted the Rs. 500 monthly under the authority of the Chief Commissioner's order of 27th October, and applied for sanction to the relief works. The application was referred, for his opinion as to the different works proposed, to the Chief Engineer, who, after a month's delay, replied that he had already given an opinion on one road and knew nothing about the others. Then, on the 19th January (nearly two months after the application was made), an answer was sent back that the Chief Commissioner would await the submission of the estimates for the proposed tank works, and that the road works would be considered if the necessity for them could be shewn.

19. On the 7th of December the Deputy Commissioner of Tumkur reported again on the

progress of affairs. There was no export, and importation was brisk: in this respect the prospect had improved, but the crying wants of the district were pasturage, water, and money for relief works. For pasturage he asked that the State forest in the Devaroydrug range of hills near Tumkur might be thrown open to the ryots. The want of water was only felt in Sira as yet, and there he proposed to sink wells wherever water could be found close to the surface. As to relief works, since receiving the orders of the 10th November, he had curtailed their number, and had begun very few tanks, but he proposed to set to work collecting metal on all the district (or second class) roads, and asked for a grant of Rs. 150 per mile, or Rs. 47,250 in all.

"These works will be within reasonable reach of all villages: if the ryots flock to them, they will find work ready for them; and if they refuse, their refusal must be accepted as an indication of no great want existing."

The Commissioner replied (18th December) that he could not ask for so large a sum as Rs. 47,250, especially as the ordinary sums annually allotted for maintenance appeared not to have been spent*; but he sanctioned a grant of Rs. 1,000 for sinking shallow wells in Sira. On the 23rd December Colonel Pearse forwarded copies of these letters to Government, and on the 16th January the Officiating Chief Commissioner replied that the Devaroydrug State forest should at once be thrown open to the ryots' cattle. He approved the proposed system of metal collection on the roads, and sanctioned its being carried out with some curtailment in 5 out of the 8 taluks of the district. He dwelt also on the necessity of providing a continuous grant from Government to aid in maintaining the kitchens for the aged infirm and helpless poor, in order to prevent their emigrating to Bangalore or elsewhere in search of subsistence; and allotted Rs. 3,000 to the Nandiding Division, which the Commissioner was to distribute according to the wants of his three districts. More money should be given if necessary; but "it cannot be too strongly impressed that relief must be given mainly by affording suitable work to the indigent, gratuitous food being given only to those who really are quite unable to work."

20. The delay in passing orders on this correspondence, and the desire to present in one view the reports which about this time were sent up regarding the condition of the different districts, has led me to anticipate a little the course of events. We must retrace our steps somewhat to take up other threads of the story. A remarkable correspondence which took place before this illustrates the briskness of trade, and the suppleness and energy with which the local merchants were prepared to desert the beaten tracks of commerce, and to carry their grain wherever the eagerness of the demand indicated a prospect of profit. On the 31st October Mr. Clift, Executive Engineer of the Kadur District (who was chiefly employed in carrying on the improvements of the roads leading down the Ghâts to the west), asked leave to import a stock of rice from Mangalore, and to pay his coolies one seer of rice and 2 annas instead of the usual 4 annas a day. The Chief Commissioner sanctioned this, though only if absolute necessity existed; but remarked that the usual course of trade was for rice to go down from the Malnád to Mangalore, and that to bring it up was to reverse that course and probably to incur greater expense. It was then explained that the course of trade had already been reversed: all the Malnád rice had been sucked eastward to fill the vacuum caused by the famine in the "Maidán," and rice was daily coming up the Ghâts from the western coast to supply its place.

21. The usual instalments in which the land revenue was paid were four equal portions in the four months of December, January, February, and March. These had already been modified in 1875-76, and by a notification of the 2nd November the same modification was extended

* These sums, however, were not, according to Captain Ludlow, available for famine relief, as they had already been advanced, or promised, to petty contractors before famine was expected.

to 1876-77 in all but the Malnád taluks. The instalments were seven in number and ran on through April, May, and June. Under the orders issued on this date, as modified by those of 16th November and 10th February, Deputy Commissioners were authorised to make remissions as follows where crops had failed: on dry lands two, or at most three, instalments ($\frac{1}{4}$ or $\frac{3}{8}$), to ryots paying Rs. 35 and under; one or at most two instalments to ryots paying larger sums as land revenue. On wet lands,—namely, those irrigated by tanks, wells, or small channels taken out of rivers,—half the land revenue might be remitted if the tanks were absolutely dry, or if the wells and channels had yielded no water for two years running. This last concession was due to an application from the Assistant Commissioner in charge of the Pugarh taluk of Chitaldrug, who reported that about one-quarter of the land usually irrigated by the wells, which are very abundant there, had been waste for two consecutive years, the wells having been dry both in 1875 and in 1876.* The effect of these orders on the land revenue and the amount that was collected under them will be shewn subsequently.

22. The question of the best method of providing grazing for the cattle was at this time engaging the Chief Commissioner's attention, and it has been seen how loudly every district officer had represented this as among the chief causes of suffering to the ryots, and of the excessive emigration then going on. The Forest Department in Mysore is strongly officered; the head of it at this time was Captain VanSomeren, the Conservator, with seven Deputy and Assistant Conservators under him, and a proportionate subordinate establishment. This Department has a large number of State forests, most of which are in the "Malnád" tracts in the west, but some also are situated in the ranges of hills that intersect the "Maidán," particularly the range that runs through Madgiri and the Devaroydrug down to Kankanhalli; and the chief efforts of the Forest officers had been directed to the object of keeping out fires which are so constantly caused by the herdsmen accompanying grazing cattle, as they light their fires and cook their meals among the long grass, and which are so destructive to the young trees. Captain VanSomeren, therefore, very naturally looked with reluctance on any proposal to admit grazing cattle within the closed forests: he pointed out that in most cases there were many square miles of forest, not reserved by the State, in which the cattle could graze; and he proposed that in the first instance people should be allowed to come in and cut grass in most places, and that the permission to introduce cattle should not be given unless it were found absolutely necessary. The Mysore and Hassan forests, however, were too far from human habitations to make the permission to cut grass of any value, and there cattle might be admitted; and in the other cases he requested that the Commissioners who best knew the needs of the people would decide whether grazing ought to be allowed or not. For the Devaroydrug forest he put in a special plea, inasmuch as fires had been successfully kept out for nine years. But this forest too was opened for grazing by the Chief Commissioner's orders in January, as has already been seen, under the pressure of the urgent requirements of the people. The Lakwalli State forest in Kadur was another one from which the Conservator wished, for the same reason, that cattle might be excluded. But in the end of November the officer in charge of the "Amrat Mahál," or Government bullock-breeding establishment, asked to have this opened for about 5,000 of his cattle, on the score that the grazing grounds specially appropriated for them (known as *kawals* and scattered over most of the districts of the province) no longer afforded any pasturage, this being partly due to the invasion of those tracts by the ryots' cattle in such numbers that they could not be kept out. This forest too was thrown open both to the Government cattle and the public by the order of the 18th December.

23. On the 27th November the services of a special officer, Mr. Sanderson, were devoted to the task of making arrangements for the preservation of the cattle which, as Colonel Hay

wrote (17th November), had been driven in thousands to the wooded taluks of Mysore and Hassan, accompanied in many cases by the whole families of the owners. Grass and water were already failing in some of the jungles, and it was feared that in "many instances herds of cattle from a great distance would be driven there only to die or to perish on the road back." Mr. Sanderson was therefore to be employed in ascertaining the number of cattle in the jungles and the localities where grass and water were to be had, organising the labour of the emigrants in digging water-pits and cutting roads through the jungle, and arranging for the establishment of small temporary bazars.

24. On the 2nd November the Chief Commissioner (having first obtained the sanction of the Government of India) called a public meeting to make known the condition and prospects of the country, and invited charitable subscriptions to be devoted to the gratuitous feeding of the infirm poor, promising that Government would add a sum equivalent to the amount subscribed by the public. A Central Relief Committee was also appointed, consisting of civil and military officers and non-official European and native gentlemen resident in Bangalore, with Mr. J. D. Gordon as President, whose special charge was to be the care of the starving in the town and cantonment of Bangalore itself. Up to this time no very extensive measures had been required to meet such distress as had shewed itself there. Two associations of native gentlemen had been formed on the 24th and 25th September, one in the town (or *pettah*), and one in the cantonment. Subscriptions were collected and two kitchens established, where cooked food was distributed to those unable to work; and up to the 15th November Rs.3,548 were expended in this way. Besides this, ten native gentlemen subscribed a capital of Rs.5,500, with the object of buying grain and selling it below the market rate to indigent purchasers. They purchased about 4,000 maunds of ragi at an average price of 12½ seers, and re-sold it at an average price of 13½ seers per rupee, with a total loss of Rs.968. The Central Relief Committee took over the management of the two feeding-kitchens and the grain bazar from the 15th and 12th November respectively.

25. On the 2nd November, on the receipt of a telegram dated 30th October from the Government of India, district officers were directed to prepare reports in a statistical form, shewing the condition of each taluk as to rainfall, prices, probable extent of failure of crops, and amount devoted to relief. On the 13th December, a letter dated 2nd December was received from the Government of India, giving fuller details as to the information required, and this was circulated to all districts for their guidance. The statements in the form first called for were submitted in January and February, and the estimates there given as to the extent of the failure of the crops were as follow:—

District.	TALUKS IN WHICH THE PRODUCE WAS, AS COMPARED TO AN AVERAGE CROP,			
	½ and over.	From ¼ to ½.	From ¼th to ½th.	From ½th to nil.
Bangalore	...	...	9	...
Kolar	...	4	5	1
Tumkur	...	...	2	6
Mysore	11	...	...	...
Hassan	9	...	...	...
Kadur	3	2	...	...
Shimoga	6	2	...	...
Chitaldrug	...	1	4	3
TOTAL	29	9	20	10
	38		30	

The later returns, which were mostly made up in December, were to much the same effect, and may be thus summarised:—

District.	TALUKS IN WHICH THE PRODUCE WAS, AS COMPARED TO AN AVERAGE CROP,			
	½ and over.	From ¼ to ½.	From ¼th to ½th.	From ½th to nil.
Bangalore	...	...	5	4
Kolar	...	6	4	...
Tumkur	...	...	3	5
Mysore	11	...	...	...
Hassan	6	3	...	...
Kadur	4	...	2	...
Shimoga	6	2	...	...
Chitaldrug	...	...	4	4
TOTAL	27	11	1	13
	38		31	

26. There is always, however, a great deal of uncertainty about estimates of this kind; the average crop is calculated on an undecided basis, some officers taking 12 and some 16 as the representative figure for the produce of an average year; and in many cases the amildars' opinion varies much from the Deputy Commissioner's. Thus, for Kolar the figures given in the preceding statements are those of the amildars. The Deputy Commissioner, writing on the 18th January, estimated the produce in two taluks at nine-sixteenths, in two at seven-sixteenths, in five at five-sixteenths, and in one at one-fourth. I have no hesitation in saying that the amildars' estimates were the more correct of the two. In Mysore and Hassan the valuation given in the preceding statements is greatly too high. In the Mandia taluk of Mysore the Deputy Commissioner stated that the crops had failed almost entirely, and yet he calculated the outturn at 8 annas, or half the produce of an average year. In Haranhalli (of Hassan) it is stated that in some parts the crops entirely failed, and nowhere were they above 3 annas, or three-sixteenths, of an average; yet the conclusion came to was that "6 annas were saved." In Naga Mangala again (Hassan District), no crop produced more than one-eighth of an average, except rice, of which hardly any was sown, yet the summary was that "6 annas," i. e., either three-eighths or half, according to the method of calculation, was saved. It must be remembered also that the main crop everywhere is ragi, which is not threshed out till January or February, and therefore estimates made in December could not be tested in the only practical way.

27. My own conclusion, formed after careful and repeated enquiries, and after inspection (in many cases repeated two or three times) of the taluks in which I venture to differ from the estimates formed at the time by the local officers, is that the following statement represents with tolerable accuracy the quantity of crop raised and harvested during 1876-77:—

District.	TALUKS IN WHICH THE PRODUCE WAS, AS COMPARED TO AN AVERAGE CROP,			
	½ and over.	From ¼ to ½.	From ¼th to ½th.	From ½th to nil.
Bangalore	...	1	7	1
Kolar	...	3	7	...
Tumkur	...	...	4	4
Mysore	7	3	1	...
Hassan	3	3	3	...
Kadur	3	1	2	...
Shimoga	5	1	2	...
Chitaldrug	...	1	5	2
TOTAL	18	13	31	7
	31		38	

gratuitous relief, and house-to-house visitation, were then dwelt on, and in conclusion the Chief Commissioner and officers of the Commission were congratulated on the "zeal, judgment, and humanity which have characterised their arrangements and exertions to meet the great calamity which has fallen on the province, and on the large measure of success which has hitherto attended them."

35. On the 8th of January, Captain Ludlow, Deputy Commissioner of Tumkur, returning from a month's absence, at once observed that a considerable change had come over the appearance of the people during the month he had been away. On the 11th January he wrote demi-officially to tell the Chief Commissioner the impression he had formed. Within the last 48 hours he had seen several people actually dying of starvation. He begged for the rescission of the order to confine himself to one or two works in a taluk, or else for sanction to his former proposal to start road-work on all the secondary roads, and to spend Rs. 47,500 on it. Mr. Gordon, after a personal interview, sanctioned this request on the 13th January. About the same time Mr. Meiklejohn of the Revenue Survey was posted to the district as a special Assistant to the Deputy Commissioner. He was the first special relief officer appointed in the province, and his services in this district were invaluable.

36. On the 6th January the Officiating Chief Commissioner informed his officers that he learnt by a communication from the Madras Government that numbers of people were leaving the province and crossing the frontier to Bellary, for the purpose of getting employment on relief works, which they allege have been stopped in their own districts. Mr. Gordon went on to say that he feared the attempts made to provide relief in the most distressed taluks were very inadequate, and that it was very unlikely that, with suitable work, provided at a reasonable distance, people would go to other districts, save for the object of preserving their cattle. He therefore urged that wider and more systematic arrangements should be made to provide relief works for all who are able and willing to work. The local officers, however, all attributed this exodus to the laxity with which the relief measures were administered in the adjoining districts. Captain Ludlow reports that numbers sought relief in Bellary, being attracted by the system of daily work without a task, whereas in Tumkur the task was exacted:—

"There were also extraordinary rumours abroad of the facility with which work could be of the high rate of wages paid. To quote one instance: on the road between Sira and Madgiri, I to-do Mysore ryot, travelling with two carts, a milch cow, a cot strapped to the top of one of, cooking utensils and other articles. On enquiring whether he was going, he informed me that he had heard that Rs. 8 per mensem were paid to head coolies on the famine relief works in the Bellary District, and that he was going there in search of work for himself and his family. This man was in no need of relief; he was evidently comfortably off, but the slack season being on and work procurable on easy terms he thought he might reap a little harvest. In another instance Mr. Meiklejohn reported having met an old man in the Sira taluk who admitted he was too old to work, but had gone to Bellary and earned one rupee a week on relief works. He had some fine fields of irrigated jowar (millet) coming up."

37. This was the beginning of a long and rather acrid correspondence with the Madras Government, the history of which had better be followed out now to its close. On the 9th February the Government of Madras issued an order that "coolies" from Mysore and Hyderabad were to be treated on relief works like our own people. On the 10th February they wrote to say that large numbers of people were flocking from Mysore to Bellary, Cuddapah, and the Wynád; that attempts had been made to "eliminate them from the relief houses," but without success; and that the Madras Government was opposed to doing this, as it perceived the serious risk involved in sending back again people who had left their homes in search of food, and it proposed therefore that the Mysore Government should send its officers to arrange for the return of these people as soon as possible, and should meanwhile pay for their support while in the Madras relief houses.

38. The Chief Commissioner replied on the 15th of February, altogether repudiating this proposal of payment, and asserting that the reason for the emigration had been, not any deficiency

of relief in Mysore, but the lavish way in which it was given in Madras, and the absence of any tests or tasks. As to the Wynád, there had no doubt been large emigration to coffee plantations both there and in Coorg, and it would have been inexpedient for the Mysore Government to have checked it, as the planters would have complained if there had been any interference with the labour market.

39. On the 16th February Sir Richard Temple wrote a Minute in which he communicated his views on this subject to the Madras Government. He held that, if Madras treated Mysore and Hyderabad paupers exactly like British subjects, and if, as was the case, relief was more liberally administered in Madras than in Mysore, it would necessarily follow that paupers would be attracted to Madras and the Government would be burdened with an expenditure which did not properly belong to it, and which the Mysore State was anxious and willing to bear, although it imposed its own conditions on the recipients of relief. He recommended, therefore, that such immigrants should be received temporarily, but that arrangements should be made with the nearest authorities of Mysore or Hyderabad to transfer them back to their own territory.

40. On the 1st March the Government of Madras replied to the Mysore letter of the 15th February to the effect that it was beside the question to discuss the reason why Mysore paupers emigrated to Madras districts; the fact remained that they were there in great numbers and in severe distress, and that by relieving them a burden was thrown on the Madras revenues which they ought not to bear. His Grace the Governor considered that there should be no difficulty in arranging for a contribution from Mysore to pay for the cost of feeding its own people, and again requested that a Mysore official might be sent to supervise the return of the people to their own country. On the 6th March this latter request was complied with. An Assistant Commissioner, Mohamed Ali, was sent from Kolar to the adjoining parts of Bellary to bring back such sore people as he might find there, but the Chief Commissioner declared himself unable to comply with the request to contribute any sum towards the outlay incurred for relief in the Madras districts.

41. But already, before these letters were penned, events had occurred which proved the justice of Sir Richard Temple's and Mr. Saunders' views as to the real causes of the Mysore emigration, and the temporary character of that phenomenon. The letters forwarded by the Government of Madras on the 1st March to prove their case were dated 10th December, 11th January, and 23rd January, respectively; but meanwhile the visit of the Famine Delegate, Sir Richard Temple, and his instructions were bearing fruit, and severer tests for admission and a stricter system of task work were being enforced in the Cuddapah and Bellary Districts. This at once not only stopped the Mysore emigration, but turned the tide backwards and induced many Madras paupers to enter Mysore districts in the hope of getting relief on easier terms than at home. On the 19th February it was reported that the people of the Hindupur and Madak Sira taluks of Bellary were entering the Madgiri taluk of Tumkur in great numbers, flocking both to the relief works and kitchens and spreading cholera. The Chief Commissioner issued a Resolution on this subject on the 22nd February. He had

"no reason to believe but that the provision made by the Madras authorities for the subsistence of their poor is fully adequate, and that the immigration is due to the expectations of these people that they will obtain more liberal treatment on this side. Accordingly, he had directed that the scale of daily wages on special relief work should be assimilated to that recently prescribed by the Madras Government, and that able-bodied persons should be relegated to the works under the Public Works Department."

(This presumably refers to the Resolution of 26th February (see paragraph 86), although no reference is there made to Madras rates.)

"Those who are in a starving condition must be afforded the needful help at the relief kitchens, and efforts should be made to send them back to their houses."

42. On the 26th March Mr. Mahomed Ali reported that he had carried out his orders, and had found altogether one family of four persons whom he had sent back to the Chitaldrug District with one rupee for their subsistence, and 33 persons in a relief camp in the Hindupur taluk, who were too ill to travel.

43. On the 2nd and 6th April Sir Richard Temple recorded two Minutes, the outcome of which was that the question seemed to have settled itself. There was no longer any need to depute officers to bring back the refugees, because there were none or next to none left in Bellary, Cuddapah, or Coimbatore, and the Collector of Malabar had telegraphed on the 3rd April that "no Mysore people in the Wynád now need relief, as they are returning already to Mysore, and all say they intend returning."

44. The information supplied by the Collector of Malabar was apparently incorrect, and much correspondence subsequently passed, as will be narrated in its proper place, regarding the proper measures for stopping emigration to the coffee districts and for providing employment and relief for the returning emigrants. But of immigration into the eastern districts of Madras, little more was heard. The only reference I have met with on the subject bears date in July, when the Collector of Cuddapah reported that there were 700 or 800 paupers from the Kolar District in Madanpilly. An official was at once deputed, who found as usual that most of those who asserted that they had come from Mysore had not really done so; but he collected 286 Kolar paupers and took them away. The Chief Commissioner remarked that this fact was not creditable to the Kolar administration; but Mr. Krishnaiengar replied that no administration however good, and no system of relief however complete, could stop wandering. There were Cuddapah paupers in Kolar, and Kolar paupers in Cuddapah. The habit of going to a distance to seek relief was ingrained in the minds of the people, who could not bear to appear as paupers in places where they were known and had lived in respectability, but preferred to go to distant places where they were strangers.

45. The general question how the British Government should deal, in times of famine, with Native States (and Mysore must be considered to be a Native State, since, though at present administered by British officers, it is financially separated from British India and bound to provide for its expenditure out of its own income) is one that has been referred to the Famine Commission to report on, and it would be out of place for me to discuss it in this report. But it will be necessary to state, in Chapter V, in what way I found it expedient to deal with the relics of the theory of deportation.

46. Early in February Sir Richard Temple, the Famine Delegate from the Government of India, visited Mysore. He entered Bangalore by rail, and after remaining three days and visiting the environs he returned *via* Dod Ballapur and the northern road to Bellary. Mr. C. Bernard, his Secretary, travelled through the Kolar District from Cuddapah and joined Sir Richard at Bangalore. Thus, through his own eyes and his Secretary's, he had a good opportunity of seeing the condition of the eastern part of Mysore; and in Dod Ballapur and Devanhalli he saw as bad a tract as any in the province. He also met a large number of the officers of the Commission at Bangalore. The minute and memorandum which he wrote on 14th February at Bellary, concluding with Mr. Bernard's note on his journey through Kolar, give valuable information as to the impression which was made on those experienced observers.

47. Sir Richard Temple's memorandum begins by giving a rapid sketch of the usual character and present condition of the country. The previous bad year is referred to, and an estimate given of the outturn of the current year. He put the produce of four districts (Bangalore, Kolar, Tumkur, and Chitaldrug) at less than one-fifth, and of Kadur at a quarter, of an ordinary harvest; the other three districts at from a half to three-fourths. His conclusion from this was

that the produce of the harvest was enough to feed not quite half the population, or $2\frac{1}{2}$ millions; that of the remainder, or $2\frac{1}{2}$ millions, about 1,850,000 would subsist on old stocks, and 900,000 people, requiring 13,000 tons of food monthly, would be supported by railway-borne grain. Now, 13,000 tons was precisely the quantity which was brought in by the railway to Bangalore in the month of February.

48. My own estimate of the amount of food-grain produced and of the deficiency below the minimum consumption has already been given; it was framed at leisure, and after considerable enquiry in the country, and it would be neither seemly nor reasonable to criticise an estimate made under such great disadvantages as Sir Richard Temple's, and framed confessedly as a mere working hypothesis in default of better data. But as there is nothing more important than the framing of a sound forecast during the early stages of a famine, and facing the future with something like accurate knowledge in one's right hand, it seems worth while to dwell a little on

Richard Temple's calculation there are three hypothetical assumptions, all of which I will now mention as well as the conclusion to be drawn from them—

The proportion borne by the actual produce of the year to the average produce of the ordinary year.

second.—The number of persons whom the actual produce of the year would support.

Third.—The amount of old stocks, and the number who would be supported from them.

The estimate of the proportional produce of eight districts was as follows:—

<i>Proportion of crop saved.</i>			
Bangalore	2	annas or	2 out of 16
Kolar	3	"	3 " 16
Tumkur	2	"	2 " 16
Mysore	8 to 11 annas or say 10	"	" 16
Hassan	8	annas or	8 " 16
Kadur	4	"	4 " 16
Shimoga	9	"	9 " 16
Chitaldrug	2	"	2 " 16
TOTAL			40 out of 128

The total crop of the province is thus estimated at 40, where the produce of an average year would be 128,—that is, it was thought to be a little less than one-third. So far the estimate agrees closely as possible with that given in paragraph 30. But as to the second hypothesis, the number of people who would be supported by the food produced, the assumption is slightly different; it was calculated by Sir Richard Temple as $2\frac{1}{2}$ millions. According to my estimate, we would put the produce of an average year at 11 millions of khandis. So that a one-third crop would be enough to feed $3\frac{3}{4}$ millions, and a crop a little less than one-third would feed about $3\frac{1}{2}$ millions. I assume (as was set forth in paragraph 31) that a quarter of a million is provided for by emigration and coffee, then there remain 1,500,000 people to be fed. The railway-borne grain is sufficient for 800,000 or 900,000, and the balance would have apparently to be supported by old food stocks in the country, if they were to be fed at all.

49. As to the existence of these old stocks there was next to no evidence adduced, and no attempt seems to have been made to enquire into the subject. There appears to have been the usual divergence of opinion; the district officers (except in Mysore, where the existence of considerable stocks is undoubted) asserted that there were none; the officers at head-quarters expressed their belief that stocks were large. On the whole, I am inclined to consider that,

whether any stocks existed or not, very little was brought out to add to the local supply. The stocks were admittedly very much depleted. The lawlessness of the country was such that no man unless strongly protected could venture to confess to the possession of any such property, and, as far as I can learn, no local ragi, and hardly any local rice, were seen in any market after March or April 1877 till February 1878. But though not exposed for sale, and though none of the concealed grain-pits were opened, it is probable that the families of many ryots lived for months on old ragi laid by in their houses, and when they were able the ryots also fed their dependants from the same stores. It seems to me, therefore, fair to conclude that most, if not all, of the 1½ millions could have been fed from old stores combined with the railway-borne grain, and that there was likely to be no actual famine of food in the country.

50. But this only removes the question one step backwards. It being granted that at least 1½ millions would have to buy their food for a year, the next enquiry should be what is the purchasing power of those 1½ millions? A large number of these, especially the low field labourers, those who live by wages, were known to have hardly any capital. Even supposing that half these people had, or could obtain otherwise, money with which to buy food, the necessity remained of providing relief works for 700,000 or 800,000 people, which must necessarily prove a severe strain on the powers of the Civil Administration.

51. We have already seen that the chief officers of the province do not appear to have realised, up to this time, that it was incumbent on them to prepare for so tremendous a task, and it would have been fortunate indeed for Mysore if so consummate an organiser as Sir Richard Temple had had the necessary information supplied to him to shew the real extent of the calamity and the time available for working out a scheme of sufficient magnitude and comprehension with the fast approaching famine. But it does not seem that any of the defects in the administrative system which will shortly be noticed (under the head of relief works), the measures suggested by Colonel Pearse, or the expostulations of Mr. Ricketts, were brought to his notice. No intimation existed at the time as to the number of people receiving relief. Estimates were prepared and assured him that, at the beginning of January, 30,000 had been fed in relief kitchens and employed on relief works; but these were undoubtedly exaggerated, and it will be shewn later on that in all probability a nearer approximation to the correct numbers would be to put the total number of people at that time at 15,000, and those on special relief works (that is, not including the labourers permanently engaged under the Public Works Department, in whose status no alteration had taken place) at 15,000, or a total of 30,000. By the time of Sir Richard Temple's visit, the number had probably risen to 30,000 on relief works and 20,000 in kitchens, or 50,000 in all.

52. The best data possessed by Sir Richard Temple for judging of the character of the relief works and the system under which they were executed were mainly derived from Mr. Bernard. On account of his visit to the Kolar District; and it is in one sense unfortunate that his visit had not been paid to the district in which the system was best worked and in which relief works were most efficiently carried out. Mr. B. Krishnaiengar, C.S.I., who for 12 years has been Deputy Commissioner of that district, joined to an intimate knowledge of his people and country a remarkable enthusiasm for material improvements and very considerable knowledge (for a non-professional) of engineering matters. He felt a personal delight in seeing machinery in efficient and in good preservation, a positive pain in seeing one that was breached and out of order. He saw in this famine an opportunity of carrying out many of his favourite schemes, and pushed them on with a vigour and assiduity, and a readiness to assume responsibility, which deserve high praise and which conduced greatly to the prosperity of his district. His office was well ordered and systematic. Consequently, Mr. Bernard did not hear from him, and would have heard had he been brought into as close contact with Mr. Ricketts or Captain Lu-

complaints of the constant running short of funds, of the difficulty with which they were granted and recouped, of the impossibility of complying with all the details of the usual routine, with an office out of order and overworked, and of the frequent refusal to sanction the works they proposed. Had such complaints been brought to his notice, it is probable that Sir Richard Temple would have given advice which would have saved the system of relief works from becoming the comparative failure it ultimately did.

53. Mr. Krishnaiengar's works were mainly repairs to tanks, restoring them when breached, strengthening the dams when decayed, and excavating the basins which had been silted up; and in planning these works he received much and cordial assistance from Lieutenant Kensington, R.E., Executive Engineer in the Irrigation Branch, who had some important tank repairs in progress under him in one part of the district. It was assumed mistakenly that the same class of useful work was then being carried on in other districts, and that "the officers of the Public Works Department were co-operating most fully with the civil officers in carrying out relief works." Unhappily this was not the case. In Bangalore the Deputy Commissioner received help from Mr. E., the Irrigation Engineer in his district, and one considerable chain of tanks was repaired at his request, but he had not many proposals of this kind to make, and the works which were carried out were mainly the construction of new roads and the demolition of old ones. In Tumkur the Deputy Commissioner hardly undertook any tanks, and confined himself entirely to road-metalling, and he received next to no assistance from his District Engineer. Moreover, in Kolar itself, as will be seen in its proper place, the Chief Commissioner at this time checked the tank works which the Deputy Commissioner advocated by an expression of his disapproval of the class of work, on the ground of their being too large for the people seeking for employment.

Holding, however, these views, based on the information he received from the local officers, as to the useful character of the relief works that were being carried on, Sir Richard Temple did not feel himself bound to enter into the controversy between large and small works, between the necessity of professional supervision, or the necessity of enforcing any "distance test" between the labourers. He wrote:—

"So long as good useful work on irrigation tanks is being done at piece-work rates, perhaps it may not be wise to begin any large work; but if hereafter bodies of people should require relief employment, the Mysore Government has ready two excellent schemes."

These schemes were the great "Mari Kanwe" project of damming up the Vedavati in the Chitaldrug District. "If, therefore, large works are required, the Mysore Government has them ready for immediate commencement." The assumption here was apparently that it was by which to judge of the necessity of "large" works was the number of people who flock to receive relief. It could hardly have been foreseen that the inefficient management of "small" works, their short duration, the constant stoppage of supplies, and the uncertainty of being able to live by them, might so discourage the people as to drive them away from the relief works, and to cause the numbers to decrease, instead of increasing, at the time when distress was becoming more and more acute.

55. As to the general condition of the people at this time, Sir Richard Temple's opinion was on the whole unfavourable. There was not much definite information on the subject in the possession of the officers of the province. Captain Ludlow's report of the occurrence of cases of starvation in January has already been quoted, and in February Mr. Meiklejohn picked up nine dead children in one day and found many people lying about the streets of Tiptur at the point of death. The mortuary registers, defective as they were, shewed a slight increase over the number of deaths in January, while the number reported in February was twice as

be referred by the patels. A sum of Rs.50 or Rs.100 was to be entrusted to each amildar for these purposes, and the Chief Commissioner would be prepared to sanction a further allotment to each taluk in addition to the funds provided for relief kitchens. The services of munsifs were to be utilised, and they were to be relieved of all civil work, and "the superior control of these operations" should be "exercised by the sub-divisional and other special officers who might be appointed." The Resolution ends thus:—

"Mr. Saunders desires lastly to impress upon all officers of the Administration from the Deputy Commissioners to the village patels that he must hold them responsible for following out the spirit of the instructions above conveyed, and for maintaining a strict watch over all persons in need of relief, with a full sense of the obligation which rests upon the Administration of allowing no deaths to occur which, under God's providence, can be prevented."

58. The humane and benevolent spirit which dictated these instructions cannot be too highly praised; but it needs little practical experience to see that they were wanting in precision and definiteness, and that in some respects, considering the character of the persons to whom was entrusted the duty of carrying them out, they were not likely to work well. The primary responsibility was imposed on patels, but in many villages no patels existed, and in many more they received no remuneration at all, or no adequate remuneration for their ordinary duties, and were not likely to be zealous in performing the additional tasks expected from them. They were ordered to disburse relief in the first instance out of their own pockets, but many patels were in a state of abject poverty, and some were supporting themselves by labour on the relief works, and in all cases it is easy to imagine that the hope of reimbursement should seem distant and uncertain. They were told to send people able to work to relief works, but no provision is made for the possibility that these people might refuse to go. They were ordered to send all others to kitchens, provided they could bear the journey; but no instructions were given that at every kitchen sheds should be erected at which such people could be received and housed. Later on, too, in paragraph 8 a conflicting order was given that they should refer such people to the relief officers, but it was not shown how this was to be done or what the relief officers were to do with them. Nothing was said about permanently feeding in their homes, as long as they were in distress, the old, sick, and bed-ridden who could neither work nor walk to a relief house, and whom it was a useless expense to carry there. The patels were to see that no traveller died of starvation, but it was not seen that this was beyond the power of the patels of towns or of villages on the high roads crowded by wanderers. Colonel Hay reports that 7,000 persons passed along the road through Naga Mangala in 9 days of March, all in a state of extreme emaciation. The sheikhdars were told to visit all their villages within 10 days; it was not said whether they were to repeat the visit. No definite instructions were given as to the duties of the taluk relief officers, nor any system of report provided either as to the fact of the appointment of such officers, or as to the amount and character of the work done by them. As to the promise to make special arrangements for giving effect to these orders, a single instance will suffice to shew how it was carried out. The Deputy Commissioner of Bangalore, immediately he received the Resolution (on 13th February), applied for a grant of Rs.10,000 a month to enable him to carry out the instructions; the Commissioner thought a permanent advance of Rs.5,000 would do for each district; the Chief Commissioner on the 22nd February made a grant of Rs.20,000 to be distributed to the three districts for "kitchens" (no mention being made of the village relief), and the Commissioner out of this distributed Rs.3,000 to each of his districts.

59. Of the actual working of these instructions and of the effect they produced, no report has been seen by me, and I believe none was ever called for or submitted. Some good no doubt was produced by them. When I became acquainted with the province, I found one relief officer (generally a Police Inspector or Peshkar in substantive rank) employed in most of the affected

taluks. They all had some special work, such as the charge of one or more kitchens, and could only give their spare time to the inspection of villages. They used, when they went through a village or along a road, to give small sums (one or two annas) to relieve the momentary wants of any specially starving people they found, and to urge them to go to the kitchens; but they had no means of relieving the sick bed-ridden or helpless old people at their homes. Their reports, however, were useful to the district officers, informing them of the general condition of the country and of the specially affected tracts. But taking the province as a whole, the effect of this well-meant circular, so often referred to in the official reports as shewing the activity with which relief was administered, was not very great.

60. The mortuary returns of the province are, as has already been shewn, extremely incomplete, the average number of deaths being returned as about 12 per mille per year. But however inefficient a system of this kind may be, it may probably be claimed for it that its irregularity is regular, and that the relative figures of one year as compared with another do indicate a real difference, however inaccurate the absolute figures may be. Treated in this way, the returns had now begun to give a warning that famine was producing its usual results. The number of deaths recorded in 1874 was 51,230, and in 1875, 51,276, or 12.1 per mille; in 1876 it rose to 54,265, or 12.8 per mille. The increase was due to cholera, of which there had been a severe outbreak in the earlier part of the year—an outbreak of which hardly any indication appears in the official correspondence. The deaths in 1875 had been 3,139 from this cause; in 1876 they amounted to 12,087. The epidemic was at its height in April, May, and June, when 7,807 deaths occurred. It declined from this time till the reported number in December 1876 had fallen to 277. On the other hand, the deaths from fever in 1876 were considerably lower than in either of the two preceding years. Cholera revived again in 1877 and raged with extreme virulence during the months of February to June. In February and March alone the mortuary returns registered 28,000 deaths from this cause, and there is no doubt that this number is much below the real mortality. When cholera broke out on a relief work the labourers all dispersed, but when it broke out in a relief kitchen there was no escape for the emaciated and sick. Captain Ludlow reports two shocking instances of such outbreaks at Sira and Chiknaikanhalli:—

“The dead and dying were lying about on all sides, cholera patients rolling about in the midst of persons free of the disease; for shelter some had crawled to the graves in the adjoining cemetery and had lain themselves down between two graves as a support to their wearied limbs; the crows were hovering over bodies that had still a spark of life left in them; and beyond an ignorant ‘Hakim’ there was no one but ourselves to administer medical aid to the many who were suffering from cholera and small-pox.” “On the 13th March I arrived very early in the morning at the Chiknaikanhalli relief kitchen; there were very few people about, so I took a quick survey of the single shed that had been run up. The place seemed to be tenanted by none but the dead and dying. In a few minutes I picked up five bodies, one being that of an infant which its dying mother had firmly clasped, ignorant of the child lying no more: the cholera patients were lying about unheeded by those around; some poor children were crying piteously for water within hearing of the cooks, who never stirred to wet the lips of the poor little things that were in *extremis* from cholera; and in spite of all this frightful suffering, I found the mutsuddi (superintendent of the kitchen) ‘not fifty yards off complacently giving orders about the rations to be distributed.’”

61. On the 31st January, the first of the fortnightly statements called for by the orders of the Government of India in November was published; the second one appeared on the 17th February, and thenceforward they were issued weekly, the accounts being made up to the night of Saturday in each week. They were gradually improved in form, and after the first few numbers had appeared they became extremely complete, containing all necessary information as to the numbers on relief works, civil and professional, the numbers fed gratuitously, the cost of relief, the prices, and the rainfall. I extract here one or two notices as to the condition of the people and country which seem worthy of record. On 24th February, Major Chrystie, R.E., reported after a journey from Bangalore to Bellary that cholera in a severe form had broken up the larger gangs;

that those relieved at kitchens were not generally so emaciated as he expected to have seen them, though in some instances they were pitiable objects. In the northern taluks there was much ripening rice cultivated under tanks and wells, and everywhere the ryots were using what water they could obtain, and cheerfully doing their best to look their difficulties in the face. Some subsistence was obtained by the distressed by gathering a harvest of seed from the dying bamboos in the Mysore jungles, the seed being sold at 25 seers the rupee, and it was reported that this had occurred before in 1837, which is one of the periods of previous scarcity. Throughout this period the prices of common rice varied from about 13 to 14 lbs per rupee, and ragi from 16 to 18 lbs per rupee. Showers of rain fell everywhere during March, setting the ploughs at work and encouraging cultivation with the hope (entertained also in the preceding year: see paragraph 10, Chapter II) of an early and abundant monsoon. On the 31st March and 1st April a heavy downpour took place over most of the Nandidrug Division, but did not extend to the western and northern districts. On the whole, the month of March closed with fairly favourable prospects, and with sanguine anticipations on the part of the authorities at head-quarters that the distress would soon pass away.

62. The increase of crime during this period was very great: it both serves as an index to the distressed and disturbed state of the people, and also shews how severe the strain on the district officers must have been when so much extra work was thrown on them. The following table gives the statistics of those cases of crime in which we can best observe both the direct effects of hunger and of the lawlessness induced by hunger. These are dacoity, robbery, burglary, and theft. The smallness of the number of such cases before the famine, hardly over 25 a month for each district in the whole province, testifies to the simple and law-abiding habits of the people in ordinary times. In August and September 1876 the number began to increase, and the average number of such cases between January and March 1877 in Bangalore, Kolár, Tumkur, and Chitaldrug was six times the usual amount. The rise, however, in Mysore, Kadur, and Shimoga was very slight indeed; in Hassan it did not begin so early as in the worst districts; but between January and March the number of cases was four times what it had been before. The work thus imposed on district officers, already beginning to be overburdened with the extra labours incident on famine relief, was very heavy, and efforts were made to assist them by giving enhanced powers to Assistant Commissioners and amildars, and in many cases by relieving the amildar entirely of his magisterial work and giving it over to his serishtadar or head clerk.

Crime Return.

District.	AVERAGE MONTHLY NUMBER OF CRIMES REPORTED.					AVERAGE MONTHLY NUMBER OF PERSONS ARRESTED.				
	January to August 1876.	September to December 1876.	January to March 1877.	April to August 1877.	September to December 1877.	January to August 1876.	September to December 1876.	January to March 1877.	April to August 1877.	September to December 1877.
Bangalore	20.25	103.50	173.00	264.2	203.00	21.60	104.50	222.0	425.4	365.00
Kolár	38.75	84.00	204.00	393.2	214.20	52.60	307.00	318.0	602.0	327.00
Tumkur	14.50	63.50	73.00	113.2	94.50	15.50	167.50	196.0	292.0	277.00
Mysore	50.00	64.50	54.30	135.2	193.00	38.00	41.25	45.0	166.8	275.00
Hassan	22.10	33.50	97.30	162.4	164.75	31.10	98.75	138.3	174.0	212.25
Kadur	23.00	28.00	22.20	66.4	87.00	53.10	116.25	58.3	122.2	180.25
Shimoga	30.60	34.75	38.00	93.4	54.75	41.00	35.00	47.3	178.2	109.00
Chitaldrug	18.40	40.25	105.00	212.2	97.75	135.20	212.6	393.8		180.75
TOTAL	217.60	456.00	767.50	1,417	1,109	311.00	995.00	1,267	2,357	1,926

63. The history of prices during the early part of this period is somewhat obscure. On the 3rd October the Chief Commissioner reported to the Government of India that common rice

was selling at 10 to 11 seers per rupee and ragi at 14 to 16; but the price lists shew that rice was at 10 seers in August, 9 in September, 8 in October, 7 in November, and 6½ in December. Ragi, again, in the letter of 11th October was ordered to be distributed at 8 seers the rupee, although it had been, according to the letter of 3rd October, at 14 to 16 seers, or half the price just before. Between September and November it was bought, as we have seen, by the Charitable Committee at 12½ seers. The price lists shew it at 18 seers in August, 14½ in September, 10 to 11 in October, 8 to 9 in November, 7 to 8 in December. From that time the rapid rise came to an end, and a slight fall set in. Rice, which at the end of December was 6½ seers or 13 lbs per rupee, from then to the end of March varied little, averaging from 13 to 14 lbs. During this time the railway was pouring in a constantly increasing quantity of grain, most of which was rice—

Month.	Quantity of tons.	Daily average.
November	9,943	331½
December	11,562	373.
January	11,259	363
February	13,130	469
March	15,282	493

Besides this import rice was being brought up the Western Ghats to the Malnad, but no record was kept of the quantities so introduced. Ragi was naturally dearest in December, as the new grain only comes into market in January; it then fetched 15 lbs per rupee, and the price fell slightly, averaging 16 to 18 lbs up to the end of March.

61. The narrative has now run through all the reports which shew the first appreciation of the prospects before them by the district officers and the Government, and the nature of the remedies with which the Chief Commissioner proposed, acting first on his own judgment, and later on with the assistance of Sir R. Temple's advice, to meet the famine; and the account of these more general proceedings and enquiries has been brought down to the end of March. I now propose to give a more detailed account of the two main classes of relief measures, works and kitchens, of the manner in which they were carried out, and the extent to which they were effectual in alleviating the distress of the country.

65. During the months of September and October grants were made to different districts or to the Commissioner of a Division to distribute among his districts, according as the Deputy Commissioners applied for money and satisfied the Chief Commissioner that there was need of it, and that their proposals for spending it deserved approval. The Chief Commissioner was not easily satisfied on this head, but considered himself bound in the interests of economy to scrutinise these applications closely. Instances illustrating this have already been quoted, and will again be met with in the course of this history, and it is not necessary now to particularise in detail every grant and to state how it was utilised.

66. On the 27th October the Officiating Chief Engineer (Colonel Johnson) issued a circular to all officers in his department, enjoining on them the duty of giving cordial assistance to the civil officers in this time of pressure, by suggesting to them useful works, and helping them to prepare the estimates and put the works in hand. Following on this, Captain Bowen, R.E., Superintending Engineer, made the useful suggestion that, wherever other work was not possible labourers might be well employed in collecting and breaking stone by the high roads, and thus laying up a store which would diminish expenditure in future years. This proposal was approved and circulated to district officers, and in many places, especially in Tumkur, where there was great difficulty in finding useful works, the famine labour was largely employed in this way.

67. On the 4th November the Deputy Commissioner of Bangalore drew attention to the need of a regular system of grants to provide for the wants of the people, as witho

it there could be no permanency or continuity in the works. In reply to this, the Commissioner authorised him (6th November) to carry on works on his (the Commissioner's) responsibility, and not to turn people off if even the money allotments failed.

68. The system under which relief works were planned and sanctioned at this time was as follows. First, the Chief Commissioner made a money allotment to the Commissioner for him to distribute, and out of this he granted a sum to each of his districts. The Deputy Commissioner in his turn would probably divide it among his taluks, according to his opinion of their needs. But not a rupee of this money could be touched till it was definitely appropriated to a particular work. The next process was for the Deputy Commissioner to draw up estimates, and, in the case of roads, plans and detailed specifications of the works he desired to carry out. If the cost was under Rs. 500, he had power to sanction it himself. If over Rs. 500 and less than Rs. 1,000, the Commissioner would sanction it. If over Rs. 1,000, it had to go for sanction to the Chief Commissioner. But in any case, whether he had to obtain sanction to the work or not, he had to submit a notification in duplicate shewing how much, out of the total sum allotted, was appropriated to each work, and if no objection was taken, the notification was said to be accepted.

In the case of large works where sanction had to be obtained, if it was thought that the execution of the work would take some time, it would be sanctioned, but only part of the estimate "appropriated," and when that money was expended a fresh appropriation had to be asked for. One consequence of this was that a large quantity of a Deputy Commissioner's allotment was always locked up. Say he had Rs. 50,000 granted him. All of this, at least as far as notifications had been accepted, would be appropriated to particular works, but not necessarily spent or even likely to be spent for some weeks; and so a Deputy Commissioner might have a large unexpended balance, and yet have no money at all with which to start a new and urgent relief work. The practical inconveniences that arose from these arrangements in carrying on a large number of small works will be referred to in the sequel.

69. On the 10th November the Central Relief Committee intimated that they proposed opening relief operations on a larger scale than heretofore, and feared that this might attract the indigent population, unless more active and systematic steps were taken to offer them employment on relief works and so to retain them near their homes. It was proposed, too, that a uniform scale of wages should be laid down for labourers on such works throughout the province. The Chief Commissioner on the 15th November circulated a copy of this letter, and suggested that the rate fixed should not exceed 2½ annas for a male adult and 1½ for a female. No positive orders, however, were passed on the subject till a later date. On the 28th November the Chief Commissioner, replying to a proposal from Chitaldrug to raise the wages of coolies to 4 annas for a man and 2½ annas to a woman, on account of the high prices, observed that he

"could not but view the proposal with serious apprehension as calculated to cause a large influx of persons seeking work from the adjoining districts, and to alter the character of the works, which are undertaken solely for the relief of destitute persons."

70. On the 29th November the Chief Commissioner granted Rs. 10,000 more for the three districts of the Nandidrug Division, (Rs. 15,000 having been asked for from two) and noted that, including the unexpended allotments of the last year, Rs. 71,747 had been allotted, while notifications and estimates for Rs. 30,482 only had been submitted. The Deputy Commissioner of Bangalore in particular had not sent up a single notification. The Chief Commissioner

"looked to the Commissioner to maintain an effective control over the expenditure by issuing definite instructions as to the mode in which they are to be carried out and the individual projects to be taken up."

The fresh grant was only sanctioned on the understanding that no further sums would be given till those already allotted had been utilised.

71. These instructions were forwarded by the Commissioner to his officers on the 8th December 1876. In order to maintain the necessary check over the rate of expenditure he prescribed a new periodical statement to be submitted every 10 days, shewing the amounts expended on works. He further ruled that no new work was to be started in any locality till any project previously started "in the neighbourhood" had been completed, but he did not prescribe any limit of distance.

72. In the meantime a correspondence was going on with Colonel Hay, the Commissioner of Ashtagram, which forms a remarkable contrast with that in which the Commissioner of Nandidrug and his Deputy Commissioners were engaged. Colonel Hay knew his districts and his officers, and could state with precision and clearness what works were going on and were capable of being extended, what quarters and taluks were most in need of relief, and what works could be opened there to provide relief, and he was opposed to the very small works that were in favour in Bangalore. His different reports were dealt with on the 2nd, 6th, 11th, and 29th of December, and the various works proposed (mainly roads) were sanctioned by the Chief Commissioner. On the 5th December, however, a very similar proposal by the Commissioner of Nagar, to open out a new road in the worst parts of the Shimoga and Kadur districts, was rejected, on the ground that "no such project should be taken in hand unless there was the clearest evidence of its future utility, and that the work itself is of a nature to provide employment to those in need of it." It seems doubtful, however, whether any of Colonel Hay's proposed roads fulfilled these requirements any better than this rejected road; and most, if not all of them, are unfinished at the present day; some, I believe, were never begun.

73. The reason why, when relief was so much needed, the works which were opened in order to afford relief were resorted to by so few in comparison to the mass of those who underwent the deepest suffering, is one of the most important matters which an examination into the way in which the administration was conducted has to solve. To some extent no doubt it will be elucidated by the facts which have been and will be recorded in this report. But in dealing with this question, it is important always to bear in mind the great difference which the habit of emigration made between the inhabitants of the eastern and western districts. In Mysore and Hassan, and the western part of Tumkur and the east of Kadur, the custom has prevailed for years for all unemployed persons to start off to seek for service in the coffee plantations. In ordinary years it has always been difficult to obtain local labour for common repairs in these parts; and now that so great a proportion of the population were thrown out of employment by the iron-bound earth and the rainless skies, they evinced no inclination to break through the habits of past years and take to earth-work for a living. They wandered off to the coffee districts in the vain hope that where thousands had been employed before, tens of thousands might find sustenance now.

74. On the 15th January the Executive Engineer of Mysore replied to an enquiry from the Chief Engineer as to what works he had to offer to the people who were then returning from the coffee plantations. He said that he had received sanction to mettal the road to Manantoddy, the head-quarters of the Wynád, and could employ any amount of labour on it, but could get none. Those who were going in that direction resolved to proceed and try their luck and would not stop; those who were returning said they must go home first and look about them, but they would come afterwards if promised a wage of Rs. 6 a month. Far, however, from off any such enhanced wage as this, the Executive Engineer, in the mistaken notion that when labour was so abundant he could command the market, had cut down the rate of wage from 4 to 3

a day, the result of which was that none of the travellers would accept it, and the regular body of coolies, who had been imported on the understanding they should get 4 annas, struck and went away.

75. On the 17th January Colonel Hay reported the preparations he was making to provide for the returning flood of coffee labourers, who always leave when the picking season is over in January and February. He expected 30,000 to leave Coorg, 20,000 the Wynád, and 4,000 or 5,000 to return from Manjarabad, and all these, instead of having saved money as in ordinary years, had through the high prices barely lived on their pay, and would come back poor and half-starved to a starving country and would be in urgent need of relief. He proposed to open some new works on the Ghât roads, and issued a proclamation to let the coolies know that there were nineteen works in Mysore and six in Hassan, besides the Ghât roads, on all of which they could be employed. At the same time he called for reports from his officers in the Civil and Public Works Departments, enquiring what the reasons were which caused the general reluctance to accept relief. The answers to this enquiry were curious and instructive. Captain Maltby's (Deputy Commissioner of Hassan) explanation was to the general effect that the people were demoralised by the amount of Government help they received. They hoped to have work given at their doors, to get the rates of pay raised, and knowing that Government would not let them die, thought they were masters of the situation. In one case where a tank work in Haranballi had been opened, the amildar had had to advance people money and to send messengers round to sweep the country and compel them to come in. Mr. Dobbs, Executive Engineer, said the people who had come from the famine tracts would not stop at work unless they could get fodder close by for the cattle they had brought with them. Even half-starved wanderers, living on roots and grasses, refused to stay for work and pressed on to the coffee districts, where they heard that wages were given in grain. The Assistant Engineer in Mandia replied that the works were given out to petty contractors whose object was to work cheap and at low rates, that the soil was unusually hard, that the famine coolies were unaccustomed to labour, and preferred daily wages to piece-work, and that cholera had driven many away. Colonel Hay also writes thus in his Administration Report for 1876-77: at every village the ryots had the same tale to tell—the able-bodied were emigrating; those who remained at home had not enough to eat; and the cattle were with difficulty kept alive by leaves of trees. But in spite of the want there was great reluctance to go more than a short distance from home for work, and the Irrigation Department had great difficulty in keeping even the usual numbers on their works. Contractors had to give advances to induce people to come from any distance, and though the villagers round Naga Mangala were reduced to eating such food as the pounded fig-tree berries and other substitutes for grain, they refused to accept work away from their doors.

76. In the light of these replies, one begins to see how different causes worked together to produce the same evil result. The distressed and half-crazed wanderers, deluded by the vague hope of an El Dorado in the coffee plantations, would not be turned aside from their object. The rigid departmental system was unaltered, except for the worse; and as for the few who tried to earn a living by earth-work on roads, &c., the hardness of the earth, joined to their want of skill, made it impossible for them to support themselves by piece-work.

77. The Public Works Department was at this time exercised about the same question, and a circular of 11th January issued by the Chief Engineer, Colonel Johnson, recounts the reasons to which he attributes the small number of applications for admission to relief works—

- (1.) Emigration to coffee.
- (2.) Harvest operations.
- (3.) Insufficiency of the rates.
- (4.) Disinclination to do a fair day's work.

As to the first two, he said so far as they operated at all they must be nearly over now. As to number 3—

"the object of relief works as entrusted to the Public Works Department is to provide means by which the able-bodied populace can earn sufficient by a fair day's labour to support themselves and such portion of their families as may be unable to work. The same rates are being given now as have prevailed for some years past, and though not so remunerative now as in years of plenty, it is believed that they allow of any persons inclined to work earning amply sufficient to support themselves. Should there be any doubt on this point, a full report should be submitted at once."

As to number 4, he said that task-work has always been insisted on, and it has never been unpopular when once fairly started:—

"It seems therefore probable that the plan cannot have received fair trial; that tasks are too heavy, or not properly given; that proper payment is not made for the works; or that sufficient trouble has not been taken to make the people understand what is intended."

In conclusion, he directed that all officers of the department should take pains to keep themselves acquainted with the wants and condition of the people:—

"It is anticipated that the great demand for relief has yet to come, and it is essential that the fullest information regarding all matters in connection therewith should be promptly supplied to this office. The members of the department are well situated for informing themselves on these matters, and the Chief Commissioner expects that they will lose no opportunity of making themselves acquainted with and reporting on the wants of the people and their feelings with reference to relief work, by free communication with the ryots and the men of influence in their respective districts. Too much importance cannot be attached to the necessity of acquiring the confidence of these people."

78. But in the eastern districts the unwillingness to come to the relief works was not so marked, and the causes which diminished and in the end paralysed the usefulness of these works were mainly of a different kind. In many cases the district officers would appear neither to have been judiciously guided nor judiciously let alone. On the 19th December Mr. Ricketts, who was then acting as Commissioner, sent up for sanction a work which he, as Deputy Commissioner, had begun on his own authority at Dod Ballapur, a piece of cross road of some utility to the town, but of no general importance. He explained at the same time that it was urgently required to relieve the acute distress in the town, and that he had had to sanction enhanced rates of pay, because the labourers were mostly weavers, who could not earn a living at the ordinary rates. On the 11th of January Mr. Gordon, the Officiating Chief Commissioner, severely censured him for having begun the work without sanction, and for having raised the rates. No doubt the feeling was that he had taken advantage of the opportunity to push on a hobby of his own. When he justified himself on the score of the necessity of the work and his inability to suggest any other, sanction was given. This town of Dod Ballapur was in the centre of the very worst famine tract in Bangalore and suffered terribly; we shall meet with it shortly again. It is certain that other work suitable in character and of undoubted utility could have been suggested:

79. On the 18th and 19th January the Deputy Commissioner of Kolar wrote, asking for a grant of Rs. 5,000 to be spent in excavating the beds of tanks and similar useful works; and to be allowed to lower the rate of earth-work from 16 to 12 cubic yards per rupee, as it was found practically that the famine labourers could not do a full task. On the 23rd he also represented that the operations of the Irrigation Department which had several large tanks under repairs in the Bet-Mangala taluk did not really provide any relief, as the work was given out to petty contractors who, in order to make a profit, required 18 or 20 cubic yards to be done for Rs. 1, which was beyond the power of the distressed people. In reply to these letters, the lowering of the rate to 12 cubic yards of earth-work per rupee was sanctioned; but the Chief Commissioner (31st January) granted only Rs. 1,000 for his relief works, observing that he would prefer the money should be spent on wells or reservoirs, not on large works or repairs of tanks, as

demand for employment seemed to exist, and in Chitaldrug works had to be closed because no one would come to them. It seems, however, to have been a mistake to argue from the analogy of Chitaldrug. At the time this was written, the numbers on relief works in Kolar had gone up with a bound from 752 to 3,237, and they rose in the next fortnight to 8,183; over 4,000 people were being gratuitously fed.

80. On the 24th January the Chief Commissioner sanctioned three works proposed by the Deputy Commissioner of Bangalore, on condition of plans and estimates being submitted in due course, but refused to sanction two others (one of them was a road joining the famine-stricken town of Dod Ballapur to the hardly less miserable town of Nela Mangala), on the ground that district funds would hereafter be too heavily burdened by having to keep them up.

81. On the 27th January Colonel Pearce, having just resumed charge of the Bangalore Division, sent up a report on the state in which he found it. He stated the sum that had been granted to each district up to date for gratuitous relief and for works, and shewed that though there was nominally a large balance in hand, it had all been really spent, but that the offices were behindhand with the accounts. At the time of writing, 99 works had been completed at a cost of Rs. 12,604, and 301, on which Rs. 68,607 had been expended, were in progress. But he said—

"the works have been carried on somewhat spasmodically and have not been sufficiently continuous in their character, and have consequently failed to retain the destitute poor of the taluk in their own neighbourhood; the consequence is whenever the work ceases, the poorer classes rush off to the nearest feeding-kitchen or large town, and being able-bodied in appearance are refused assistance, and in some few instances have ultimately died of starvation in the course of their wanderings. It appears to me, therefore, that our object should be to retain the population in the taluks by works which should be continuous within a certain distance of their homes; and to meet this end, instead of placing certain lump sums at the disposal of district officers, it would be better . . . to classify the taluks, and fix a certain imprest amount for each, with an authority to the Deputy Commissioner to recoup every 15 days all outlay on relief works carried out up to date under notifications of sanction and due appropriations."

He ends the letter by saying that he is going out at once with the Deputy Commissioner to Dod Ballapur, and thence on to Kolar on sessions duty, after which he hoped to make a tour through that district.

82. He did go to Dod Ballapur, and the state of things he found there was truly distressing, for all work had been stopped for want of funds, and he was beset by crowds of people imploring him to give them employment. Even then it does not appear that he called the Deputy Commissioner to account for the stoppage, or reminded him of his order of 6th November never to let a work stop for want of funds, or enquired why he had not made proper arrangements for finding suitable work for the distressed population when such work could have been readily found at hand. This was on the 3rd February, and he at once reported the state of affairs, asked for more funds, and urged the adoption of the plan proposed in his letter of the 27th January. He stated also that the two roads which the Chief Commissioner had refused to sanction would have been most valuable, and particularly the one from Dod Ballapur to Nela Mangala, which would have provided work for all these starving people. The Chief Commissioner replied to this appeal by making a fresh grant of Rs. 30,000 on the 9th February, and by a Resolution dated the 6th he sanctioned the system of granting imprests to amildars to the extent of Rs. 500 (this was raised on 21st February to Rs. 1,000), on the condition that none of the money should be spent on works not sanctioned by the Deputy Commissioner, and that accounts of the expenditure should be furnished weekly, or oftener if the expenditure was large. Deputy Commissioners were

"to be careful to have sufficient projects provided beforehand, so that no works should be stopped for want of the requisite sanction; and after ascertaining the extent of the demand for work in each taluk, should make arrange-

83. On the 22nd February Colonel Pearse reported regarding the Rs. 30,000 allotted him on the 9th, that it had been already distributed, all but Rs. 1,697, and that he had applications for definite works aggregating Rs. 2,480, and also for a general grant of Rs. 10,000 for Bangalore District, which he was unable to sanction for want of money. At the same time he made a vigorous attempt to get free from the shackles of the routine system under which relief measures were breaking down. He prayed for emancipation from the rules about notifications and grants. He urged:—

“Tell me that so much money will be available on the 1st and 15th of every month, and I will distribute it to my districts. Under the present system it is a race between Deputy Commissioners who shall get most money; those whose offices are best managed and who are sharpest in sending in notifications, succeed and get the lion's share, and there is a constant apprehension of stoppage of funds.”

At the same time (26th February) Mr. Ricketts wrote up that he estimated his wants for relief works in March at Rs. 75,000, and he begged that this might be given him absolutely on his own responsibility, without the necessity of going through the usual routine of estimates and sanctions, and of undergoing the usual delay in each special case. In reply to this, the Chief Commissioner said that he would make a grant of Rs. 30,000 now, and that whenever the Commissioner had allotted Rs. 20,000 of this, and had only Rs. 10,000 left, he should make fresh requisition, and it should be attended to at once. This was forwarded to district officers on the 28th. To Bangalore Colonel Pearse allotted Rs. 10,863, and said he

“must hold Deputies responsible that in all localities which require continuous work no cessation of necessary expenditure is allowed to take place. At the same time I would wish to impress on Deputy Commissioners the absolute necessity of seeing that economy is exercised wherever practicable.”

84. Here, then, another notable opportunity of reconsidering the existing system of allotting money and sanctioning works was lost. There were at this time about 300 works in progress in each of the three districts of Bangalore, Kolar, and Tumkur. If the original order (para. 16) had been adhered to, and only two or three largish works started in each taluk, or about 20 in each district, it would have been easy for the Commissioner to consider the merits of each work separately and decide which should be taken up, and possible for the district surveyors to draw up plans and estimates of each, to shew the quantity of earth-work, of masonry, of stone-pitching and so forth, the rates and the cost; but to do this for 300 petty works, to prepare estimates and notifications for every little pond and well and drain in a village, was both impracticable without a great increase of establishment, and was utterly worthless when done. Unfortunately, Mr. Saunders and his advisers did not perceive that the conditions were altogether altered, that the work had outgrown the system, and either the system must be relaxed, or else the work would be strangled in the folds of the red tape in which notifications and sanctions were tied up. At the same time it should be added that the Commissioner's proposal was hardly an effectual remedy; it only shortened the chain by one link, and did not loosen it. Money would have been granted more regularly and easily, but its amount would still have been limited; and if the demands had been higher than the sums the Commissioner received on the 1st and 15th of each month, they could not have been complied with.

85. There was, in fact, but one panacea for the difficulty in which the Administration found itself, and that was unlimited confidence in the district officers, and relaxation of every part of the usual routine which required estimates and preliminary sanctions, combined with constant personal supervision and direct guidance to guard against extravagance. Unfortunately neither of these steps was adopted. The fear of spending too much money hampered every order that was issued from head-quarters. The principle that no work of even moderate size was admissible, and that only the pettiest of works were desirable, prevented relief from being certain, continuous,

and efficient, and made supervision impossible. The Chief Commissioner neither went out into the province to see matters with his own eyes, nor insisted on his subordinates doing so. And the Commissioner, tied as he was to Bangalore to a great extent by sessions duties, only went out once to Kolar and once to Tumkur on sessions duty, and made four flying tours besides in different directions, each lasting only for three or four days. Thus almost every communication which passed between him and his district officers was in writing, and they were burdened with an increase of official correspondence just at the time when they should have been relieved of it.

86. On the 28th February a Resolution was issued, fixing the rate of grain wages on relief works in case grain payments were made, “which for the present should not be done unless under exceptional circumstances.” The wage for a man was calculated at three-fourths of a seer, or 60 tolas weight, of ragi, *plus* 6 pies for condiments; of a woman, five-eighths of a seer, or 50 tolas weight, *plus* 3 pies; of a child under 14 years, three-eighths of a seer, or 30 tolas, *plus* 3 pies. At the then rate of 8 seers per rupee, these wages would cost annas 2, annas 1½, and anna 1 respectively; “if prices grew dearer, wages should rise so as to enable them to buy the specified quantity of grain.” The Resolution proceeds thus—

“Paragraph 3.—Generally the most able-bodied men and women should be employed on regularly sanctioned works by the Public Works Department, and those less able on relief works under the district officers. In the former case task or piece-work should be exacted at not less than 25 per cent. below that required in ordinary times.

“Paragraph 4.—No fixed rule, however, can be laid down on this point, the responsibility of any necessary change must rest on those in charge of such work.

“Paragraph 5.—With regard to relief works, it is desirable that the rate of one anna and six pies per cubic yard should not be exceeded at any time, unless under exceptional circumstances.”

87. This Resolution was issued without being shewn to the Public Works Department officers, and it called forth strong objections on their part. Both the Chief Engineer and the two Superintending Engineers opposed the 25 per cent. clause, saying they were supposed only to deal with able-bodied people, and that no such reduction was necessary. If from any cause destitute coolies were employed who were unable to do a full task, paragraph 4 would give sufficient authority to lower the task, and no general order to diminish it by 25 per cent. should have been issued. To this it was replied that the rule was copied from Bombay, and that if applicable there it must be applicable in Mysore; and that the paragraph did not prevent the Public Works Department from exacting a full task. In short “the clause was only a permissive one.”

88. It seems strange that in this discussion no one should have taken objection to the view set forth that officers of the Public Works Department ought to employ only able-bodied labourers and not those weakened by famine. This is the first definite assertion of this pernicious theory (though paragraph 4 of the circular of 11th January quoted in paragraph 77 alludes to it), which afterwards was the cause of much discussion and friction, and of the failure of many well-meant schemes of relief. To state this theory is to condemn it, for the consequence that would flow from it is that no Public Works Department officers can ever be employed on famine relief work. It is an axiom of famine literature that labourers of this class can never be made to do a full tale of work.* Bodily weakness through fasting, depression of spirits through losses, inexperience in the kind of labour exacted, all combine to make this impossible. The Bombay Government early recognised this, and laid down the rule that not more than 75 per cent. of an ordinary task was ever to be expected of a famine coolie. By making the rule permissive, while the Public Works

* There is no greater authority on the subject than Sir G. Campbell, who writes in paragraph 167 of the Orissa Famine Report:—

“There was another cause of difficulty not peculiar to Orissa—the attempt to enforce task-work.

“The professional officers have a natural dislike to disbursing money for insufficient work even when daily pay is given, they are expected to shew an out-turn in proportion to the disbursement, and their ordinary rates and professional character are put in jeopardy when exceptional systems grow up; on the other hand, whether in Orissa, or in Ireland, or in most other countries, people employed from charitable reasons have the greatest possible objection to task-work.”

officers held the views that have been spoken of, the Chief Commissioner deprived it of nearly all its value.

89. On the 2nd March the Deputy Commissioner of Bangalore, who had already estimated the wants of his district for March at Rs. 75,000, asked for a further grant of one lakh of rupees (which was to last him six months) to start collection of metal along all the roads. On the 12th March the Commissioner reported that there were only 6,960 people on relief works on the 31st March, and that even if the number rose to 12,000 or 14,000 by the end of the month, the expenditure at Rs. 3 a head would not exceed Rs. 30,000 or Rs. 35,000, and adding Rs. 15,000 for metal collection he could not require more than Rs. 50,000. On this the Deputy Commissioner remarked as follows in a letter dated 16th March :—

“I do not think it is safe to calculate on future requirements in the way of expenditure for relief work on the experience of past periods of time, inasmuch as amildars, when they had the prospect of only a limited sum of money being placed at their disposal, kept the expenditure down by refusing work to all beyond a certain number. A case of this kind was only recently brought to my notice where more than 100 men, women, and children were thus refused work, and yet, in the Assistant Commissioner's words, there was not one of them who did not seem pinched and much reduced for want of food.”

He goes on to quote reports of several large gangs in the Nela Mangala taluk, all of whom are said to be much emaciated and in severe distress, and insists that if more money was given him he could raise the number on relief works almost indefinitely. The Commissioner replied the next day that if the Nela Mangala taluk was in such a bad way, and if the Deputy Commissioner would name suitable projects, he would support the request that additional sums should be placed at his disposal. The Deputy Commissioner on the 19th March named three tanks and the road from Nela Mangala to Dod Ballapur, which had already been the subject of so much correspondence, as suitable works. On the 24th April the Commissioner replied that he had forwarded the estimates to the Chief Commissioner, as he had no funds at his disposal out of which to sanction them.

90. But we must turn aside now for a time from this wearisome and dispiriting correspondence to mention what was doing in other districts than Bangalore. On the 22nd February the Chief Commissioner authorised the Public Works Department to carry out a road from Chikmagalur in the Kadur District at an estimated cost of Rs. 15,728, on the condition that the work should not be given on petty contracts, but that it should be treated as a relief work for “Maidán” coolies in search of labour. But it was found here, as elsewhere, that without a special organisation to collect the distressed people and place them on the work, not many availed themselves of the opportunity offered. At the end of February there were about 300 on the work; in May 350. Then cholera broke out and the numbers fell in the end of May to 104. After that they rose rapidly, and at the end of June stood at 870. Heavy rain (the rain of the south-west monsoon, which is generally most excessive in the Malnad) reduced the number on the 7th July to 80, and they never rose again to much over 100. This instance serves to shew that, if it was so hard to collect famine labourers on a road which, though on the outskirts of the Malnad, was connected with the headquarters of the Kadur District, it would be still more hopeless to try to use as relief works the roads from the Ghâts towards the western coast, which were in still more inaccessible regions and where the season was still more inclement.

91. Another attempt to start large works under Public Works Department officers for purposes of relief was made about the same time by beginning the Timanhalli tank. This was a project for making a new tank by throwing a dam to catch the water descending from between two parallel ranges of hills; it was proposed originally many years ago, and correspondence had gone on fitfully regarding it ever since 1870. The Commissioner, Colonel Campbell, had strongly urged

taking up the work in February 1876; the plans and estimates were revised and completed in December, and in January 1877 its construction was resolved upon. A temporary Assistant Engineer was placed in charge of it, and the Superintending Engineer directed him to pay for labour at the following rates: 10 pies per cubic yard for sandy soil, 1 anna for loose earth, and anna 1-3 for easy gravel, there being no long lead to carry. On the 25th February the Assistant Engineer reported that he was giving task-work at 1 anna per cubic yard and daily wages to those who were unable to do task-work, at 2 annas for a man, anna 1-6 for a woman, and 1 anna for a child. But these rates failed to attract the people. The numbers had fluctuated extremely, and many had come, tried their hand at the work, and left it; the average number up to date had been 27 on task-work and 12 on daily pay. On the 12th March the numbers were not larger, and it was reported that the patels of the neighbouring country, who had been urged to send their villagers to the work, refused to do so on the ground that the wages were too small to live on. The Chief Engineer wrote a note on this, observing that no experiment could have been tried under more favourable circumstances, and yet it had proved a complete failure as far as relief was concerned. He believed that if the people were not demoralised, or influenced by some designing persons, they would have accepted the terms offered if they had been really in need of relief. On the 21st March the Chief Commissioner closed the work.

92. The tank was taken up again afterwards under more careful and lenient provisions for the welfare of the coolies, and the subject will reappear in the course of this narrative. But with regard to this remarkable and unfortunate fiasco, several reasons may be alleged which partly help to account for it. The work is situated in a wild and hilly country, over 10 miles from any town or market, in a locality reputed feverish, and which certainly afterwards justified its reputation, and in the extreme corner of the Chitaldrug District, fully 80 miles from the headquarters of the Deputy Commissioner, whose influence was therefore reduced to a minimum. No civil officer was specially attached to it to co-operate in inducing people to come. The rates for task-work were the ordinary rates which attracted labour when ragi was at 40 seers, and which were insufficient when ragi was at 8 seers and the people weakened by fasting. But, on the other hand, the daily wages which were offered were sufficient to support life, and yet they did not attract the people. Possibly the reason of this was that no provision was made for non-working children and infants, and that it was not understood that the whole families were to be received on the work. The surrounding taluks of Sira, Budihal, and Chiknaikanhalli were among those which were involved in the deepest distress. The Assistant Engineer was humane and considerate in his treatment of his coolies. Lieutenant Macintire, a young officer distinguished for zeal and good sense, was in charge of the general relief operations in this and two other taluks, and though he could not devote much time to this one work, he assisted cordially as far as he could. So that on the whole the conclusion seems to be that the people were not at this time as hard pressed as they were afterwards, and that they were not of such a temper as voluntarily to go to a wild and unknown place at any distance and there to support themselves by labour.

93. At the same same time two considerable works were being carried on in Bangalore itself under the Public Works Department: the deepening and improving of the Alsur tank, which supplies the troops with drinking-water, and of the Dharmanbudi tank near the native town. These works were specially devised as relief purposes, and were carried on under the ordinary rules of the Public Works Department. Spaces were marked off of given length and breadth, and any party who dug a pit there to the required depth and carried the earth to the bank, earned and was paid Re. 1. The average wage earned in February was: men annas 2-8, and women anna 1-6, and in March, including women and men together, annas 2-1½. The Chief Commissioner, in asking for sanction to the Dharmanbudi tank, observed that it had been a most useful work, admirably adapted

to afford timely and efficient relief to the labouring classes, and had saved them from much physical distress and deterioration; and owing to pains taken in organising the system of piece-work labour, it has proved useful as an example of the method in which relief work should be carried out by Public Works Department and Revenue officers. The Government of India in sanctioning the work observed that it illustrated the justice of the objection which had been raised to piece-work labour, as the average wage, annas 2-2, was larger than was needful to support life, and was more even than was being paid in Madras.

94. When Sir Richard Temple visited Bangalore and wrote his minute on the condition and prospects of Mysore, he made an attempt to estimate the number of people on relief works on the 1st of January. No returns had been collected up to that time, and the estimates given him by the local officers were very vague. The total number came to 59,301, and this evidently is meant to include all works under Revenue and Public Works Department officers; but as in the earliest detailed returns—those for the fortnight ending the 15th January—the number returned was 16,042 on civil relief works, it is not probable that there were more than 15,000 employed on the 1st January. Again, on the 17th February, the number on Public Works Department works was 28,788, and the numbers were pretty steadily increasing, so that on the 1st January they are not likely to have stood much above 20,000.* These works, though not specially designed for relief, utilised unskilled labour, and did afford effectual relief, not by employing men who in other years were able to support themselves by field or other labour and were now thrown on the State, but by keeping in work those who usually looked to such quarters for their support, and who would otherwise have been thrown on the public charity. But as far as any special measure distinctly designed for relief went, Sir R. Temple's figure of 59,000 must probably be cut down to 15,000 or 20,000.

95. The following table shews the numbers returned as employed in the different districts from week to week up to the end of March, as far as the provincial returns contain that information. If the reader carries his eye along the figures for any one district, he will see at once how sudden rises and falls in the numbers indicate that relief was spasmodic and uncertain. The Bangalore figures, for instance, which fell from 8,909 on 31st January to 5,886 on 17th February, tell us at once to the scene at Dod Ballapur, where Colonel Pearce was so horrified at being surrounded by starving wretches howling for employment, who were thrown out of work by the sudden cessation of funds.

Districts.	Sir Richard Temple's figures, 1st January.	15th January.	31st January.	17th February.	24th February.	2nd March.	10th March.	17th March.	24th March.	31st March.
Bangalore	12,983	7,265	8,909	5,886	6,922	8,071	11,957	11,832	16,015	19,786
Kolar	8,500	758	3,237	4,326	6,874	5,794	3,616	5,637	4,954	8,499
Tumkur	8,900	5,000	6,734	14,656	14,219	9,119	7,786	7,574	7,652	8,434
Mysore	5,560	1,543	3,112	1,894	4,678	1,929	1,650	2,077	2,367	2,497
Hassan	9,746	1,433	3,010	2,978	2,636	3,060	3,545	2,775	4,407	4,733
Kadur	6,296	1,468	351	692	1,301	975	877	1,847	1,586	2,175
Shimoga	1,236	661	1,161	676	639	640	675	670	697	854
Chitaldrug	6,000	2,974	2,191	3,542	3,841	3,925	5,295	6,200	6,687	8,709
TOTAL CIVIL RELIEF WORKS	59,301	16,042	28,705	34,560	41,110	33,513	36,600	38,512	44,365	55,687
PUBLIC WORKS DEPARTMENT	...	...	...	28,788	...	30,794	30,794	31,052	31,052	31,052

* Colonel Sankey in one of his printed papers states that the number was 20,000 in January.

96. It is necessary now to turn from relief works to feeding-houses or kitchens, and to record the efforts made to start and organise these during the earlier period of the famine. The idea of giving away cooked food to starving people (though not so familiar in Upper India, where it is more usual in native charities to distribute raw grain) had long been naturalised in the south, and considerable endowments were made in the time of the late Rajah and of Dewan Purnia for keeping up *chatrams*, or rest-houses where travellers, and in particular Brahmins, are received and fed. There are in the province 75 such places with an endowment of Rs. 68,235 a year. The building of *chatrams* or *serais* (four-walled enclosures with rooms or sheds round the walls) is also a favourite form of charitable benevolence. It was natural, therefore, that as soon as distress arose the impulse of the sympathetic residents should be to utilise one of these buildings, in which to collect the starving poor and to distribute cooked food to them.

97. The earliest institutions of this kind were opened towards the end of August 1876, and at first they were supported entirely by local subscriptions; but as the prospects grew worse and the distress increased, this source of charity soon dried up. Towards the end of October many of the kitchens began to be closed for want of funds, and it became more and more necessary for Government to intervene. The first step was to make special grants (Rs. 3,000 to Kolar on 17th September, Rs. 1,000 to each district in the Nandidrug Division on 27th October) according to the urgency of the application. The next was to undertake to give sums equal to the amount privately subscribed, and for some time it was hoped that this might be sufficient. It was not till the latter part of January, when private charity was almost exhausted except in Bangalore itself, that the Chief Commissioner agreed to give Rs. 3,000 a month to the three districts of Nandidrug for their kitchens, although in November Rs. 1,000 a month had been allowed to Hassan and Rs. 500 to Kadur. The same system of retardation through friction in the official machine was pursued here as in the case of relief works; there was the same readiness to distrust the discretion of district officers; if an officer applied for money, he generally got less than he asked, or was ordered to explain his unexpended balance, or was told that an adjoining district had asked for much less than he. This policy, however, could not do the same harm in the case of the kitchens as it did in the case of relief works. However stupid or callous a subordinate might be, he could hardly shut up his kitchen in the face of the starved and emaciated wretches who thronged to it.* He might turn away labourers from a relief work when his funds ran out, even though he knew that in all human probability they could not find employment anywhere else; but he felt that it was a less risk to spend money without sanction on feeding the starving than to incur the responsibility of letting them die at his gate. It will not, therefore, be necessary to give any account of the constantly growing demands and the doling out of supplies, since, as a matter of fact, whatever any Deputy Commissioner chose to spend on feeding-houses was sanctioned perforce in the end.

98. No record was kept during the earlier months of the numbers fed at the kitchens, although, judging from the amount of the private subscriptions which the Government was asked to supplement, the number cannot have been very large. The first regular statement which contains this information for the whole province is that for the week ending 3rd March. In Bangalore Mr. Ricketts reported on the 24th October that thousands had been fed; and in Mysore Town on the 3rd November about 2,000 were being fed daily. In Hassan on the 7th December the number was about 900 in nine kitchens. But Kolar was the district where kitchens were started earliest and were at first most popular. Eight were started in September and twelve had been opened by the end of December,—that is, one at each of the ten taluk head-quarters, and one at the

* There are, however, cases on record where this was done, but it is no good to specify them now.

Districts.	Beginning of January, R. Temple.	31st January.	17th February.	24th February.	3rd March.
		By provincial returns.			
Bangalore*	11,527	...	7,523	14,253	14,253
Kolar	3,733	4,749	...	2,129	511
Tumkur	2,100	...	2,471	2,039	2,471
Mysore	3,699	1,000	3,274	3,274	3,274
Hassan	4,249	526	...	312	405
Kadur	1,546	...	258	258	512
Shimoga	1,430	...	150	777	393
Chitaldrug	1,780	233	...	...	1,471
TOTAL	39,094	...	...	...	23,295

shew, until they are complete for all districts.

In the estimate for the beginning of January, the Kolar* numbers are certainly, and those for Hassan, Kadur, Shimoga, and Chitaldrug probably, too high, and as there was a general tendency to increase from month to month, and the number at the beginning of March was only 23,295, it seems hardly likely that the number on the 1st of January can have much exceeded 15,000.

99. This, however, was a considerable number of people for the Government to have on its hands, and up to this time no instructions had been issued regarding the organisation and management of these institutions. The first step to this end was taken by the Central Relief Committee who wrote on the 6th January that they had two kitchens opened, one in the *pettah* or native town, one in the cantonment, at which an expenditure of Rs. 80 and Rs. 120 a day went on; they proposed at once to enlarge their operations and open four new kitchens; and that they wanted a Government officer to be appointed expressly to supervise these institutions and a grant of Rs. 10,000. Before granting this request, the Officiating Chief Commissioner directed two officers (Major Chrystie, R.E., Superintending Engineer, and Major Gompertz, Deputy Inspector General of Police) to visit the kitchens and report on their management and organisation. They inspected the distribution of food on the 13th and 14th January, and reported on the 17th that almost every error which the human mind can conceive was being committed. At the cantonment kitchen, where the applicants for food were 8,000 on the 13th and 6,000 on the 14th, only 750 seers of rice were cooked: there was no establishment to maintain order, and the weaker were pushed aside by the sturdy, and the distribution was unequal. From one-third to one-half were able-bodied; many were villagers attracted to Bangalore by the prospects of gratuitous food. There was no system by which able-bodied applicants could be sent away to relief works. The times of feeding were so arranged that it was easy for a man to receive food at one kitchen and then to walk over and get it again at the other. At the Pettah kitchen the food given was a third of 1 lb to each adult and half the quantity to each child. The site of the distribution was a narrow street with a deep drain at the side; there was one policeman to keep order; but when food was brought the people became so excited that women and children were trampled on and knocked into the drain, and many seemed quite exhausted when they reached the food. There was another distribution at night, which was even worse, the darkness making it impossible to distinguish those who needed relief or to exclude those who were unfit. The two inspecting officers then proceeded to give their own proposals for future management. Enclosed and suitable spots should be chosen for the kitchen, two were

thought enough; a definite ration of $\frac{1}{2}$ and $\frac{1}{3}$ of a seer for adults and children should be fixed on; order should be enforced; paupers should only be admitted on shewing a ticket from a relief officer; they should be divided into gangs placed under gangmen, seated in small partitioned spaces, and obliged to remain quiet till the food was served out. The report was accepted by the Officiating Chief Commissioner on the 22nd January. An uncovenanted officer (the Sar Amin or Subordinate Judge of Bangalore) was appointed as Superintendent of Relief Kitchens; a suitable establishment was provided; and the simple measures of discipline indicated in the report were inculcated. Arrangements were to be made for deporting the strangers who had flocked into Bangalore to their homes.

100. The steps to be taken towards carrying out this system of deportation, and towards preventing the influx of fresh immigrants, were prescribed by the Officiating Chief Commissioner on the 18th January. On all the roads leading into Bangalore, and at a distance of about 6 or 8 miles out of the town, *chattrams* or *serais*, such as have been described above, were to be selected and utilised as feeding places. A trustworthy official, with a small establishment, was to be appointed, and raw food, not cooked, to be given, leaving the paupers to cook for themselves. All persons who came into Bangalore from outlying taluks in a destitute and famished condition were to be sent here, and, as soon as their physical conditions permitted, to be forwarded to their own villages by convenient stages. The Superintendents were to detain all famine-stricken persons who might be found on their way into Bangalore, and the assistance of a small police force was to be given to each *chattram*.

101. On the 9th of February the President of the Central Committee reported that as these road-side *chattrams* had now been established, the deportation of outsiders had begun: 108 had been sent away on the 8th, and 150 were being sent on the 9th. Still there was a steady influx of persons in distress, chiefly from Kolar and Tumkur, and unless this could be put a stop to, it would be necessary to establish a pauper camp near Bangalore. Mr. Gordon also stated his impression that kitchens existed only at the head-quarters of each taluk in the outlying districts, and that this was clearly inadequate:—

"I would suggest, if possible, that a kitchen be established at some principal place in each hobli. If a trustworthy official, *amilidar*, or *munsiff* be deputed to each taluk, all such hobli kitchens could be thoroughly supervised."

The Chief Commissioner, replying on the 26th February, passed over in silence the proposal to multiply kitchens, and said that it would be needful for district officers to use their exertions to discourage and, as far as practicable, to prevent the migration of villagers.

102. These two ideas of stopping immigration and of deporting those who had immigrated took firm hold of the minds of the authorities in Bangalore; but it seems doubtful whether, under any circumstances, such a policy could have been successful, unless some large relief works had been opened to which the paupers could have been sent, and on which thousands could have been employed on a wage which afforded them the means of subsistence. There is a Canarese proverb, *khettu nāgar hogu*, "Let the poor man go to the town;" but the flocking of beggars and starvings into large towns is no peculiarity of Mysore, but is common to all India and is noted in the records of every famine.* There were no practicable means by which to have effected the object aimed at. And what in fact would have been gained by it? The people would probably have died out of sight, the extent of the calamity would not have been known, and the Government would have been deluded into security by its ignorance of the extent of the famine. It must have been an imperfect understanding of the severity of the calamity, and the nature of the

* The numbers, however, fluctuated largely and are probably inaccurate. In the beginning of February, Mr. Bernard learnt that the number in Kolar was 1,592, and this agrees pretty well with the figure I received for January.—1,695,—but the number returned for 31st January in the provincial report was 4,749.

* Compare the minute of the Chief Commissioner, Central Provinces, dated 20th February 1871:—"Fugitives from villages at once flock into towns, clog the labour market, enhance prices, and pull down the town to their own level. A transference of distress from the country to the town is a fact of general observation in times of famine."

remedies which were being followed, which gave rise to such ideas as were entertained at this time. The small scattered relief works, spasmodically opened and closed at uncertain intervals, affording only a bare subsistence on piece-work rates for able-bodied adults, and making no provision for their families or for those who were enfeebled by fasting, did not suffice for the necessities of the great masses of people on whom the visitation of famine fell. The error seems partly to have consisted in supposing that the immigrants who left their villages were the only persons in want there, instead of which they were only the symptoms of far-reaching and profound distress.

103. The measures that were taken to prevent immigration and to deport wanderers were, however, altogether ineffectual. It was a small thing to send out 108 one day and 150 the next under a strong police guard to a station 6 or 8 miles off; but how were those people to be sent on to their homes when the guard had left them there and returned to Bangalore? How was the Superintendent to prevent those who wandered in from outside from continuing their journey, and to turn them back again? The order that a police force was to be attached to each of the road-side kitchens was in some cases not obeyed at all; and in no case was the guard so placed as to bar the road and to turn destitute wanderers into the enclosure, nor were instructions given to this effect. Thus, these kitchens which were placed to prevent immigration became the greatest assistance to it, and served as hostelrys at which the starving paupers were fed and lodged, and then continued their journey to Bangalore.

104. The introduction of the first rudiments of order and system into the distribution of food in Bangalore, as suggested by Majors Chrystie and Gompertz, appears to have brought down the numbers considerably. In December the cost of feeding was Rs. 15,733; in January it was only Rs. 5,204. On the 12th and 13th January the average number fed was 6,000 to 8,000 in the cantonment and 3,000 in the pettah; but from the 29th January to the 21st February the average number was reduced to 1,656. On the 13th March the Central Committee reported the average number fed to be 2,417 in the pettah and 4,339 in the two kitchens in the cantonment (Ar Lines and Cleveland Town). The appointment of a Superintendent of Government Kitchens has thus been very effectual in producing economy.

105. On the 26th February the first regular poor-house or enclosed relief camp was opened, at Binni Mangala, 3 miles out of Bangalore on the Kolar road. It was intended only for the reception of outsiders—both those paupers of Kolar who were deported from Bangalore, and the who wandered in along the road and applied for food. The place was one of the usual square enclosures with high walls and a gate. Residence was insisted on; two meals a day were given to the paupers; and they were set to such work as they were capable of. Up to the end of March the average number resident here was 1,020.

106. Nothing as yet had been laid down as to the amount of the daily ration of food in the kitchens. We have seen that the quantity suggested by Majors Chrystie and Gompertz was one-third of a seer of cooked food, ragi, for adults, and one-sixth for children; but no special reference to this point was made in the Government orders. Mr. Bernard records that the ration at the Kolar kitchens in February was half a seer of ragi flour with a spoonful of pulse soup. In the road-side kitchens the Officiating Chief Commissioner recommended uncooked food, but did not state the quantity. On the 7th March the Central Committee brought to the Chief Commissioner's notice that at one kitchen the Deputy Commissioner was giving to each applicant three-quarters of a seer of raw rice, with two ounces of dhal (pulse), and this was so popular as to attract people in crowds. On the 20th March the Chief Commissioner enquired if every district officer was giving the same ration, and cooked in the same way, as Captain Ludlow had described at a general meeting of the Relief Committee that he gave at Tumkur. On the 24th March the President of the Relief

Committee reported the ration that was given in the Bangalore kitchens, and on the 29th March the Chief Commissioner directed its being "adopted tentatively in all Government feeding-houses in the province." The scale was—

For an adult 45 tolas ($\frac{3}{8}$ lb) of ragi flour or 40 tolas (1 lb) of rice, with 3 pies worth of condiments.

For a child under 10 years half that amount.

"Those who are able to do some slight work in return for their support, or who from being sick require special attention and diet, are not included in this scale." Nothing, however, was prescribed concerning their ration. A form of weekly report was at the same time laid down.

107. Under circumstances such as then existed in Mysore, almost any uniform ration was better than want of uniformity, because the hope of finding the diet at one kitchen more liberal than at another tempted the people to wander from one to another, and the wandering frequently ended in exhaustion and death by the way-side. And the ration here prescribed for ordinary paupers did, on the whole, work well and required very little modification, except in one point, the excess of the allowance of ragi over rice. If any difference should have been made, it ought to have been in favour of rice, which is the less nutritious of the two. But the exception of those paupers who did any work was unfortunate, as the work was generally very slight, and the clause enabled Superintendents to baffle supervision of the accounts; also a scale of special diet was required for those who were reduced to great emaciation, but who were not actually sick. These defects, however, were found out by subsequent experience, and could hardly have been foreseen at the beginning.

108. Another subject regarding which there was much discussion—and no settled principle was laid down either now or in the second stage of the famine—was the proper number of kitchens that ought to be established. On the one hand, it was seen that the more numerous they were, the closer would relief be brought to the doors of the distressed; while, on the other hand, it became more and more difficult to supervise them properly. Mr. Gordon's advice was, as has been seen, to open a kitchen in every hobli; and as there were on an average about 10 hoblis to a taluk, this would have implied 100 kitchens in Kolar, 90 in Bangalore, 80 in Tumkur, and so on; but he also proposed that a special officer, an amildar or munsif, should be relieved of other duties and placed in charge of these institutions, over which he would have been able to exercise some, though not a very close, supervision. The Chief Commissioner expressed no opinion on the subject, but the natural inclination of district officers set the same way, when they began to see how ineffectual the relief works were and their humanity revolted against giving no help at all. Thus, though there was by no means one to each hobli, the number soon increased greatly and much exceeded the institution of one at each taluk head-quarters, which at first had seemed sufficient. In Bangalore with its 9 taluks, 24 kitchens were established by the end of March, and 4 more were opened on the 2nd of April. In Kolar 12 were in existence at the end of December; 7 more were opened in March and 3 in April. In Tumkur, 13 were open at the end of 1876, 30 more by the end of March 1877, and 2 subsequently. In March the Commissioner of Nagar reported that there were 25 kitchens in Chitaldrug, 3 in Shimoga, and 3 in Kadur. The number open in Hassan at the end of March was 20, and in Mysore 16. The total number in the province on the 17th March was 151.

109. Colonel Pearce was steadily opposed to this system of indiscriminate gratuitous relief, and on the 20th March he addressed the Chief Commissioner, pointing out that there were 90 kitchens in his division; that no special officer had been appointed to supervise the management of them; and that without careful and constant inspection fraud and mismanagement must necessarily ensue. Accordingly, he proposed to close 27 of them, choosing the least important

places for this purpose, and to this proposal the Chief Commissioner on the 29th March gave his assent. At this time none of the kitchens were enclosed, and at none was residence enforced, except the one near Bangalore and another at Mysore. In most of the rest, sheds were erected at which paupers could stop and sleep if they chose, but at hardly any of them was there any resident population. The people fed daily consisted either of wanderers and sick persons who remained temporarily in the sheds, or of people from the neighbouring villages who came every day from a distance of 3 or 4 miles and returned home again after receiving their dole. A certain discretion was vested in the Superintendents to reject those who did not appear in want, but this was seldom exercised, and they were not officials of calibre to exercise such a discretion wisely.

110. Under such a system, and with so rapidly increasing a number of kitchens, it is not

DISTRICT.	WEEK ENDING MARCH				
	3rd.	10th.	17th.	24th.	31st.
Bangalore district	14,253	12,878	10,354	14,240	16,753
" municipality		6,570	5,165	6,612	6,830
Kolar	511	1,831	4,198	5,371	6,805
Tumkur	2,471	10,030	13,205	16,198	16,092
Mysore district	3,274	1,263	1,941	1,979	2,800
" municipality		1,710	1,609	2,241	2,207
Hassan	405	364	1,453	1,963	2,122
Kadur	512	515	838	1,102	1,572
Shimoga	398	593	331	436	490
Chitaldrug	1,471	1,685	1,765	2,329	2,803
TOTAL	23,295	37,361	46,861	52,471	57,974

111. Thus, as this first period of the famine ends, we find the State supporting about 114,000 paupers, 58,000 of them gratuitously fed in kitchens, at a total cost up to the end of March, Rs. 1,20,000, and 56,000 of them on civil relief works, who made some return in labour for the wages, and on whom Rs. 6,20,000 had been expended to the same date. Besides this, the Government was employing 31,000 people in the ordinary way on its public works; not many of these works were specially started for the purpose of giving relief, but the fact of being so employed kept the labourers from want, and to some extent enabled them to support their families also.

112. This chapter may be fittingly closed by a reference to certain documents and correspondence which, though written in the beginning of April, relate to, and describe the condition of, the country in the latter part of March. The first formal and periodical reports sent in by Commissioners of Divisions were drawn up for the period ending with the 15th March, and they do not betray any depression or serious alarm as to the future. Colonel Pearse reported the great mortality of cattle, but explained that it affected only the less valuable cattle. Cholera was bad, and sickness prevailed in the chief towns, but the cultivators were pushing on with well-irrigation wherever they could, and about half the revenue demand had been paid up. Rain had fallen nicely in many parts, and the people were hopeful. The relief works were numerous and the expenditure on them, Rs. 1,04,613, considerable; that on relief kitchens (90 in number) had only begun in January and was still small, amounting to Rs. 16,404. Private charity still carried on much of this class of relief. The Commissioner of Ashtagram reported in a similar tone: there were hardly any special relief works, and altogether only 5,000 persons employed on works of all sorts, though kitchens were 30 in number, and the people fed there were 4,500. Of the land revenue, 84 per cent. had been collected. He gave the result of his enquiries into the question of the amount of food usually consumed. In one village where 92 persons said they eat in ordinary years 70 seers a day, they had now reduced their consumption to 37½ seers, but it was

not said how many of these persons were children. The hopes of the people were fixed on the early cholam or jowar crop; if that was got in, the rains coming in good time and falling abundantly in June and July, all distress would soon pass away. Colonel Campbell's report was also very colourless. Hardly any riots had come to the relief works, partly because field labour had existed, and the dread of robbery had kept them at home. At Timanhalli the works had to be closed because so few would come, but this was probably due to the low rates. There were 31 kitchens, and no more would be opened; trade was active, and local markets well supplied.

113. At the beginning of April Sir R. Temple revisited Bangalore and remained there a few days, and while there he recorded his Minute of 6th April as to the condition of the country, the change that was observable since his visit in February, the success of relief measures, and the prospects of the future. Containing, as it does, a deliberate expression of Sir R. Temple's opinions on this his second visit to the province, it is of sufficient importance to be quoted whole in this place:—

"I have again enquired into the state of relief affairs in the Mysore Province. I find that the total numbers on relief are now 116,000, equal to about 2 per cent. of the total population of Mysore, or about 3½ per cent. of the population of its distressed tracts. An unusually large number of Mysore people had emigrated to the coffee districts; and though they are now coming back, yet for some months they obtained subsistence by working on the plantations. When the failure of season, which is now going on for the third year consecutively, is remembered, these numbers appear very moderate, and shew, firstly, that the people must be in good condition and must have some self-sustaining power; and, secondly, that the authorities are administering relief very carefully and economically."

"2. The results of relief administration in Mysore still compare favourably with the neighbouring districts of the Madras Presidency, namely, the Ceded Districts and Kurnool, even after all the economy and reduction which have been introduced into those districts."

"3. The labourers on the relief works are all employed on piece-work at rates somewhat cheaper than the piece-work rates of the Public Works Department in ordinary years. They can earn in this way enough to support themselves, and they are in fairly good physical condition. Their earnings on piece-work are estimated to amount to 2 annas per diem for adult men. The people who receive gratuitous relief at the relief centres, also do a certain amount of light work. From the helpless poor, who are relieved at their villages through the agency of the *patels* (village headmen), no work of any kind is exacted."

"4. I am still of the opinion expressed in my minute, dated the 14th February, that the Government of India and the Chief Commissioner may be satisfied with the progress of relief affairs in the Province of Mysore. Already favourable rain has (1st April) fallen over the whole province; prices have fallen, and the people are taking courage."

114. The tone in which this minute was written is hardly one that would be adopted by any person who has followed the history of the events up to this time and studied them in the light of the correspondence which this chapter contains; nor is it a tone which can be taken now in the light of the dark and dreadful months which followed. But it is no credit to any one to be wiser after the event than even the most practised and keen-sighted observer was before the event, and it would be unreasonable to criticise such an estimate as this for its necessary want of prophetic insight. With our present knowledge regarding the weakness of the personnel of the administration, the wide interval that often existed in Mysore between the issue and the execution of an order, and the peculiar agricultural system of the province, there are some considerations which strike us now, and which had he possessed that knowledge could not have failed to have occurred to him. The first question which presented itself to him for solution was—Is the relief sufficient and efficient? The data he had for answering this were neither accurate nor complete. The figures he has given for the number relieved in January were, as we have seen, exaggerated; those for the 15th March also include the people employed by the Public Works Department on its regular works, and these could hardly be considered as recipients of famine relief. But accepting the figures placed before him, was the increase of numbers from 89,000 in January to 116,000 on 15th March as large as should have been expected? One great peculiarity of Mysore is the slow

way in which, after harvesting is over, the process of threshing out the grain in January and February, and the extent to which even in a year of failure this gives employment to the population; but as in the middle of March all field labour was over (there being no late rice sown this year), the smallness of the increase could only point to one of two conclusions,—either the distress was not severe and relief not largely needed, or else the relief measures were ineffectual in attracting the people in need. We know now that the latter explanation was the true one: but Sir R. Temple on such information as he could collect accepted the former one. No doubt the local officers were very sanguine, and there was a general belief that rain would fall and disperse the distress; but even so it must have been foreseen that in the impoverished and depleted state of the country there must be severe scarcity before the next harvest was ready. And considering what has been seen of the tendency to strict economy, which, however laudable in itself, had from the manner in which it was applied produced the unfortunate result of starving the relief works, and especially judging by the subsequent history of the famine, there is reason to fear that this minute must have encouraged the Mysore Government in the course which it was already only too much inclined to follow.

CHAPTER IV.

THE HEIGHT OF THE FAMINE.

APRIL to AUGUST 1877.

2, Introductory — 3, Report on Nandidrug Division for four weeks ending 7th April — 4, Report on Ashtagram Division for month ending 15th April — 5, Report on Nagar Division for month ending 15th April — 6, Colonel Hay's report on his tour in the Haranhalli taluk — 7, These reports forwarded to Government of India with no remarks — 8, Chief Commissioner's circular on the wandering habits of the people — 9, Mr. Hudson's résumé of the financial results of the year 1876-77, and forecast of 1877-78 — 10, Report on Ashtagram Division for month ending 15th May — 11, Report on Nagar Division for month ending 15th May — 12, Report on Ashtagram Division for month ending 15th June — 13, Report on Chitaldrug District for month ending 15th June — 14, Remarks by Chief Commissioner on the 15-day payments — 15, Remarks by Government of India on the same subject — 16, Colonel Sankey's defence of the system of 15-day payments — 17, Colonel Campbell's second reference on utilisation of the Public Works Department in relief work — 18, The Chief Commissioner's orders on this proposal — 19, Further explanation as to deteriorated condition of people in Chitaldrug, and orders about Tiranhalli tank — 20, Reason for absence of any condition report of Nandidrug Division — 21, Tables shewing the provincial numbers on relief works and on gratuitous relief throughout the five months embraced in this chapter — 22, Diminution of number of labourers on relief works after 1st April — 23 and 24, Causes of the diminution — 25, Reason why the diminution remained permanent — 26, Increase of the numbers on gratuitous relief — 27, Rainfall of April to August 1877 — 28, Review by the Government of India in June of the condition of the province — 29, Reply by the Chief Commissioner — 30, Further correspondence on this subject — 31, Deaths in the streets of Bangalore — 32 & 33, Report on the Nandidrug Division up to 15th July — 34, Report on the Tumkur District — 35, The Chief Commissioner's orders on the above — 36, Report on Ashtagram Division up to 15th July — 37, Importation of grain by the railway — 38, Inability of the railway to carry enough grain to feed the province had there been another failure of the crop — 39, Two cases of cannibalism reported — 40, 41, and 42, Increase of crime, its extent and violence, and the retaliatory measures it provoked — 43, Orphans and orphanages — 44, Attempts to improve the organisation of the relief kitchens — 45, Introduction of a measure for the cooked food — 46, Colonel Pearse's rules for the management of relief works and relief kitchens — 47 and 48, Immigration of paupers into Bangalore and orders about deportation — 49, Erroneousness of the theory of deportation and unsuitability to the condition of the people — 50, Demoralised state of those gratuitously fed — 51, Results of deportation to Tumkur and Kolar — 52, Difficulty of retaining the paupers in the place to which deported — 53, End of the correspondence about deportation to Kolar — 54, Mission of Major Cole to report on management of Kolar kitchens — 55, His report — 56, Chief Commissioner's orders on the report — 57 and 58, Colonel Pearse on the reduction of the number of kitchens — 59, Report on the Nela Mangala kitchen — 60 and 61, Further measures of offering relief to the increasing number of paupers in Bangalore — 62, Enlargement of the ration in the central kitchens — 63, Ill effects of this measure — 64, Colonel Hay's report on kitchens in the Ashtagram Division, deficiency of the ration — 65, Inadequacy of the condiments supplied — 66, Establishment of enclosed relief camps in the Ashtagram Division — 67, Organisation of the Hassan kitchens under Colonel Hay — 68, Extension of the system of enclosed camps in Mysore, and drafting of paupers to relief works — 69, Want of a definite principle as to the employment of relief coolies by the Public Works Department — 70, 71, and 72, Illustration of the above; the Mysore water-works — 73, Relief measures in the town of Mysore — 74, Relief measures in the Hassan District — 75, Colonel Hay's report on Haranhalli (24th August) — 76 and 77, Further correspondence about migration of Mysore paupers to the Wynad and other coffee plantations — 78, Relief works. Orders of the 23rd March. Preparation of lists of works beforehand — 79, Effect of the new orders in the Tumkur District — 80 and 81, Illustrations, drawn from the correspondence of another district, of the difficulties experienced in getting sanction to relief works — 82, Reference made to the Chief Commissioner and its results — 83, Colonel Pearse's report on the multitude of small works — 84, The Deputy Commissioner's defence, and the Chief Commissioner's censure of his conduct — 85, 86, and 87, Further correspondence about works: the Commissioner proposes to close them in consequence of the downfall of rain in May — 88, Correspondence about enlargement of the Amildars' imprests — 89, Conclusions derivable from this correspondence as to the usefulness of small works for purposes of relief — 90, Relief works carried on by the Public Works Department — 91, The railway station approach-road, Bangalore — 92 and 93, The Doderi channel — 94, The extension of the railway to the town of Bangalore — 95, The circular of 21st July authorising daily payments and a sliding scale of wages — 96, Difficulty of carrying out the order — 97 and 98, Mr. Gatherer's proposal to allow payments for non-working children — 99, Brief history of the previous growth of the annual allotment for public works — 100, Curtailment of three lakhs of rupees — 101, Colonel Sankey reopens the question — 102 and 103, Reforms in the system of relief works proposed by Messrs. Hudson and Krishnaiahgar — 104, Summoning of a Conference to discuss the proposed reforms — 105 to 109, Colonel Sankey's memorandum in answer to Messrs. Hudson and Krishnaiahgar — 110, Effect of Colonel Sankey's opposition on the Chief Commissioner, and subsequent proceedings — 111 and 112, Concluding remarks.

THE period which this chapter treats of, from April to August 1877, includes the darkest and most terrible part of the Mysore famine. It began with sanguine expectations that a plentiful and timely rainfall was about to put a speedy end to the sufferings of the starving.

people. It closed with the fear that the monsoon had failed again, and that another and yet more intolerable year of famine was about to settle down on the devoted country. It began with the belief that the relief measures which had been adopted were sufficient, prudent, and humane. It ended with the conviction that all measures had been in vain; that though money had been poured out like water, a fearful mortality had not been obviated; that the people were hopeless and demoralised; that the local Administration had not been strong enough, unaided, to cope with the emergency; and that help must be sought by strengthening its numbers from outside.

2. I propose, as in the previous chapter, first to give a sketch of the gradual changes in the condition of the country and of the progress of the famine, and then to deal in more detail with the two special classes of measures taken to relieve the starving—the feeding-kitchens, and the relief works.

3. On the 25th April the Commissioner of the Nandidrug Division submitted a report

RELIEF WORKS. District.	Average of the month under report.	Average of the previous month.
Bangalore	17,117	13,216
Kolar	6,388	4,989
Tumkur	8,088	8,878

The provincial returns shew rather different figures for the four last weeks: Bangalore 14,520, Kolar 5,810, Tumkur 7,328.

KITCHENS. District.	Average of the month under report.	Average of the previous month.
Bangalore	20,758	6,668
Kolar	9,016	3,755
Tumkur	15,768	11,947

Here, too, the provincial returns shew different figures: Bangalore 15,165, Kolar 5,893, Tumkur 16,045.

is evident that very serious want must be felt by large numbers of the population at present, and that all their money or their stock of grain is gone, for very many prejudices must have given way at once where, in a few weeks, the numbers applying for public relief in the shape of cooked food rose from 22,370 to 45,540, or more than double in a short period of time."

The mortality was also becoming serious. The mortuary returns showed in four weeks 10,205 deaths, which is not a very high figure in itself, for it only represents a death-rate of 60 per mille, but the ratio was five times as high as the usual proportion given by this most defective system of registration, and the number recorded as having died in the month was nearly half of the number of deaths registered in the eight months ending with February 1877. Cholera was very severe, and a promising and useful Assistant Commissioner in Tumkur, Mr. Woodcock, had died of it. He was taken ill at an outlying town and died, alone and unattended except by his native servants, by the road-side while attempting to reach Tumkur.* No general fall of rain had taken place (the Commissioner here omits mention of the heavy downpour of April 1st which marked 2·2 inches at Bangalore, and from 1 to 1·3 inch at Kolar and Tumkur), but several local showers had encouraged the ryots to plough and manure their land.

* I make the following extract from a letter to a Bombay newspaper, dated 27th April: "Poor Mr. Woodcock, the Police Assistant Commissioner, was carried off by cholera on the morning of the 17th instant. He contracted the disease at Chiknaikanahalli on the night of the 14th in this wise: a heavy storm of wind and rain came on, and the cholera-shed attached to the kitchen was blown down. Poor Woodcock, though suffering from diarrhoea at the time, turned out of bed and superintended the removal of the patients. This he did in the rains; and to add to his trials he had to wade knee-deep through water, going to and returning from the kitchen. Cholera attacked him on Monday the 16th, and he sank under it in a few hours. He has left a widow and one child but poorly provided for, and it is hoped that Government will do something

4. Colonel Hay's report on the Ashtagram Division for the month ending 15th April was a long and more hopeful one. Rain had fallen in both Mysore and Hassan to an unusual extent for that time of year, marking in some places as much as 4 inches, and the early sowing of jowar had begun with good promise. The epidemic of cholera, though general, was not as severe as in the preceding year. The register at the two principal places through which the coffee colonies pass to and from Coorg and the Wynad shewed that 5,000 had gone thither and 9,000 turned. The number of labourers on relief works was 8,333 in the last fortnight of March, an increase of 2,500,

simply resulting from energetic efforts to finish off works included in the regular budgets to prevent lapses. have already pointed out that most of these cannot be considered as famine relief works."

In the first fortnight of April the numbers fell to 2,000.

This was mainly due to the completion of works, but partly also to the ryots in many places having left to plough their fields, and to occasional outbreaks of cholera."

There were 41 Government kitchens, besides several private ones; and the numbers fed up to the 15th April had not been received in time for this report. The provincial returns shew that they were 4,900 at the end of March and 5,200 on the 15th April. Of the revenue due up to the end of March (four instalments or five-eighths of the whole), 91 per cent. or 13½ out of 4 lakhs had been collected. Nothing is said of the death-rate among the people, and the returns of cattle mortality had not been received; but more than half the cattle driven into the forests for pasturage had been taken back by the owners to their own villages, since rain had fallen and grass begun to grow. In conclusion—

the seasonable falls of rain in so many places have greatly encouraged the ryots and roused them from despondency, but no material alteration in the circumstances of the distressed taluks can be expected yet, and it will be necessary to provide work and food for a large and possibly increasing number of the population for some months longer."

5. The report on the Nagar Division for the same period was very short, and does not throw much light on the condition of the people. It gives an account of the Commissioner's visit to the worst part of the Kadur District, where the numbers on relief were very small, and most of the people wanderers from other districts; and he mentions that the rain which had fallen was encouraging the return of the emigrants to their homes, and that he hoped to describe in his next report a more hopeful and cheering state of affairs throughout the whole district.

6. Colonel Hay sent up with his report an interesting minute on his recent tour through the Haranahalli taluk, which throws some light on this the worst part of the Hassan District. Many people were, he found,

unwilling even as a last resource to leave their homes, and declared they would rather die where they go to the relief houses. The remedy proposed by the native officials is the multiplication of kitchen advocating one in each hobli, or even in every village; but hobli kitchens are open to nearly the same objection as "taluk kitchens" (distance from the homes of the people in distress, presumably), "and I have consulted the Commissioner on the advisability of trying the plan adopted at Poona with success, of lists of villages relieved with grain in their own villages to the same amount as is sanctioned for the ration at the kitchens."

No notice was taken of this proposal by the Chief Commissioner, nor does this plan appear to have been put in force anywhere, though Sir R. Temple, as we have seen, understood it was being followed as far as regards the infirm and house-ridden throughout the province. The number on the 34 relief works in this taluk in March was 2,544 (it was only 3,211 on the whole district on the 31st March), of whom 945 came from 62 villages in the taluk and belonged to 489 families. Of these, 448 families, who were almost all ryots, sent 3 members each to the relief works; the remaining 41 sent 4 and 5 members each. The works were carried on on the piece-work principle, the men being paid for every 12 to 16 cubic yards of earth-work (which also includes carrying the earth a

greater distance) being exacted for Re.1.. The people were left to divide themselves in working parties, which consisted generally of six,—2 men, with 4 women or children,—at the average wage earned per head was anna 1.4.* There were no general complaints that the rate was insufficient, “and the people seemed too glad to get work to find fault with the rate of pay.” But it was difficult to provide work for single persons, and for women who came in excess of the due proportion required to carry earth for the men who dug. In the relief kitchens, three in number, 590 people were fed, who chiefly belonged to neighbouring villages. Most of them were much emaciated. In one portion of the taluk, the Gaṇḍasi hobli, a rough census was taken. Thirty per cent. of the population or 2,215 had emigrated, but some of these had only gone to the rice harvest in the Maṇḍād and nearly half the number had returned, leaving 1,321 absent.* Of those found present at the census, 5,879 in all, 1,769 were Brahmins, Government servants, and artisans, who could presumably support themselves, 2,179 were aged, blind, infirm, decrepit, and children below 12 years of age, 1,931 were fit for work, of whom 297 were on the relief works. Nearly 90 persons otherwise qualified for work were found in an emaciated or enfeebled state. In the relief kitchens 140 were fed. This census is obviously imperfect for the purpose of a special famine inquiry. The children should not have been classed separately, but with their parents, and it is not stated how many of those able to work were in want. But it leaves the impression that, if only 2,544 were relieved by employment on works, and 590 by gratuitous feeding, the relief would hardly have been sufficient for the wants of the people. Yet this was, out of all the taluks in this division, the one in which far and away the largest amount of relief was provided for the suffering poor. As to cattle, the census shewed that out of 1,055 ryots, 455 had lost all their plough cattle, 358 were left with single bullocks, and only 242 had one or more pairs. It was anticipated that this would be

a serious impediment to getting in the seed of the early crops in time, but no doubt the ryots will help each other as far as possible, as they are accustomed to do this in all years.”

There was no fear of any failure of supply in the markets, for, though the local bazars were nearly empty and scarcely any reserve stock existed in the hands of the richer farmers, the chief markets of Tiptur and Alur were well supplied and freely resorted to:—

“Coarse Mangalore” (i. e., west coast) rice was for the first time being freely consumed, and seemed to be bought in greater quantities than Madras rice from Bangalore.”

7. These reports were forwarded to the Government of India after some time (on the 12th day) for information, but no remarks were made to shew whether the Chief Commissioner was satisfied that the amount of relief given was sufficient or not; nor was any notice taken of the singular reason given for the increase of numbers on relief works before the close of March and the decrease in April, which shewed such a lamentable error in the system.

8. On the 1st May the Chief Commissioner issued a Resolution on the subject of the increasing tendency to wander and of the deaths that occurred among the vagrant paupers. The bit, he said,

is traceable rather to a restless disposition on the part of the people than to any defect in the measures which have been taken to provide gratuitous relief to all persons in need of it; but it is probable that adequate precautions are not taken by the officials in charge of relief centres to provide employment for persons whose condition has sufficiently improved to admit of their being discharged from the kitchens, and that those who have been so discharged take to wandering about in search of promiscuous relief.”

Accordingly, it was enjoined on relief officers to see that persons discharged from kitchens were admitted to and kept at works, and Commissioners were to issue “such further detailed instructions as may be requisite to give effect to these intentions.” No fresh instructions were, a

* At the rates quoted for Hassan at this time labourers could get 1 lb of ragi for 1 anna.

I could learn, issued by the Commissioners, probably because it was thought that all that usefully be said on the subject had already been said with sufficient distinctness. It is at that no good could come of reiterating instructions unless some new steps were taken to give practical effect. These steps would have been to concentrate and reduce the number of the relief works, and to appoint a staff of officers strong enough for the efficient supervision of all details. The Haranahalli report, which has just been summarised, supplies a good and crucial instance of the failure of carrying out the Chief Commissioner's instructions under existing circumstances. In 34 works going on under the village patels and shanbogs, the one relief officer could hardly exercise the supervision that was expected of him, nor could the rustic authorities be supposed to possess the necessary intelligence and authority to keep the people from wandering.

9. On the 9th June the Deputy Accountant General, Mr. Hudson, submitted a report on the financial state and prospects of the province. During the preceding year, 1876-77, the total income, and on account of the land revenue, which usually is 73 lakhs of rupees (Rs. 73,00,000), had been reduced by the remissions quoted in Chapter III, paragraph 21, to 64½ lakhs, out of which 50½ lakhs had been collected. Thus the receipts from land revenue had been lower than was estimated by 22½ lakhs, and a further deficit of 3½ lakhs had accrued on excise and the miscellaneous house and trade taxes known as *Mohtarfa*. On the expenditure side the excess items consisted of the cost of famine relief, 6 lakhs of rupees, making a total loss of 31½ lakhs of rupees due to famine. Besides this, there was the normal annual outlay of the Public Works Department (10½ lakhs), which was planned with the express purpose of utilising the Mysore invested surplus. Altogether, the expenditure of 1876-77 had exceeded the income by 42 lakhs of rupees, and this had been mainly taken from the large cash balances, but to make up the total nearly 16 lakhs of the invested surplus had been spent out, leaving that fund in possession of a little over 47 lakhs of Government bonds at 4 per cent. (Rs. 47,14,000) on the 1st April 1877. In the current year, 1877-78, Mr. Hudson estimated that the receipts might come to 86 lakhs (against 82½ lakhs in 1876-77); that the ordinary cost of the Civil Administration would be 92½ lakhs, besides the regular Public Works Department expenditure (25 lakhs) and the special famine expenditure, which he roughly estimated at 20 lakhs. This calculation works out to a total deficit of 51 lakhs, which would more than swallow up the whole of the surplus fund. The Chief Commissioner on the 15th June circulated a copy of this report to the different heads of departments, directing them to submit an early date their proposals for reduction of expenditure. Nothing was said specially in this communication about the reduction of the Public Works budget, to which Mr. Hudson referred as contributing so much to the depletion of the Treasury; but a separate correspondence was going on at this time on the subject, which will be noticed in its proper place towards the end of the chapter.

10. The next source of information as to the condition of the people and country is to be found in the reports of the two Commissioners of Ashtagram and Nagar for the month ending 15th of May. None was submitted for the Nandidrug Division. According to Colonel Lytton, the prospects of the early crop were not as good as they had been, for there had been hardly any rain in May, and the young jowar was beginning to wither. Markets were well supplied, both rice and ragi coming in from Bangalore and the west coast, though the import of ragi by sea to Mangalore was quite a new thing in history, and due to the unprecedented scarcity of agencies and activity of trade. Both rice and ragi had risen in price, and rice now stood at 4 annas 4 paise for the rupee. Emigration had decreased, though it was beginning to show signs of renewed activity, as the coolies who went home were unsettled and disappointed at the want of rain. It was reported that there were only 7,500 Mysore coolies in the Wynād, and that

there was no distress among them. The number on civil relief works was 2,900, an increase of 900 since the 15th April, the cause being the starting of a number of new works; and the applicants for employment on the Cauvery channel works under the Public Works Department had also increased. In kitchens the number fed had risen to 8,500. The condition of the cattle had improved, as grass had sprung up. Since the 16th May the barometer had fallen, and there had been heavy rain in many parts which Colonel Hay hoped would save the crops. He himself had been out in the south and south-west direction, organising the arrangements for assisting destitute coolies and travellers to the Nilgiris and Wynad.

11. Colonel Campbell had been unable, through the pressure of sessions duties, to go out much on tour in his division during the month. He had been enquiring into the grain traffic, and found that supplies were being sent to Chitaldrug and Shimoga from Bellary and Dharwar, and that some import from the west coast still went on. He estimated the number of grain carts from April 1876 to March 1877 at about 2,000, representing nearly 1,000 tons. The number on relief works was 12,294 on the 28th April, an increase as compared with the previous month. The number fed at kitchens is not stated, but at one place (Chenagiri) which the Commissioner had inspected, he says there were 209 people fed, and not one had to be turned away; while about 200 men were clamouring for admittance outside, of whom 50 or 60 were proper objects of gratuitous relief.

"The districts of Shimoga and Kadur have been comparatively fortunate in the matter of rain, and a good deal of ploughing has been done; but regarding Chitaldrug, very little of an encouraging nature can be said. The weather, however, is considered to be on the whole seasonable, and there is a general impression that the south-west monsoon will be early."

12. The reports for the month ending 15th June were submitted by the Nagar and Ashtagram Commissioners towards the end of June, but again no report was sent up by the Commissioner of Nandidrug. Colonel Hay began with some interesting remarks on the rainfall. The effects of the extraordinary cyclone, which between the 16th and 19th of May deposited 21 inches of rain on the Madras coast, were felt in Mysore and Hassan, where there were heavy showers from the 23rd to the 25th, but in June, though Hassan had received some rain, hardly any had fallen in Mysore. The quantity that fell in March, April, and May was an inch over the average in Mysore, but 2½ inches below it in Hassan. The south-west monsoon set in about the 7th, when the first fall exceeding 1 inch took place, and it was reported as having broken in the neighbourhood of a coffee plantation in the Malnad on the 9th June. At Attikupa, in the eastern part of the Hassan District, the first heavy fall of 3 inches took place on the 12th; great benefit had been done by this rain; the early jowar crops were thriving, and a variety of wild leaves and grasses had sprung up everywhere, which afforded food to the people. Labour could scarcely be procured by the Irrigation Department, as every one was anxious to go off to plough and sow his ragi field, but the numbers gratuitously relieved (mostly strangers, not local poor) were not falling. There was a large number of debilitated and emaciated coolies returning from coffee, and few going there; but if the south-west monsoon failed, there would be an active revival of emigration. Trade was still lively, though there were fears that it would be stopped by the rains; and in anticipation of this, prices had already begun to rise. About 18 carts a day had come up the Manjarabad Ghat with rice, and in May over 300 carts; this would imply an import of 120 tons a day, or about one-fourth of what the railway was bringing into Bangalore daily at this time, the hire for the trip to Cannanore being Rs. 20 a cart, or about one-third of the value of the cart-load of rice (500 seers, or about Rs. 60) at the market of import. The cost of carriage must thus have added 30 or 40 per cent. to the value of the grain when landed at Cannanore. He concludes by noticing the extent to which stocks of money

June, or forwarded to the Government of India till 30th June, and considers that all famine matters should be disposed of with the utmost promptitude."

16. The letter was forwarded on the 26th July to the Chief Engineer, who, on the 24th August, submitted a memorandum in reply. He said (1) that these people were apparently not able-bodied (though the Commissioner said they were), and therefore ought not to have been sent to the Public Works Department at all, it having been decided on many references that that Department ought only to deal with able-bodied labourers; (2) that the overseer referred to by Colonel Campbell was practically amenable to any order of the Commissioner or Deputy Commissioner, and if they had told him to issue daily pay he would have done so. He then went on to say that, since gangs employed on the repairs of roads were generally about 10 miles apart, and each overseer had about 80 miles to look after, it was impossible that payments should be made oftener than 10 or 15 days without entrusting the duty to "unreliable agency," and that till lately there had been no desire on the part of the labourers employed by his department to receive daily pay oftener. The principal works carried on had been in the Malnad: nearly all the coolies engaged there come from the Maidan taluks or from the coast, and come with the object of making a purse to take back to their villages.

"The daily payment to men so situated would be useless, and the coolies composing our *khulshat*, or labour corps, in fact pride themselves as being on monthly pay. In the Maidan taluks," he quotes from Captain Bowen, "the works are, and have since the commencement of the distress been carried out as a rule by regular gangs accustomed to such work, and to the long-established rules under which the works are conducted. Our aim in thus keeping the able-bodied fully employed has been, I should say, quite as benevolent as the provision of ordinary relief, which indeed, with the funds and supervision at our disposal, was quite beyond our power."

In plain language, this amounts to saying our works do not employ, and are not meant to employ, relief labourers or persons who are driven by famine to work for their livelihood; we can only concern ourselves with our ordinary body of regular labourers, and it taxes all our energies to look after them.

17. On the 30th June the Commissioner of Nagar followed up his report by a more definite proposal to utilise the Public Works Department for relief works. He forwarded an application from Major Armstrong for a special grant for metal collection on roads, on the ground of

"the great difficulty which exists in opening suitable relief works for the paupers in some taluks, and especially at such places where large kitchens exist."

He wrote that, excepting the cultivating ryots and the regular coolies employed by the Public Works Department throughout the year,

"the remaining portion of the labouring population in the Chitaldrug District are as a body reduced to a dangerous state of physical weakness, and those who can be kept out of the kitchens are not in a condition to do more than half the ordinary daily task of a strong man or woman."

The small relief works which had been sanctioned in large numbers consisted of digging and cleaning out wells, making village roads, repairing small ponds, filling up ditches, and cutting down hedges.

"No doubt there has been much waste and peculation in carrying out these works in remote places; but much good has been done, money has circulated, and many a healthy man has been kept out of the kitchens for months longer than would have otherwise been the case. But there was and is one disadvantage in this system of scattered petty works. They gave little opportunity of observing the gradual deterioration in health and strength which has been taking place. Before the beginning of the year, I saw very few young and middle-aged men in the kitchens (*i. e.*, emaciated); now they are numerous."

He therefore proposed to reduce the number of petty works and to employ relief coolies on provincial and district works, but as they could only do half an ordinary day's work, the

and grain had been reduced. A regular trade had been created in the female ornaments which the ryots were obliged to part with, and goldsmiths and money-lenders attended every market for the purpose of buying them up. Colonel Hay reckons that the wife of a poor ryot usually possessed ornaments worth from Rs.23 to Rs.40 (bracelet, anklet, and marriage-necklace), and those of a wife of a well-to-do ryot would be worth from Rs.80 to Rs.290. Lists had been prepared shewing that at eleven places in the Hassan District ornaments to the amount of about Rs.5,700 were disposed of monthly, and besides these a variety of old coins had been produced for sale:—

"Sales of this kind had begun in November and December, and have been on the increase since, but the chief is that when the early crops are out they will diminish, which I trust will be the case."

The numbers on relief works and in kitchens were not stated in the report, but from the provincial returns they appear to have risen from 2,600 to 3,600 in the one case, and from 5,400 to 10 in the other, in the division.

13. Colonel Campbell's report refers only to the Chitaldrug District, in which he had on tour of inspection, and he does not give any general view of the condition of the district, but confines himself to remarks on those he saw at the places he visited. Appearance of those at Chitaldrug shewed a marked change for the worse, but the two large kitchens under Lieutenant Macintyre were well managed and in good order. The state of those people who, being able-bodied, were drafted, according to the Chief Commissioner's orders, on to works under the Public Works Department, or who were employed on works carried on with the ordinary district funds, and not specially organised for relief purposes, was, however, very unsatisfactory. Many who were sent to district road repairs,

though paid daily, could not earn enough to live upon as a strong man can, and relief work proper, in making sanitary improvements in the town, has now been provided. Applicants for admission at Hiriyur kitchen who can do some work were sent to be employed on repairs to the Bangalore main road, but they have left this and refuse to return, as they are paid only once in 15 days, and then some part of their wages is deducted for short work."

The abandonment of the Timanhalli tank is mentioned with regret, as it was undoubtedly a remunerative work, whereas, through the want of it, it has been necessary to sanction large sums for trifling works here and there, the utility of which cannot always be guaranteed. Colonel Campbell ended by asking that another assistant or another survey officer might be sent to help Major Armstrong in relief works.

14. The Chief Commissioner made no observation on Colonel Hay's report; he said nothing in reply to Colonel Campbell's petition for another officer for Chitaldrug, but referred his remarks about the 15-day payments and the Timanhalli tank for consideration to the Chief Engineer.

"If the mode of payment," he said, "is the sole obstacle to employment of the distressed people on such works, no consideration should interfere with the temporary alteration of the system. It is important at least that these works should subserve the purpose of affording relief in affected districts."

15. The moment the Government of India read this report, they felt that a clue had been obtained to the unwillingness of labourers to apply for relief to the Public Works Department. But it was not till the 8th of July that the correspondence was received at Simla. On the 13th the Additional Famine Secretary wrote—

"His Excellency the Governor-General in Council has observed with surprise that a system so unsuited to famine times, as paying coolies only once in 15 days, exists in the Province of Mysore, and has continued so long without attracting notice. This practice alone would go far to account for the small numbers on works under Public Works agency, and for the eventual swelling of the numbers in need of charitable relief. His Excellency in Council desires that bi-weekly, and where distress is extreme, daily payment may be substituted as soon as possible."

"His Excellency the Governor-General in Council also observes that the report of the Commissioner of the Ashtagram Division for the month ending 15th May was not despatched till the 20th idem, dealt with until 12th

work wage would not suffice, and special arrangements must be made. The able-bodied need not be turned off, but might be kept in separate gangs and in different parts of the road, and paid on a distinct system.

18. This important letter was the first paper in which was traversed the argument that was impossible for able and weak coolies to work side by side; and that if any departure from the ordinary system of task and payment was admitted, the strong labourers would be demoralised by their shewn to the feeble ones. The plan here proposed by Colonel Campbell was the one adopted in the later stages of the famine, but at this time it seems neither to have been accepted nor seriously discussed by the Public Works Department. The Chief Commissioner's reply, however, treats of the matter as if it were quite simple, and as if the plan proposed had not been opposed or denounced by any one. From able-bodied coolies a full day's work was to be exacted, and from others who are unaccustomed to work or are in an enfeebled state, less work should be required and full wages paid.

The system of work referred to should be applied to road repairs and other works carried out under the supervision of the revenue officers, and it is probable that the Chief Engineer will be able to arrange for the employment of the distressed portion of the population on similar work as well as on tank repairs in progress under the Public Works Department on similarly equitable terms, provided that the different classes of labourers can be satisfactorily employed."

19. The statement (in June) that the people of Chitaldrug, other than the ryots and coolies employed by the Public Works Department throughout the year, had been brought to a dangerous state of physical weakness, attracted the attention of the Government of India, and a report was called for as to the causes which led to this condition. Colonel Campbell replied on the 6th August that the main cause was that this was the third year of famine, and that the local stocks of grain had been entirely exhausted, and that the majority of the people were not able to pay the ruling prices for imported grain.

The different phases of famine generally come to notice with apparent suddenness. This is particularly the case in a large portion of the labouring population leave their villages for the more favoured localities. During the famine surprise is often expressed that applicants for admission to relief and other works are not so numerous as it is expected, and when the wanderers return too often exhausted by travel and exposure, they are fit only for hospital or relief kitchen. Thus it has been impossible to take notice of the deteriorating condition of many, the consequence of their absence; and as regard others, no single large relief works have brought them together and under intelligent observation. When I made my report in June, it was after visiting several relief works and seeing a considerable stream of people. At that time I excepted the regular tank-digging and road-making coolies from the ranks of those whose strength had been seriously reduced; but I see from a circular in the Public Works Department that even these hardy labourers, to whom the use of the *mamati* and pick-axe has been always familiar, require to be exceptionally dealt with; and I have been told, on good authority, that the men of some of the *khalihal* corps, accustomed to labour as they also have been, have lost health and strength, because their pay will not buy them enough to live upon.

"I have to-day in a letter to the Under Secretary, Public Works Department, strongly urged the recommencement of the Timanhalli tank project, and if my proposals meet with the approval of the Chief Commissioner, I am confident that the result will be to put new life and energy into thousands of people who can hardly hold their own, and in many instances are pining away in the depressing and sickly atmospheres of the relief kitchens."

The Chief Commissioner replied that orders had already issued for re-opening the Timanhalli tank, on the principles recommended by the Commissioner, though Mr. Saunders very much doubted whether it would be found practicable to carry them out successfully.

20. The reports which have been thus summarised relate to those divisions of the province which were least severely affected with famine, and in which the smallest numbers of people were in receipt of relief. No such reports were sent in by the Commissioner of the head-quarters

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On the 31st March the numbers on relief works had been 55,687; they fell immediately after the 1st of April to 32,000, and from thenceforth they oscillated between that figure and 25,000. The numbers on gratuitous relief, on the other hand, had been 57,974 at the end of March; during April they rose to 87,691; during May the increase was 20,000; during June there was a check in the flow of the tide, and for a short time there was a slight tendency to decrease, which coincided with the favourable commencement of the monsoon, and with dispersal of many cultivators to plough their lands; but this soon passed away, and by the end of the month the numbers stood 13,000 higher than at the beginning; in July they rose by 44,000 to the aggregate figure of 164,439; at the end of August they had reached an enormous total of 227,067.

22. The decrease in the numbers of labourers on the relief works under the district of Mysore was explained in the provincial return for the 7th April as being—

“owing to the completion of some of the works under revenue officers before the close of the official year.”

“The Deputy Commissioner of Tumkur reports a large demand for labour for harvesting the jowar crop, the same may be said of other parts of the province. Under the rules of the Public Works Department, such a lapse, if not fully utilised, before the close of the official year, but to prevent this operating adversely to the interests of the relief labourers, Commissioners have been directed to apply for the necessary reappropriation of unexpended grants and to proceed with the works pending sanction.”

On the 26th April, in reply to a special enquiry by the Government of India as to the cause of this decrease, the Chief Commissioner telegraphed the same explanation. On the 30th April the Government of India replied that people in real want should not be deprived of relief on technical reasons, or because the works they have been engaged on have come to a close. On the 1st May the Chief Commissioner called on the district officers for a further explanation of this decrease, but without waiting for the arrival of all the answers he replied on the 19th May to the Government of India in the following terms:—

“On referring to the original reports on which the statement” (quoted above) “is based, the Chief Commissioner sees that its wording was calculated to convey a somewhat erroneous impression as to the fact of the decrease of 23,000 persons on relief works being due wholly to the completion of works in progress under the district office. In a report from the Commissioner of Ashtagram it was certainly stated that a decrease of 6,333 persons on relief works had arisen in the fortnight ending 31st March owing mainly to the completion of those works; but there is no information of such a result having occurred in the other divisions where the distress is chiefly felt, while, as remarked in the paragraph under advertence, there is evidence of other causes having largely operated to bring about considerable desertions from relief works.”

Referring to the rainfall of April 1st:

“there is nothing surprising in the circumstance which was specifically reported from the Mysore and Tumkur Districts, that the people were returning to their villages in order to commence agricultural operations. Mr. Saunders considers that this was the chief, and as he has reason to believe the only, cause in most districts for the falling off in the numbers on relief works at that time.”

This explanation, however, was hardly borne out by the replies received from the district officers, many of which came in after it was written. The Deputy Commissioner of Bangalore gave no reply. From Kelar the answer was (20th June) that the decrease was due to the completion of most of the minor works before the 31st March, not many new works having been started owing to the non-completion of the necessary preliminary arrangements. The Deputy Commissioner of Tumkur (30th June) replied that it was due to the close of the financial year. Either sanctioned works were completed, or else their amounts lapsed, on 31st March, and amildars waited for fresh sanction. In Mysore it is attributed to fall of rain, cholera, and completion of works: in Hassan to the completion of most works on the 31st March; in Kadur to the close of the official year and “recent dawn” of the new year; in Shimoga to the fall of rain in April and the return of people to the fields.

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Looking in the whole history of the administration of the Mysore famine, it is more saddening than this sudden collapse of the relief works, and yet there might have been more surely predicted from a knowledge of the preceding events. The immediate source was evidently a pure oversight. Nobody in high place had remembered the existence of this alleged technical rule; nobody had foreseen its effect; and nobody had sent suggestions to the inferior officers who were in charge of the works that the rule was not to operate the more to cut off relief from starving people. But when we look a little deeper into the origin of the mistake, we find that it arose mainly from two causes. Why did no one remember the rule? Because it was no one's special business to remember it, or see that its application was not a means of disaster. There was no Famine Department and no single administrator of famine relief in Mysore. The Commissioners gave to famine only the time they could spare from their increasing and onerous duties as Sessions Judges. The Deputy Commissioners, burdened with the multiplicity of their cases, bewildered with the intricacy of their accounts, tied hand and foot in the trammels of official routine, relieved of scarcely any of their usual duties, and strengthened only in two or three instances by the appointment of special assistants, found it hard enough to carry out the day's sponson the day,—harder still to look forward to the needs of a fortnight or a month in advance,—in the absence of personal communication and confidence, to conduct the correspondence necessary to elicit the orders that were needed. If there had been a single officer in Mysore with extraordinary powers, whose sole business it should have been to carry on the relief in Mysore, to see things with his own eyes, to hear the views of the district officers from their own mouths, to make a forecast of the future and provide plans for all its wants, this catastrophe would have been a human probability not have happened.*

24. But this was only a negative cause—the want of help which might have been provided. The direct and positive cause of the failure was the refusal to relax routine, the insistence on obedience to the ordinary system of procedure under conditions to which that system was wholly inapplicable. If the necessity of obtaining special sanction beforehand to every petty application had been abrogated, if broad definite principles had been laid down and district officers had been left to apply them to individual cases according to their discretion, guided by a strong central authority, the power which would have insisted on the proper use of that discretion, then the doctrine of personal responsibility could have been enforced, and due punishment might have fallen on the heads of those who preferred to close a work on which starving people depended for their existence, rather than carry it on without a notification, a sanction, and an appropriation. Then the amildars, who, as one Deputy Commissioner reported, turned hundreds of applicants for work away, or who employed them only on alternate days for fear their funds might run out, might have been instantly dismissed the service and their fate published *in terrorem*, after which the crime could not have been repeated. Then the Deputy Commissioner himself might have been suspended.

Allowing the starving people of Dod Ballapur to be thrown out of work in the end of January. But how could that be done when he had just been severely censured for starting an unsanctioned work to employ those very people? What happened during the first week of April had happened before, though on a small scale, and not having been checked then, it was certain to happen again, if not now, then at another time.

25. But the numbers having been thus reduced at once to below 32,000, the next question is, why did they not in time rise again to their former amount? The Chief Commissioner stated that Commissioners had been directed to apply for the reappropriation of the unexpended grants, and to proceed with the works pending sanction. It would seem then natural to expect that

* The Bombay Government, on the 22nd February 1877, issued a special circular warning all officers that sanctions for famine relief works should not lapse at the close of the official year.

people who were turned off by the closing of the works ought to have been by their reopening; but no such result occurred, and the numbers oscillated a little over or under 30,000. The number of works in progress had risen again of April to the same number as were open on the 31st March (2,070), but only about the old number of people were employed on them. The only cause alleged for this in their correspondence is, that the rain which fell on the 1st April attracted the cultivators to the fields; but the effects of that single rainfall must soon have passed away, the ground may have dried up again and become too hard for ploughing, and no more rain fell, till the 19th here. In the four worst districts—Bangalore, Kolar, Tumkur, and Chitaldrug. It is impossible, was a fore, to hold that agricultural activity kept the people away from the works. There have been decrease where there should have been an increase. The numbers on the 1st May should have been double, but were only half, what they were at the end of March.

26. The explanation is to be found in the sudden increase of those gratuitously employed. There were 23,000 people summarily turned off the works in the first week of April. Certain third week of April, 25,000 fresh admissions were being fed in the relief kitchens. It is possible not to connect these two events together. Discouraged by the precarious and uncharacter of works so suddenly closed, the famished people no longer responded to the invitation given them by opening new works; they loitered about a few days, went to their hawks and tried in vain to live there, and then betook themselves to the kitchens. From that time every effort of the district officers to relieve the increasing distress by employment on works was in vain; and the history of famine operations becomes almost merged in the account of the gradual growth of the numbers fed gratuitously in relief kitchens.

27. The following table shews the rainfall week by week for each district in the province

Rainfall.

	APRIL				MAY				JUNE					JULY				AUGUST				Sum.
	7th.	14th.	21st.	28th.	5th.	12th.	19th.	26th.	2nd.	9th.	16th.	23rd.	30th.	7th.	14th.	21st.	28th.	4th.	11th.	18th.	25th.	
Bangalore Observatory	2.25	...	...	...	2.22	...	1.30	.75	1.15	.97	1.77	.26	...	.85	...	.02	.76	.6	.7	1.3	.5	...
Kolar	1	...	...	...	...	...	1.60	1.05	.84	2.57	.81	...	...	...	...	...	.15	.1	.1	.4	2.2	...
Do. (according to Dr. Kensington's figures)	1.21	.16	...	...	...	...	1.84	.40	.25	1.33	1.80	.01	.02	...	...	.02	.30	...	...	...	...	...
Tumkur	.40	.36	...	...	...	...	2.4	.32	...	3.42	1.71	.44	.54	.20	.08	.08	2.04	.5	.4	.7	...	...
Mysore	1.2	...	.7	.11	...	...	.76	2.53	2.63	.29	...	.45	.12	.12	.14	...	.59	.3	.6	.6	...	...
Hassan	...	...	...	.38	.64	...	.23	.02	1.67	1.54	3.01	1.45	2.13	.03	.26	.14	1.01	.5	.5	.7	.6	...
Kadur	.55	.97	.75	1.55	1.56	...	.35	1.15	.89	.30	2.45	1.05	.67	...	.12	.23	.47	.9	.1	.9	.1	...
Shimoga	...	...	.35	1.55	...	...	.11	.32	.50	.26	5.35	1.80	.80	.34	.15	...	.48	1.1	.1	1.6	...	...
Chitaldrug	...	1.30	...	...	.2	...	1	...	.70	2.65	1.95	.19	.1	...	.05	...	1.60	.8	.5	.2	...	...

In the western districts there was a fair and pretty constant supply of rain through April and May, but in the three eastern districts and Chitaldrug the encouraging downpour of the 1st April was followed by dry weather till the middle of May. Then took place that extraordinary cyclone which in three days, 17th, 18th, 19th May, deposited over 21 inches on the Madras coast, and which, though the quantity gauged in Mysore was moderate, disturbed the atmosphere and brought frequent showers. Early in June the south-west monsoon set in, and was at first very promising, but this lasted only for about a fortnight, and was followed by an almost rainless though cloudy season, which continued to nearly the end of July, discouraging the ryots, withering up the young crops, and tightening the market prices. The numbers in the kitchens were almost a

sensitive as a barometer. During the dry weather up to the 18th May they increased rapidly, rising from 57,000 to 108,000; for four weeks, as long as the rain lasted, they were stationary, the figure of the 16th June being only 110,000. Then, with the cessation of rain, the hopes of the agriculturists dispersed, and by the end of July the kitchens were feeding 164,000. But during all this time the numbers employed on Civil and Public Works Department relief works were stationary, or shewed a tendency to decrease as the physical strength of the labourers faded away.

28. Early in June the Government of India had received the figures of relief up to the 19th May, and observed them with alarm and dissatisfaction. In a letter, dated 8th June 1877, they drew attention to the vast increase of gratuitous feeding and to the continued lowness of the numbers employed on works. The letter ended thus:—

"From these facts, it might be inferred that relief works were regulated by the work in hand to be done, rather than by the number of persons requiring relief and able to do a full day's work; that no efficient supervision of such petty works could exist; that either multitudes are being improperly and unnecessarily fed, or relief works have been kept down to so narrow a limit that the people have been reduced to the last stage of distress, and have no alternative but to resort to the kitchens; or, again, that if village relief were efficient, such large bodies of persons would not leave their homes and crowd to centres of relief. In this connection, it may be noticed that in the weekly report of the 21st ultimo, the Commissioner of Ashtagram is said to state that 'a large portion of the persons at the kitchens were half-starved and sickly emigrants from other places.'

"His Excellency the Governor-General in Council is not, however, prepared to draw these conclusions, being well aware that the total numbers relieved is not excessive compared with the population; that emigration may have had an important effect upon the numbers able to work; and that habit, difficult to overcome, may prompt resort to centres. At the same time His Excellency in Council considers that the apparently peculiar condition of affairs at the present juncture demands your most careful consideration, and by means of specially deputed officers, or otherwise, as you may deem best, with the view of ascertaining, on the one hand, that all who can work shall be forced to do so, and on the other that charitable relief may reach all who are really in need of it without too great concentration of recipients, and its concomitant evils and abuses. His Excellency the Governor-General in Council has every confidence that you will take with vigour and promptitude whatever steps may seem to you advisable for these ends, and will be glad to know by telegraph the course you propose to adopt."

29. The Chief Commissioner's reply to this communication was dated the 2nd July. He recapitulated what had been done to supervise and control the administration of relief. Deputy Commissioners had been relieved of a portion of their magisterial work, the Civil Courts had been closed as long as possible up to 10th June, and the judicial assistants and munsiffs had been utilised, and they were still sharing in relief work as far as was consistent with their other duties. In Bangalore itself the management of relief had been entrusted to an Executive Relief Committee under Mr. Gordon, one additional assistant had been sent to Kolar, two survey officers to Tumkur, three to Mysore and Hassan, and one to Chitaldrug. The Chief Commissioner believed that the means thus taken to supplement the ordinary Civil Administration had been and were adequate. In Bangalore the numbers on relief were certainly large. The Deputy Commissioner had explained that it was natural that crowds should flock into the towns; but this explanation was not considered sufficient, and further enquiries were being made to elucidate the point. As to the relief works—

"the course followed in this province has been to provide such works, as far as possible, within easy reach of the homes of the people; in those localities where the distress has been most felt. A reduced task-work was exacted in respect of all who were not sufficiently able-bodied to undertake employment on works in progress under the Public Works Department. In this manner, numerous petty works, such as sinking or deepening wells, excavating silt from tank beds, have been opened and carried out from funds assigned to some extent from local funds, but chiefly from famine grants. Road projects have been taken up to some extent, but in a province so largely intersected by roads, already an objection has been felt to prosecuting works of this kind too actively, with the certainty of imposing an undue burden on the district funds in their maintenance hereafter. As a circumstance bearing on this subject, it may be needful to state also that, in a large number of the relief camps—certainly in all those where the numbers being gratuitously fed are large—light work is provided for those inmates who are capable

of it, by employing them in collecting and breaking road metal, gravel, and in other ways. The advantage of this arrangement is that useful work is provided under more efficient supervision than it is always practicable to secure for petty and scattered relief works."

30. The Government of India on the 13th July replied that this letter did not give any account of the actual expenditure or explanation of the causes which kept down the numbers on relief works. On the 2nd August the Chief Commissioner answered that, as soon as the accounts could be made up, they should be submitted, but it was impossible to give all details at present. As to the low and steady numbers on relief works, the Secretary wrote:

"Mr. Saunders finds it difficult to account for the circumstance to which attention is drawn in clauses 1 and 2 of paragraph 7 of your letter. That there was up to the date of the reports, to which your remarks refer, little or no variation in the numbers employed on works may be viewed as evidence of the sufficiency of the works opened out in each locality to provide labour for those accustomed to work. To a certain extent Mr. Saunders would accept this view as the correct one, for it will be borne in mind that the distress had not up to that time affected the great body of the agricultural class in such a degree as to drive them to labour on public works for their subsistence. The classes affected in this respect were the farm labourers and miscellaneous population, as well as some portion of the smaller ryots with petty holdings. There was, moreover, from a very early period in the famine, a great disposition manifested in all the affected tracts to migrate to the hill districts to the westward. The labour supply of those districts is drawn from Mysore almost entirely, and though the earnings were large, the numbers were in ordinary times comparatively few, who would make the venture under trying conditions of climate and labour. With the failure of rain and of the crops for two successive years, the loss of cattle from drought and disease, and devastating epidemics of cholera and small-pox, the people emigrated from some taluks almost, it may be said, *en masse*. The information furnished by the Commissioners and others amply testified to the efforts made to divert these people from their purpose, and to draw them to the large works in progress under the Irrigation Department in the Ashtagram Division through which they passed. With regard to the people who have not left their villages, Mr. Saunders is satisfied that all has been done that could be done to provide relief works in every locality where the need of them was felt, but it is certain that there were many hundreds in every taluk who, though reduced to the extremity of want, preferred to subsist in their own villages on a meagre and deleterious diet to seeking for employment on works at a distance from them. This fatuous course has necessarily resulted in the condition of these people being lowered to a point which, if they did not voluntarily apply for relief at the Government kitchens, led to their being removed to them by the village officials.

"With regard to the works in progress under the officers of the Public Works Department, the Chief Commissioner desires me to state that, until within the last few days, no material change has been made in the principle on which such works have been carried on in ordinary times. The position maintained by the Chief Engineer has been that the works under that Department are not adapted to those who are not able-bodied, and it has been strongly felt and urged that any deviation from this principle would tend to demoralise the employes of the Department, as no practical system could be devised by which two classes of work could be maintained, one adapted to the able-bodied, and one to those who are not so."

31. On the 2nd July the attention of the Government of India was called to an article in a Bangalore newspaper, which stated that since January 308 dead bodies had been picked up by the police in that town; and the Mysore Government were requested by telegram to state if the story was true. On the 9th July the Chief Commissioner replied to this enquiry. He referred to the wandering habits of the people, and to the great numbers who had emigrated to the Malnad, and who, being unable to find relief there, had turned back in an unsettled and reduced state of mind and body:—

"They have been found all over the province moving from one Government kitchen to another, and have defied every effort made to reclaim them from a habit which in very many cases must have ended fatally. Instances are frequent where, when sufficiently restored physically to be relegated from a kitchen to a relief work near at hand, they have evaded the work, and returned in a more emaciated condition than ever.

"It is not surprising, therefore, that with the many opportunities of picking up a subsistence from the charity of wealthy natives of the town, which has been profusely manifested, large numbers of these wretched people should have flocked into Bangalore. Arriving in an exhausted condition, after long marches, in a state debilitated by scanty food, and that often of an unwholesome kind, many died in the kitchens or infirmaries

provided by the Government. To deaths from this cause must be added those arising from cholera and small-pox, which have up to a very recent period been very prevalent in Bangalore, and indeed over the whole province."

The number of corpses picked up by the police in the streets between the 1st January and the 30th June was stated to have been 671; of these, it was recorded that 242 had died of cholera, fever, small-pox, and dysentery, and 30 of old age. The rest were attributed to starvation or to unknown causes.

"These details will, the Chief Commissioner trusts, satisfy the Government of India that every practicable effort has been made to deal with the fearful distress which combined famine and disease have caused; and I am desired to add that, in order to provide more effectually for the rescue of numbers of homeless people who do not voluntarily resort to the relief houses in the town, but prefer to subsist on precarious charity, the Central Executive Committee have organised a special agency by which the streets of the town are patrolled, and all helpless and destitute persons removed thence to the relief houses."

The subject will be reverted to again, for the street mortality, great as it was now, became much more terrible in the months of August and September, and the explanation of these deaths will be found in the next chapter.

32. On the 25th July the Commissioner of Nandidrug, whose last report on the general condition of his division had embraced the four weeks up to the 7th April, sent up a report for the period from then to the 15th July. He describes the events of the past three months in tone of much depression. In April and May, he says, the numbers on relief works* and in the kitchens gradually increased, and the time was one of much anxiety, but in the middle of May heavy rain revived their hopes.

"The rain continued at intervals up to the middle of June, and every working head of cattle in the county was at once yoked to the plough. North of Tumkur I myself saw in some instances the most miserable cattle at work in others a bullock and a buffalo or buffaloes only were yoked together; and in one case it was pointed out to me a cow was being used for ploughing purposes, and the desire of the ryots to bring their lands under cultivation, and to take advantage to the utmost of the timely fall of rain, gave to agricultural matters a most encouraging and cheering aspect."

But after the middle of June the rain ceased to fall; and—

"I am now compelled to write that hope of better days and an abundant crop near at hand are fast fading away, and nothing but the severest destitution and famine, far more severe than anything hitherto experienced, seen to stare us in the face. . . . I feel that we are now approaching a crisis when it will be scarcely possible to study economy as heretofore, if we wish to save a large portion of our working population from starvation and death.

"I feel convinced that very large numbers of those now in our kitchens will never do another day's work. Their constitutions have been thoroughly undermined by the privations they have undergone previous to applying for food, and the slightest attack of sickness will prove too much for their strength.

"This is to a serious extent the condition of thousands who are now fed at our kitchens, notwithstanding that the village patels have been instructed to send all those requiring relief, and that house-to-house visitation has been carried out to the letter, and I feel compelled to admit that the physical condition of the lower classes is now beyond anything that has ever come under my observation before, and accounts probably for the virulence which just now characterises any prevalent form of disease.

"Numbers, moreover, of the people who come to our kitchens for relief are found to be in a seriously low physical condition, from the fact that it is very difficult indeed to control the tendency to wander which seems to seize them as soon as they leave their own villages; and from enquiries which I have made, I understand that a family or an individual unable any longer to keep up appearances in their own neighbourhood prefer starting on a purposeless series of wanderings to asking for aid at the nearest relief house. Shame of being recognised is often the cause.

But the lowest classes follow the same idea in the most unaccountable manner, and I found one man in a hopeless state by the road-side, who had wandered on more than 120 miles, and could give no reason for his conduct. I think, therefore, the time has arrived for the formation of relief camps, where people in a desperate state should be retained and taken care of until they improve somewhat in physique."

* It is to be wished that this statement was accurate. While numbers in the kitchens increased, those on the relief works fell off, as has been seen.

remonstrated against it, till in July, as it appears, the Madras Government interfered to some extent and enlarged the number of names on the register of "holders of wagons." This was followed at once by a considerable expansion of the imports in July and August, so that it would seem that, if it was correct to assert that the Madras Railway could only carry 60,000 bags or 4,300 tons a week, their whole carrying power must have been diverted to Bangalore during these two months.

38. If matters had gone worse with Mysore, this deficiency of railway transport might have been a very serious calamity. We have seen that Sir R. Temple calculated in February that 900,000 people would have to be supported by railway-borne grain to the extent, at the rate of 1 lb a day, of 13,000 tons a month. The total amount actually imported from November to August in ten months was 147,792 tons, or 14,779 tons a month, thus providing food for 1,110,000 people throughout that period, and for as many as 1,400,000 people in the months of June, July, and August. But to do this required the diversion of the total carrying power of the railway to Bangalore. If the crop of 1877 had failed as completely as that of 1876, there can be no doubt that the requirements of the province would have been yet larger than they had been in these months. On the 16th July the Government of India telegraphed to know what quantity of grain should be imported daily to meet the requirements of the province up to 1st October. The reply was as follows:—

"Total failure of recently-sown crops of ragi imminent; as this follows upon exhaustion of local stocks, I estimate the requirements of the province till October next or later at 4,000 tons of grain daily, and that imports by rail to Bangalore will be needed to the extent of 1,000 tons daily. We are at present receiving from 600 to 700 tons daily by rail."

The estimate of the needs of the province was an excessive one. Four thousand tons represent 8,960,000 lbs, or food, at 1 lb a day, for nearly nine millions of people, and is probably double what the need of the population, reduced by emigration and death, then really amounted to. But that an import of a thousand tons a day by rail would have been required had the crops of the year failed can hardly be doubted, and to transport it from Madras to Bangalore would have employed 980 wagons weekly, whereas the Traffic Manager asserted that the Railway Company only possessed a sufficient stock to send off 600 a week for the service of the whole south-western line which supplied Coimbatore, Salem, North Arcot, and other famine-stricken districts, as well as Bangalore.

39. Two cases of cannibalism were reported in June and July, and the accounts which were published in the newspapers at the time regarding such horrible events created a painful impression, but when looked into, it appears that neither of them was connected with starvation. The earlier case happened in the Doderi taluk of Chitaldr. A man dug up the body of a boy who died of cholera and ate part of it; he then presented himself at a relief camp and was received there, but was at once found to be a madman. He was unknown in those parts, and his previous history was not discovered. The other case happened in a village in the Madgiri taluk of Tumkur. A shepherd was seen to take his youngest child, two years old, into a temple and shut the door; after a long time had passed, his neighbour forced the door open, and found that he had killed his child and eaten part of the entrails. He was arrested and taken to prison, and died there, undoubtedly mad, after ten days. His story was enquired into, and it was found that he had been employed as servant to a weaver to graze his sheep in the Kolar District, from which he had just returned. He had great losses from death of his own sheep and cattle, and from robberies, and this no doubt disordered his mind, but he still had a flock of sheep of his own, and could not have been impelled to the unnatural act he committed by hunger.

40. These two stories, therefore, prove nothing as to the circumstances of the people; but had there been any one at that time in the province with a facile pen and with leisure to note down what he saw, many harrowing scenes could have been recorded.* The officials were too hard pressed to have any time for compiling graphic reports or for writing anything beyond what led up directly to the order they wished to obtain, and this is the probable cause that in the official correspondence hardly any trace is found of the disorganised state into which the country had at this time fallen through the crime and lawlessness which abounded everywhere. Almost the only reference I have met with is in some correspondence in the Bangalore District. The Judicial Commissioner called attention on the 31st July to the great increase of heinous crime (the figures of which, for all the province, were shewn in paragraph 62 of Chapter III), and on the 3rd August he sent up to the Chief Commissioner a diary in which the Deputy Commissioner attributed this criminality to want of employment, and asserted that the people must rob and steal if relief works were not provided for them. Mr. Gordon supported these remarks by saying that a mere increase of the strength of the police would do no good, since the destitute, for want of means to acquire money to buy grain, were pressing on those who had property. Mr. Saunders sent this on to the Commissioner, asking how it was that sufficient employment was not provided for the distressed. He on the 10th August indignantly demanded to be confronted with the Deputy Commissioner in order that his charge might be disproved, asserting that he had encouraged and in no way discouraged relief works. He went on to say that it was clear that famine was now beginning to attack a higher stratum of society, not the poor, tame, low caste people, who simply lay down to die, but a harder and a stronger set,—cultivators, patels, Mahomedans; who had become dangerous and would not submit to starve while there was food to be had for the taking. He ended by proposing (what Mr. Gordon had deprecated beforehand as useless) the more general employment of the *sillidars* or local cavalry as police. The Chief Commissioner on the 17th August wound up the discussion by saying that, if suitable relief works were not provided, it was the Deputy Commissioner's own fault, and that the Commissioner ought to advise him in the selection of such works. But no special step was taken to prevent or avert the evil.

41. When, a little later on, I joined the province and went about among the affected districts, I heard numerous tales of what had happened in those times of bitterest distress, but nothing—not the cholera, not the famine itself—seemed to have made so deep an impression on the minds of the people as the lawlessness and insecurity of life and property during this period. Almost every man had some tale of robbery to tell: here the house was plundered; here the sheep were all carried off; here the thatch was fired, and in the confusion the frightened cattle were driven away; here the whole hamlet had been made a clean sweep of in one night. There are a great number of deserted hamlets the inhabitants of which have not died or emigrated, but only left them because it was not safe for a small number of people to live together, and they were obliged to concentrate on a larger village. The waste that occurred in these districts was terrible. A flock of sheep was killed, in order that 20 or 30 bandits might have a midnight carouse: stock of grain from plundered pits were scattered on the ground, while a few bags were hastily filled and carried away.

42. Naturally, too, the insecurity of property led to disregard of life, and if the robbers felt the hands of a stronger party than themselves they experienced scant mercy. Even women

* Captain Ludlow writes as follows: "I recollect being informed, when questioning a prisoner charged with theft and killing a buffalo, why he had taken his neighbour's animal, that the pangs of hunger had led him to deliberate whether he should kill and eat his own child or his neighbour's buffalo, and that he had decided on the latter course: dogs were occasionally eaten, an authenticated case occurring in a relief kitchen where a man was obliged to eat his food apart from the other paupers owing to his being out of caste for eating a dog. In another case, the hospital patient was obliged to eat his food apart from the other paupers owing to his being out of caste for eating a dog."

and children caught stealing in gardens or in fields were branded, tortured, had their noses cut off, and were sometimes killed. Some mutilated creatures who had escaped from their tormentors took refuge in the relief kitchens and hospitals, and lingered on there in suffering for months afterwards. In many a house old guns were got out and kept loaded to protect the family from horrors which had not threatened them since the days of the Pindaris or of Tippu Sultan. But they did not always protect them. One remarkable instance may be recounted here. A house in the Tumkur District was surrounded by night and attacked; the owner fired on and wounded two of his enemies. They fastened the door firmly from outside, piled straw in front of it, set fire to the house in spite of repeated cries for mercy, and every soul within it, twelve in all, perished. Two of the district officers were on the spot early next morning, and found the house still smouldering, and the bodies of the murdered people lying where they had died. The younger women and the children, seven in number, had been put, through fear of outrage, into a back room, the walls and roof of which were made of granite slabs, so that it formed an oven in which they had been suffocated. The rest, four men and one woman, were lying in the front room, charred beyond recognition. No less than forty-two people were convicted of a share in this crime, and three of the ringleaders were hanged.

43. Another sign of the disorganised state of the country at this time was the increasing number of orphans and deserted children. It is said that in Bombay much harshness and inhumanity was shewn by parents to children, and by husbands to wives, and the weaker ones were often driven out to starve. I found no trace of any such tendency in Mysore. It was the general remark there that the men were more emaciated than the women, and the women than the children; and though there may have been cases of cruelty and of stealing the children's food, they were rare. It was therefore a grave indication of growing distress when the numbers of these orphaned or deserted children began to increase. In April it was reported from Kolar that there were many children of this class in the relief kitchens, and orders were issued that at the head-quarters of each district an asylum should be provided for them under the care of a trustworthy person, or they should be assigned to the care of individuals who would undertake to bring them up on receipt of a moderate monthly payment, precautions being taken to preserve a register of each child with all particulars which might help to its identification in case of the parents reappearing to claim it. In May 40 such children had been found in Bangalore and made over by the Deputy Commissioner to the care of the Roman Catholic Bishop; but this system was not approved of, and the Chief Commissioner again ordered that a Government orphanage should be established to receive such cases. In Kolar a large number of destitute children were taken care of by a charitable lady who, independent of any mission, had established herself there and opened a school for Christian instruction. In June the number of these children was 107, and at the Deputy Commissioner's request the Chief Commissioner made a small allotment to assist in their support. A Government orphanage was established in the relief camp at Binnik Mangala near Bangalore, and about 150 tiny children were under the charge of a respectable Eurasian woman there. But there were also a great number of orphaned and deserted children for whom no provision was made, and who were fed at relief kitchens or wandered begging about the streets.

44. But the greatest test of all of the growing distress and disorganisation of the country was the rapid and steady increase in the numbers who, throwing aside all the prejudices and respect of their class, crowded to receive cooked food in the relief kitchens. The numbers relieved during each week of the period treated of in this chapter have already been given, and it is now time to recount the efforts that were made to improve the organisation of these establishments, and to secure that the relief given should be both effectual, and not excessive nor undeserved.

45. On the 1st May the Chief Commissioner pointed out the necessity of "ensuring that the daily allowance offered in accordance with the scale recently prescribed is really given to those fed in the kitchens. It is desirable that the cooked food should be served out in a mould or measure expressly adapted to the quantity allowed at each meal. . . . It is obvious that, if the utmost vigilance be not exercised in the arrangements made for dispensing the food, the recipients of this needful relief, as well as the Government, will be seriously defrauded."

This was an excellent and useful step in the right direction. At Bangalore, where the food given was rice, tin pannikins were made, marked ten ounces, eight ounces, &c., which were filled with the boiled rice and served out to each according to the quantity prescribed for their class. Elsewhere, ragi flour was boiled to a sort of pudding and measured out with a wooden frame like that used for moulding bricks. The subject, however, had not been exhausted yet, and will be recurred to hereafter; but though some frauds could still be perpetrated on the pauper, a great door of robbery had been closed.

46. On the 23rd May the Chief Commissioner published with approval a set of rules drawn up by the Nandidrug Commissioner for the management of relief works and kitchens. The relief officer (that is, the officer appointed under the orders of 9th February, whose special work it was to inspect villages and to hunt up cases of distress) was to visit every relief work at least once in ten days (he might often have 30 or 40 works in his taluk), and to test constantly the measurement of works completed or in progress; he was also to "supervise unceasingly the distribution of cooked and uncooked food," and to see that the kitchens are kept clean and sanitation attended to. He would probably have three or four kitchens in his taluk, and it does not seem to have been observed that it would be impossible for him to carry out these orders. There was to be a *mutsaddi*, or writer, in charge of each kitchen, who was to give an admission ticket to each person entitled to receive food after entering him in a nominal register; this register was to shew the name, sex, age, residence, caste, date of admission, and daily attendance of each person. The paupers were to be summoned by a horn blown at noon, and food to be distributed at 2, the tickets being given or checked, and the register filled up in the interval. If the framer of these rules had attempted himself to record the names of the starving wretches who crowded to the kitchens, often over 1,000 in number, undisciplined, exhausted, suspicious, giving a different name and residence each day, he would soon have learnt that it was impossible for even a much more intelligent official than an ordinary writer to carry out these behests. In the intervals of keeping up this register, and feeding the applicants, the *mutsaddi* was to look after the sick, to see them doctored, and fed twice a day, to set the paupers who could do it to some light work, and keep them at it, besides looking after the latrines, the cleanliness of the ground in the neighbourhood, and matters generally. The order prescribing that only one meal a day should be given may have been unavoidable in kitchens where the numbers were so large that it was impossible to cook and distribute food more than once; but it was an unsuitable arrangement in a country where the habit is to eat twice a day, and should not have been introduced universally. In Tumkur the rule had been to give two meals a day, and the Deputy Commissioner conformed to the new order with much regret. On the vexed question of uncooked food—to whom it might be given,—all that is said is that it should only be distributed to very limited numbers, and under very special circumstances, but no instructions are given as to what these very special circumstances might be. The Chief Commissioner adds:—

"Where raw grain has to be issued to persons or families, their necessitous condition should be certified to by the *amilidar*."

As a matter of fact, this was an abuse which required a careful check and never got it, for the persons who generally received raw grain were sleek, comfortable-looking Brahmias, whom the *amilidars* were generally ready to certify to be in extreme want.

47. At this time the Central Committee were much troubled about the large numbers of immigrants to Bangalore. Seeing some remarks about this subject in the published report of a Committee meeting (28th May), in which he seems to have been reflected on, the Deputy Commissioner of Kolar wrote to ask how many Kolar people were being fed at the Bangalore kitchens, and was told (June 13th) that no nominal roll was kept, but that, between the 20th and 31st May, numbers varying from 67 to 10 had said they came from the Kolar District. On the same day, the President of the Central Committee addressed a letter to the Chief Commissioner on the kitchen arrangements. There were, on the 30th May, 11,529 paupers fed at the four open kitchens in Bangalore (Pettah, Cleveland Town, Arab Lines, and Alsur) and at the closed camp at Binni Mangala, where residence was insisted on: the numbers in this place had grown from 1,020 in March to over 3,500 in June. The pressure on the space was getting great, although sheds had been provided for 1,000 more, and also for a new camp 4 miles beyond, but it was dangerous to keep so large a number of suffering and sickly people close to the cantonment. Of the 11,529 persons fed on the 30th May, it was found that 9,524 belonged to the Bangalore District, 825 to Kolar, 423 to Tumkur, 409 to other Mysore districts, and 348 to Madras. Accordingly, he proposed to revive the system of deportation which we saw in force in March, but which had fallen into desuetude, and suggested that an Assistant Commissioner should be appointed specially to receive Kolar and Tumkur paupers, and to deliver them over to officials of Kolar and Tumkur at certain fixed points. Only those fit to travel would be selected; they would be fed by the way and escorted by guards; but it was essential that, when received at Tumkur or Kolar, they should be carefully treated, properly fed, and retained there till work or food was provided for them elsewhere.

"There is a strong feeling on the part of the members of the Central Committee who have had the best opportunities of observation that adequate arrangements do not even now exist, and have not existed from the commencement of the famine, in the neighbouring districts of Tumkur and Kolar. From Kolar especially great numbers of emaciated persons have from the first come to Bangalore. Many have died by the way, and many more have succumbed soon after arrival here. I am of opinion that every effort should be made to keep the sufferers in their own districts; it may be difficult to do this, but is not impossible if proper care and steps be taken. If the people be really well fed at Kolar and treated as they are treated at Binni Mangala, it is opposed to reason to believe that they will leave Kolar to travel to Binni Mangala.

"From considerable experience and observation, I am quite satisfied that the people flock to the Bangalore kitchens because they fare worse elsewhere. If stringent orders be given to the Deputy Commissioners that they will be held personally responsible for the due care of those specially deported to them at this time, I think that the measure proposed may, with great advantage, be taken. The suffering and danger from want of shelter here will be averted, the neighbouring districts will have to retain and feed, as they ought to do, their own famishing people, and those persons will be near their own homes, when better times may enable them to return to their own villages."

48. The Chief Commissioner (18th June) approved the proposal, holding this to be a favourable time for such deportation, as it was to be hoped that

"many of these people will, if carefully conducted to the neighbourhood of their own houses, be able to find employment in field work, or will at any rate be provided with the means of subsistence in their own taluks till other occupation can be found."

However he did not, as was asked, designate an Assistant Commissioner for this purpose, but directed the Commissioner to make the necessary arrangements in concert with the Deputy Commissioners of Tumkur and Kolar. Care was to be taken that no sickly person was thus sent away, and that arrangements were made for their comfort on the road.

"After the several gangs have reached Tumkur and Kolar respectively, they should be housed in the Government kitchens at those places, until efficient arrangements can be made for returning them to their villages or taluks; and where needful, the Deputy Commissioners may disburse small sums, to such as are obviously not of the

vagrant class, to enable them to reach their homes. But no persons should be allowed to leave the gangs while in transit to the district head-quarter towns above mentioned."

49. I have met with no official report of the extent to which these orders were carried out, or the actual numbers sent away day by day in pursuance of the policy thus laid down, but it may be useful to record here what I have learnt from personal communication with the officers concerned in the deportation. The difficulties met with in carrying out the orders were greater than had been supposed. It did not follow that because the paupers declared that they had come from Kolar or from Tumkur that their statement was true; on the contrary, their general wish was to conceal the place they really belonged to. They had left their homes because they found themselves unable to support life there, and either could not obtain or would not accept relief on works or in kitchens in their own neighbourhood: some, no doubt, were influenced by a vague trust in the unknown, a rumour that in other places relief was given more liberally or on easier conditions, or a credulous hope that new chances and new opportunities might offer themselves to a starving wretch in a new place, and especially in a great town like Bangalore; others were actuated by a feeling of honourable shame, an unwillingness to be seen as beggars in places where they were known and had filled a respected place in society. Whatever the cause that had induced them to wander, they were in the last degree loth to return to the countries they had left. Nor did they trust the motives which influenced the officers of Government in attempting to deport them. The miseries they had gone through had degraded most of them almost below the level of reasoning creatures. The pangs of long-endured hunger; the constant dread of a horrible death kept off from day to day, as it were, by accident, but always imminent and near; the anxiety lest in the often confused and disorderly distribution of food they should be excluded altogether or put off with half a ration, or have their food stolen from them by stronger paupers; the depressing effect of sitting day after day in a row to be fed; the feeling of degradation through beggary and of loneliness in a crowd; all these influences combined to destroy the morale of the famine-stricken mass, and to reduce them a prey to the wildest rumours and the most causeless panics. There was no feeling of gratitude or allegiance to those who were feeding them at such expense of labour and money,—only an ever-present distrust and suspicion,—their hatred of themselves reflecting itself, as it were, by the light of imagination upon the faces of the officials who dealt with them, and who tried (often no doubt imperfectly, impatiently, and even roughly) to reduce them to order and discipline. The prevailing belief was that the Government meant to deport them to the Andamans, and the slightest circumstances served to awaken and give colour to this delusion.

50. On one occasion when the Chief Commissioner drove down to see them fed, followed by his mounted orderlies, the noise of the wheels and clatter of the horses broke suddenly upon them as of such awful import, that they rose up in terror, leaving their meal, and rushed to the gate to escape, crushing several of the weaker ones to death in the flight. On a later occasion when the Viceroy visited one of the largest kitchens, the same panic seized them; they did not then attempt to flee, but sat in long lines weeping loudly, and large tears rolled down their cheeks into the food they were eating. Such a sight was sufficient to convince any one that it would not be easy to control or to reason with people so embittered and so miserable.

51. Those who were marched out to Tumkur were not unwilling to travel along the familiar road. They looted a bazar on the way, and many broke loose from the party, but most of them reached Tumkur in the end and were soon lost sight of in the enormous kitchen population there.* But it was decided to take the Kolar paupers by train, and this unwonted mode of

* On my first visit to Tumkur, I at once singled out a stout comfortable-looking man in the relief camp, and said that he ought not to have been admitted. It turned out he was one of this party deported from Bangalore; and though the Tumkur authorities allowed that he was a most unsuitable inmate, they were obliged to keep him there for fear he should, if not fed, make his way back to Bangalore and put them to shame.

travelling at once revived and justified their fears of transportation. It was, with the greatest difficulty, and only by the exercise of tact, persuasion, and compulsion, that they were got into the train, and then many had to be forcibly held down to prevent them from jumping out. In this way 500 were delivered at Malur and 500 at Kolar Road Station, 20 and 30 miles respectively from Bangalore.*

52. It was, however, soon apparent that the difficulty was not ended when the paupers reached the point of deportation; the next and greatest difficulty was to retain them there. On this head no instructions had been given. The President of the Central Committee had proposed that they should be fed in the kitchens "till work or food could be provided for them elsewhere." But what if they were able to work and refused work when offered it? The Chief Commissioner had said that they were to be kept at the kitchens "till efficient arrangements could be made for returning them to their villages or taluks;" but it had not been foreseen that they might object to go back to their villages, knowing they would surely die there. The Deputy Commissioner of Kolar found himself with 1,000 paupers on his hands, many of whom had said at Bangalore they belonged to Kolar, but now said they belonged to other districts or Bangalore itself, and many of whom were in his judgment well able to labour, and far above the standard he had fixed as that below which work need not be insisted on, and gratuitous food might be given. He offered them work which they refused, insisting that they had been sent out from Bangalore to be fed, and fed they would be. The very railway ride which they had so dreaded seems, when safely over, to have turned the heads of these poor waifs and strays of humanity, and they referred to it as a proof of their importance in the eyes of Government. This ended with many of them leaving the kitchens, refusing the work offered them and finding their way back again to Bangalore.

53. This naturally worried the Kolar officers who saw that they must either relax the strict rules under which gratuitous relief was confined to those unable to work, or else must incur the displeasure of the Bangalore authorities, and it made them not a little impatient with these troublesome and refractory paupers. Accordingly, on the 16th July, the Assistant Commissioner wrote to the Central Committee a letter, to which the feeling of irritation, couched in incautious language, gave a savour of inhumanity. He said that many people who had been discharged from kitchens in Kolar as fit to do light work had been instigated by designing persons to go to Bangalore to obtain food without work, and have even taken relations with them, who were not discharged, but continued to receive food. He had ordered the amildars to stop them on the road, but if this was not successful and they reached Bangalore, he hoped they would at once be sent back to Kolar, where the only obstacle to their getting food was their contumacious conduct in the false belief that the desire to save them from starvation will induce Government to feed them gratis, though they are able to work.

This letter was forwarded by Mr. Gordon to the Chief Commissioner with expressions of serious displeasure:—

"I have already reported the recent steady and great influx of paupers into Bangalore. It is said that this amounts to about 500 persons daily, and a great deal of this has been ascribed to recent action in regard to relief kitchens in the Kolar District, where it is reported that many kitchens have been closed and those at taluk headquarters only have been retained. There can, unhappily, be no doubt that the distress through famine is now worse than it has ever been, and that our situation calls for an expansion rather than a contraction of relief operations. The Chief Commissioner will know what the facts really are as to Kolar, and will be able to give orders on the subject; but the letter of the Assistant Commissioner would seem to confirm the impression above mentioned, and some corrective orders appear urgently called for.

"It is not the case that such persons are here fed without being required to work; every one who can do any work at all is required to do something, however light. But there is not any good reason why such persons should not be as well treated in their own districts as they are in Bangalore, and if similarly treated near their homes, it is quite certain that they would have no desire to emigrate.

"It appears to me, under the terrible distress now existing, to be quite idle, indeed heartless, to talk of 'designing, contumacious,' and misguided persons in connection with the sufferers from the famine. A glance at the unfortunate condition of these distressed people suffices to shew their sad and miserable plight. They are guided merely by a natural desire to escape from starvation, and their 'design' is to save their lives.

"We have made, as the Chief Commissioner is aware under his approval and sanction, considerable provision for the relief of the distressed here, and we are now greatly extending that provision. But unless large provision be likewise similarly made from without, and vigorous efforts insisted on so as to retain and properly feed the suffering paupers in their own districts, our efforts here will not only be unavailing but we shall be increasing the very evil we are striving to mitigate. Bangalore must ere long, if existing measures continue in the neighbourhood, be enormously and dangerously overcrowded by masses of famine-stricken sufferers. I need hardly dwell on the obviously grave and evil results which cannot but follow such an incursion. I would, therefore, most strongly urge its timely prevention."

On the 28th July the Chief Commissioner replied in the following terms:—

"The Commissioner, Nandidrug Division, will have his attention again drawn to the necessity of adopting more effectual measures for preventing, by forcible means if necessary, the migratory movements of sickly or enfeebled persons, men and women, from other districts. If decided steps are taken in this direction, the Chief Commissioner feels assured that these movements will cease to a great extent. The police must be strengthened at the frontier, if requisite.

"2. The Chief Commissioner deems it unnecessary to comment on the tone of some of Mr. remarks. The Assistant Commissioner should not, however, have addressed the Central Executive Committee, excepting through the Deputy Commissioner."

54. To explain the allusion to the reduction of subsidiary kitchens, we must go back a little in the story. On the 25th May, Major Cole was despatched on a mission to the Tumkur and Kolar districts to enquire into—

"(1). The sufficiency of the relief measures adopted both as regards gratuitous feeding and employment on works; and

(2). The condition of the people and the character of the existing distress.

"With regard to the first point, it is important to learn whether the principles and intentions enunciated in the Chief Commissioner's order, dated 9th February, have been and continue to be carried out; and on the result of the enquiries under the second head will depend the determination of the question lately raised by the Commissioner as to the practicability of concentrating relief measures within narrower limits. . . . The Chief Commissioner trusts that the Commissioner will find it practicable to make a similar tour in the Bangalore District, and in so much of the Tumkur District as he can accomplish in the time at his disposal."

The Commissioner made no such tour. Major Cole traversed the Kolar District between the 28th May and the 19th June; he sent in his report on the 29th June, and it was reviewed by the Chief Commissioner on the 26th July; but he got no orders to continue his tour, and made no similar inspection of Tumkur.

55. The report on Kolar is a useful record of facts, but it throws no light on the cause of the disproportion between the small numbers on relief works and the large crowds in the relief kitchens. Major Cole observed that the average number on the Civil Relief Works was 3,412 in April and 4,998 in May,* and had fallen since the rain began in the middle of May; and he recorded the number† employed on the Irrigation Department's works under Lieutenant Kensington, R.E., but nothing is said to explain why more people had not resorted to the works, or whether they did apply and were not admitted. There were 22 kitchens, all but two of which he inspected; the average number fed in April was 8,556, and in May 11,418; and the numbers fed on the days of inspection during June amounted to 11,722; of these, 340 were Brahmins, 3,384 Hindus of good caste, 3,302 low castes, and 1,841 Mahomedans: 41 per cent. were children

* The provincial returns give these figures as 4,817 and 5,341 respectively; the average number in March had been 5,700.

† Employed by Lieutenant Kensington.

MORRIS.		MORRIS.	
Average No.		Average No.	
November 1876	1,333	March 1877	2,501
December "	2,409	April "	3,753
January 1877	3,321	May "	5,776
February "	3,302		

and 59 per cent. adults. Besides these, 711 were in receipt of raw rations. As many as 392 were *pattadars*—that is, ryots holding land direct from Government. Very few of the recipients of food lived in the sheds attached to the kitchens; the great majority

“return to their homes daily with their dole of food, which is often divided among other members of the family, and made to supplement the leaves, heart of the aloe plant, &c., which they are in the habit of eating. Many who are themselves ashamed to attend the kitchens, or too indolent to do much work, send their children to the kitchens, and make them bring their food home, several giving but a scanty proportion to their children.”

On the subject of closing the outlying kitchens and concentrating relief at the larger towns, Major Cole's opinion was that 3 of the smallest ones, might be closed on the 15th July, 4 on the 15th August, and 4 more on the 1st September, leaving 11 principal kitchens; but in advising this, he rather gave way to the instance of the Deputy Commissioner, and in his own opinion the preferable course was to keep them all open till the 1st September, unless any marked diminution in the numbers should justify their being closed earlier. In conclusion, he held that the relief measures adopted by the Deputy Commissioner appeared to have been sufficient.

“With the exception of the comparatively few (384) admitted by me to the several kitchens, I had no applications for gratuitous relief, and none for employment on works.”

The “*gaudas* and *patels*,” were still feeding the poor in many localities, and the ryots were busily engaged in agriculture, and they “seemed to have pulled through, though put to great straits.” The relief officers seem to have discharged their duties well on the whole, but no details are given as to what they did in the way of village inspection, or with what results.

56. The Chief Commissioner's reply (dated 26th July) expressed general satisfaction with the results of the inspection, but wished that more light had been thrown on the condition of the people and the causes of the extensive migration. He was glad to find the orders of the 9th February about house-to-house inspection had been so well attended to, but disapproved the system of allowing paupers to carry away their rations instead of eating them on the spot. On the subject of closing the smaller kitchens no remark was made.

57. More active steps, however, had already been taken by Colonel Pearce in this matter of concentration of kitchens. On the 22nd May, when the rain first began, he wrote to the Chief Commissioner urging that all kitchens should be at once shut up, and no new relief work opened. He had just returned from a short sojourn at Nandidrug, from the top of which hill he saw all the surrounding tanks full: on his way to Bangalore he passed through Devanahalli and Yellahanka; at the former, the numbers fed had fallen by 1,800 in three or four days, but at the latter place the reduction had been only 400, which he attributed to bad management and want of firmness. The Chief Commissioner, however, at once replied that he had been too hasty in assuming, because a few showers had fallen, that all need for relief was at an end. The ryots would, no doubt, go back to till their fields, not so the rest of the population; and he called the Commissioner's attention to the case of Chenapatam (a town on the Mysore road, inhabited by a large number of poor Mahomedans), where it had been found that the paupers would neither work nor go to the town of Closepet, 7 miles off; and that they would have starved if the kitchen had been closed. Mr. Saunders approved, however, of the principle of reducing the number of relief works to three should only be two or three such in each taluk, but would not fetter the district officer's discretion by positively ordering them to do this.

58. The rain continued to fall, as has been seen, till the middle of June, and on the 8th Colonel Pearce again addressed the Chief Commissioner, advocating concentration, and was told, in reply, to state his proposals on the subject more definitely. Acting on this hint, on the 25th June the Commissioner directed his district officers to begin the step of concentrating the gratuitous relief, by closing 5 kitchens at once in Bangalore, 9 in Kolar, and 16 in Tumkur; 2

more were to be abolished shortly, leaving only 15 in Bangalore, 10 in Kolar, and 8 in Tumkur ultimately. But, on the 17th July, he countermanded this order, and directed it to be held in abeyance, as the aspect of things had changed for the worse by reason of the holding off of the rain. Several of the kitchens had, however, already been closed, and these were not ordered to be reopened.

59. During June, attention was drawn to the very large numbers fed at certain kitchens in the Bangalore district—

Devanahalli	5,639
Nela Mangala	8,372
Closepet	3,698
Anekal	4,146

and the Commissioner was directed to depute a trustworthy officer to Nela Mangala to enquire into the cause. He deputed Mr. Porteous, Assistant Commissioner, who sent up his report on the 28th June. The Nela Mangala taluk had 4 kitchens, 3 of them very large ones, and in 2 of these he could not find a dozen paupers who were fit for work, however light. In the third, however, which was under the care of a young Assistant Commissioner, Mr. Venkat Rao, he found about 400 who were fit for work, and who were employed on some nominal labour inside the kitchens, while a useful work, the repair of a tank, was going on close by, with only 20 or 30 people labouring on it, though many more might have been employed. He instructed Mr. Venkat Rao, he said, to draft his paupers to this useful work, but no attention was paid to his orders. The Deputy Commissioner, in sending this up, observed that Mr. Porteous, the sub-divisional officer in charge of the taluk, was responsible for the management of all the kitchens, and should have seen that the young Assistant Commissioner carried out his orders. The Chief Commissioner, on receipt of the report, ordered that a Police Inspector, Mr. O'Connell, who had managed Devanahalli well, should be sent to Sompur, and that Mr. Venkat Rao should be summoned into Bangalore. This order, however, was not carried out; and when, on the 17th of September, I visited Sompur, I still found the Sompur kitchen crowded with over 2,000 paupers, a large number of whom were able to do light work, and the tank repairs close by feebly carried out by the same 20 or 30 labourers on whom Mr. Porteous had animadverted in vain.

60. On the 12th July, the President of the Central Committee sent up another report on the increase of pauperism, and the necessity of enlarging the appliances for gratuitous relief. The Binni Mangala enclosed camp, which in June contained 3,500 people, now contained 5,000; and the new one outside it, at Krishenrajpur, had 3,000 paupers to feed, and most of these were in an extremely emaciated state.

“The mortality, which has always been high, had lately increased to a fearful extent. We cannot hope to keep pace with requirements whilst the steady influx of such persons into Bangalore continues. I am of opinion that really strict, persistent, and strong efforts should be made to prevent these persons from coming into Bangalore. It may not be possible to ensure this altogether, but I believe it may be attained to a very satisfactory extent. It was with this view that the road-side kitchens on the approaches to the town were originally set on foot, but practically distressed wanderers have not been much interfered with, nor compelled to stay at any particular place.”

Accordingly Mr. Gordon proposed to utilise the spacious cavalry stables, known as the “Sillidar Lines,” as an enclosed camp for the infirm and sick, and to establish another outlying camp at Yellahanka, on the northern road; or rather to turn the existing open kitchen there into an enclosed camp to which outsiders who wandered into Bangalore might be deported. Lastly, he proposed that a “commissioned medical officer” should be appointed as Health Officer for Bangalore. The Chief Commissioner, in reply (18th July), agreed with Mr. Gordon as to the inadequacy of the arrangements made to prevent the ingress of these people at the relief kitchens placed with this object in all the avenues to the town.

"If, indeed, as the Chief Commissioner understands, the persons fed at these kitchens are not, for the most part, detained in them, but, owing to their large numbers, merely attend at the time of the issue of food, the object of maintaining them on their present footing is doubtful."

He approved of the establishments of the two proposed camps, and referred to the Deputy Surgeon General the question whether any medical help could be given. Apparently no such medical officer could be found, for nothing came of this reference.

61. This correspondence shews one of the weakest points in the Administration. The Chief Commissioner, on the 18th January,* ordered these road-side kitchens to be established for the purpose of checking the influx of paupers, and laid down rules as to the manner in which they were to be conducted, and the steps necessary to carry out the object of their existence. These rules were not followed, and the road-side kitchens never, in the slightest degree, fulfilled their object. Yet, on the 18th July, the Chief Commissioner had no certain knowledge on the subject, and wrote in the doubtful and hesitating manner quoted above regarding facts with which a morning drive of 6 or 8 miles on any road leading out from Bangalore would have made any officer he deputed perfectly acquainted. It is easy to believe in any degree of disorganisation, when positive orders could be so neglected, and the neglect, though so close to head-quarters, could be so long unknown.

62. More than one reference has already been made to the growing mortality in the town of Bangalore and the increasing emaciation of the paupers in the relief kitchens generally; and, in August, it was thought necessary to try to stop this by a more generous ration of food. Accordingly a scale of diet was issued by the Chief Commissioner on the 7th August, as having been adopted by the Central Committee tentatively, and he recommended its being similarly introduced elsewhere. It consisted of a ration of 20 ounces of raw grain, with 2 of pulse and 2 of vegetables, &c., for adults doing light work; half of this to be given at each meal. Non-workers and young persons at work were to get 16 ounces of raw grain, and a proportionally smaller quantity of vegetables, &c., and children under 10 to get half of this. Later on the Central Committee, without informing the Chief Commissioner, introduced a slightly more liberal ration.

63. There is no doubt that this was a step in the right direction; and if this scale of food could have been given only to those who were specially ordered it on account of their emaciated state, and if they had really received it, it would have done much good. But the numbers who had to be fed were now so large as to be beyond all control or discipline, and the result was that, in practice, the same ration had to be given to all who asked for it, because it was impossible to discriminate between the applicants. This again increased the attractiveness of Bangalore, for it was now true, as the starving people had all along believed, that more food was given there and on easier terms than elsewhere. Moreover, while it increased the crowds of applicants, it had not really much effect in strengthening the emaciated, except those who were received in the Sillidar Liries, and compelled to stay there. In the rest there was no compulsory residence, and only one meal a day was served,—that is to say, only half of the ration considered necessary to support life. It was beyond the power of the establishment to cook two meals a day for such a multitude, and to have given them 20 ozs. of boiled rice in one meal, would have been to give more than they could possibly eat. Even with the single meal or half ration, it was not uncommon to see people die in the act of eating it, or to see them unable, from weakness and sickness, to eat the whole. It seemed therefore to be the safer extreme to give only one meal and to trust to casual public charity for the rest.

64. But it is time to turn now to the efforts that were being made in the western part of the province by Colonel Hay, Commissioner of the Ashtagram Division, to bring the kitchens into

order, and to use them so that they should be effectual in controlling the wandering tendencies of the people and in relieving the starving emigrants. In his first report, dated 9th May 1877, he gives an elaborate account of the different kitchens, the number fed at each, and the expenditure. In the town of Mysore, the number fed at the end of April averaged about 3,000 a day; there were fifteen other kitchens in Mysore, and 20 in Hassan, but some of these were very small, and hardly any of them had more than 300 paupers. The object of the report was merely financial, to explain the expenditure that was going on and to ask for a further grant. It is instructive, however, to notice what the cost of the food provided here was. In Hassan, in the week ending the 21st April, there were, on an average, 1,290 adults and 1,219 children fed daily; and reckoning 3 pies for each adult and 1½ pies for each child, the cost of the condiments should have been almost Rs. 30 a day: it was Rs. 46 for the week. Assuming that they were fed on ragi, the cheapest grain procurable, the daily ration would amount to 2,517 lbs., which, at the quoted price, 16½ per rupee, would cost Rs. 133 per day, or Rs. 931 a week: the cost was Rs. 689. In the Mysore Town kitchens, in the four weeks ending 28th April, a daily average of 1,556 adults and 1,400 children were fed; at the rate of 3 pies and 1½ pies respectively, the daily expenditure on condiments would have been Rs. 35-5-0 a day: it was Rs. 54-14-0 for the four weeks, or one-eighteenth part of what it should have been. The ration of flour at 1½ lbs. for an adult, and half the quantity for a child, would have been 2,541 lbs., or at 18 lbs. per rupee, which was the price generally quoted for ragi in Mysore, Rs. 141 a day, or Rs. 987 a week. In no week did the expenditure on grain exceed Rs. 862, except the last, when a large quantity was purchased, of which only a portion was used in the week. It is probable that the authorities were able to lay in stocks of ragi for the kitchens at a lower price than the retail rate quoted in the price current, and that many of the recipients of food were travellers who only stayed for one meal; but though this may account for the deficiency noticed in the cost of food-grain, it cannot explain the much greater inadequacy of the expenditure on condiments. It is hard to resist the conclusion that the desire for economy impelled the subordinate officers to cut down the recipients of relief below the amount prescribed for them by the Chief Commissioner.

65. There is another instance on record in which a Deputy Commissioner was asked why it was that he had made the allowance of three pies per head for condiments cover the cost of the establishment employed in the kitchen. He replied that the circular of 29th March did not specify how the cost of establishment was to be met; and as the Central Committee had resolved at one of their meetings that the three pies ought to include the wages of cooks, he had assumed that this resolution was approved by Government, and that he ought to make it cover the whole cost of the establishment which managed the kitchens. Thus the paupers were deprived of an integral portion of the food prescribed for them; and deprived, not, as too often happened, by the peculations of the subordinates, but by an almost inconceivable mistake on the part of a superior official. No wonder that, under these circumstances, the health and strength of the paupers relieved in the kitchens did not improve.

If there had been a special famine office employed in checking and testing these returns, as was done afterwards, such errors as these would have been detected and stopped in the bud, and much loss and misery prevented. It certainly was no one's wish, and least of all Colonel Hay's, that a petty saving should be effected at the expense of the people's lives; but in order to check errors in detail, the habit of investigating details is required.

66. On the 2nd June, Colonel Hay proposed fresh arrangements for preventing emigration to the Wynaad and Coorg, and for relieving the destitute coolies returning thence by establishing relief camps (that is, enclosed poor-houses, as opposed to open kitchens) at commanding places on the roads and a similar camp at Seringapatam, to which the paupers, crowding into Mysore, might

* Vide Chapter III, paras. 100-103.

be drafted. It is not clearly stated what the object of these camps was, or what discipline was to be enforced there, but apparently the intention was that the weaker travellers should be retained till they became strong, and then either forwarded to the coffee plantations or deported back to their own homes. From Seringapatam they were to be sent to the "channel officers or the Mysore water-works," when fit for work. The proposals were approved, and the help of a survey officer promised for the special duty of supervising these camps, if one could be found.*

67. Colonel Hay's next report is dated 19th June, and refers mainly to the Hassan kitchens, which were now 29 in number, but the figures he deals with are by no means up to the latest date, as he only gives the numbers fed on the 12th May; of the 29 kitchens, 13 were at road-side places, and 16 in villages or rural towns. The numbers gratuitously fed had increased considerably, but still, comparing them with the Bangalore figures, none of the places were crowded: the largest pauper population was that of Anisikere, where 451 were fed, and only 4 other kitchens numbered over 300. A useful set of rules was laid down as to the establishment, site, and sanitary arrangements, and the provision offered at each of these kitchens; also as to the admission of applicants and deportation of strangers. Rations of uncooked food were to be given on no lesser authority than that of the Deputy Commissioner to people "prevented by caste prejudices or other causes from resorting to the relief house, and in absolute need of relief." At the roadside relief houses, "cooked food was to be ready at all hours in case of the arrival of any persons in an exhausted state from want of food;" and there was to be at least one policeman by whom all persons

"unfit to travel should be detained, and fed till the relief officer in charge of the road decides how they are to be disposed of. Those who receive a single meal, and who can be allowed to proceed without objection, should be sent in parties and receive a *rukhdari* (i.e., forwarding invoice) to be endorsed at intermediate relief houses, and to be delivered at the last relief house on the road, whence it should be returned by post."

These rules are admirable, both for forethought and precision, in all respects except one; they have their main basis on the principle of deportation, and the chief difficulty in carrying out that principle, the unwillingness of the people to be deported, is overlooked. No provision, for instance, is made for the case of (say) a Tumkur pauper who the relief officer decides ought to go back to Tumkur, but who is steadily determined to go on to try his fortune in the coffee districts.

68. The Commissioner's letter, with which these rules and remarks were forwarded, bore mainly on the subject of the grant of funds he required, and which he received from the Chief Commissioner (26th June); but he also mentions a further extension of his system of enclosed camps:—

"The Central Committee at Mysore have arranged to establish a camp in connection with the water-works project, to which paupers fit for light work will be sent; and it is found absolutely necessary to maintain the camp hospital at Hinkal (3 miles from Mysore) owing to the greatly increased numbers of paupers returning from the coffee districts, most of them now in a deplorable state from emaciation and sickness."

On the 21st June, Colonel Hay wrote again after inspecting the Mysore Town relief arrangements. It was decided to give up the attempt to deport paupers to Seringapatam, and they were to be sent to the hospital camp, and employed, as far as their strength would admit, on the water-works project, or gradually drafted to their own houses.

And again in a minute, dated 21st July, on the Seringapatam camp, he ordered arrangements to be made for drafting off those who were able to do light work, to be a convalescent gang on the water-works.

69. I have drawn special attention to these passages because the previous history of this work illustrates that want of mutual understanding between the Civil and Public Works Department officers which constituted a weak point in the carrying out of relief measures in the pro-

* Captains Cowie and McCally, of the Survey Department, were deputed to relief duty on the 21st June, and Captain Clerk on the 28th. Captain McCally had bad health, and was retained at Mysore, and Captain Cowie was sent to Hassan; the care of the Mysore roads to Coorg and Wynad entrusted to Captain Clerk, whose supervision was most efficient.

vince. We have seen that the Public Works Department maintained the principle that their duty was only to deal with able-bodied coolies according to the regular system, and that it was impossible for them to work two systems of tasking and two methods of payment side by side, but that all persons reduced below the normal strength or unaccustomed to labour at earth-work should be employed by the civil officers. The Public Works Department circular of 11th January 1877 stated this view incidentally, and the Chief Commissioner's orders of February 28th and March 23rd 1877 supported it; while, on the other hand, in his orders dated 9th February and 1st May (inferentially), and in that of 9th July clearly, he leaned to the opposite side, and intimated more or less decisively his opinion that the Public Works should be utilised as relief works. Yet it seems never to have been properly understood by the civil officers that it was of no use for them to send famine coolies who were either unable or unwilling to do a full task to the works under professional supervision. We find constant references in their reports to works of this class as places which ought to afford relief; and here, in Mysore, we find the civil officers busily employed in sending to the water-works all coolies "fit for light labour;" and the Public Works Department officers equally busy in sending away all who were only fit for light labour and unfit for a full task. And yet the two streams hardly ever met. The two sets of officers seemed for the most part to be as ignorant of what each other was doing as if they lived in different worlds, or moved in different planes, and this strange discrepancy of opinion and practice was never brought to a definite issue.

70. The labour employed at the Mysore water-works consisted mainly of the construction of a great earthen dam, which was being built up across a valley to hold a reservoir of water for the town of Mysore. It and the contour channel dug to lead water into the reservoir provided an immense quantity of work suitable for unskilled hands, such as the famine coolies; and from the beginning of the year the civil officers sent their paupers to be employed there. On the 31st March, the Executive Engineer, Mr. Dobbs, remarked in his periodical labour returns that numbers of wandering coolies had come to work, but had left after two or three days, being physically unfit to perform the required task. On this the Chief Commissioner wrote that there ought to be light work available for such, and that the Deputy Commissioner should employ them on civil works. At the same time the Chief Engineer, Colonel Johnson, wrote:

"It is not intended that works under regular estimates should provide for any but able-bodied coolies," and he enquired the task that was set. "He could understand their refusing piece-work, and that some few might be physically incapable, but it is difficult to realise that this is the condition of the bulk of the labour seeking for work, and if true it is a very serious matter."

71. On receipt of this letter, Mr. Dobbs went, on the 11th April, with the Commissioner to examine the coolies from distant places, about 150 in number. Only a limited number, he wrote, could be employed on "Departmental work" (i.e., daily pay, not by piece-work). The ordinary rate of pay was from 1 to 3 annas per cubic yard according to the soil dug, length of lead, &c. The "foreign coolies" were unable to do more than two-thirds of what ordinary coolies could do, and received on an average $1\frac{1}{2}$ annas per man, 1 anna per woman. Many had left because they could not support themselves on the wage; altogether about 600 had gone away after working a few days, and many more had come, enquired the rates, and gone away without attempting to work. On the 7th April there had been 120 "foreign coolies," all from Tumkur, all weak and sickly, and on daily pay. On Sundays they get no work or pay, and beg in the town. During the past three months, relief officers have sent hundreds of wanderers; they are all told off to piece-work, and all go away in a day or two, as they cannot do half or two-thirds of the task executed by the ordinary coolie accustomed to this class of work.

72. It is enough to fill one with despair to read such a record of mutual misunderstanding and want of co-operation as this. The Chief Commissioner issues his orders about village inspec-

tion and relief officers. The relief officers go about, and send hundreds of miserable paupers to this relief work, a work admirably suited to them as being of real utility requiring mostly unskilled labour. The officers in charge receive them, but only on the rigid departmental system of piece-work by which an able-bodied coolie, accustomed to earth-work, could earn a decent maintenance. The poor wretches try their best for a day or two, and then give it up in despair, and wander away to beg and to die. One would have thought that the mere recital of such a thing would have caused a movement of indignation strong enough to burst the shackles of red tape which bound the Department, but no such result was produced on its heads. In this case, the Commissioner and the Executive Engineer managed to arrive at a *modus vivendi*, and though there was no relaxation in the rules about excavation rates, light miscellaneous work was provided for a certain number of famine coolies, and we do not read after this visit of 11th April of those who were sent from the kitchens being turned away. But at head-quarters the tendency was to disbelieve the reports of the local officers, or to say that, if true, the fault was somebody else's. The Chief Engineer's note on this correspondence was to the effect that the evidence of impartial observers, such as Major Chrystie, and Captains Bowen, McCullagh, and Strahan, shewed that the visible numbers of the physically weak were not great, and would have been still less if they could have been induced to go to work earlier.

73. Up to this time relief matters in the town of Mysore had been managed by a committee of the townspeople under the Commissioner's general supervision, and independent, in the main, of the Deputy Commissioner. They had received praise before for their voluntary exertions, but at last several cases of abuse and laxity having been discovered, it was found necessary to take the charge out of the hands of the committee, and make it over to the Town Magistrate, Mr. Abdul Kadir. Restrictions were put to the admission of children, only those being fed who were evidently in want. People were no longer allowed to apply for food and carry it away for sale, which was found often to have happened; an organised system of stealing the food, which used to be given out without any check or count, was put an end to; residence within the poor-house was insisted on; and as a consequence the number of recipients decreased largely (from 4,500 on 21st July they fell to 3,105 on 4th August); ragi not being procurable, rice was given on a rather liberal scale, and two meals were provided each day.

"With regard to uncooked food, it appears that a great number of tickets were issued by the late committee to families, *Gosha* women* and others whose position in life or prejudices were supposed to prevent them from coming for public relief, and that these tickets were for varying quantities of grain. No orders have ever been laid down regarding any particular quantity to be given in cases in which the recipients will not come to obtain public relief, and this must be left discretionary with the officers in charge who have reason to believe that the privilege has been greatly abused† and have consequently begun to institute enquiries."

74. In August, Captain Cowie was transferred to relief work in Bangalore, and the Commissioner, observing the steady increase in the numbers gratuitously fed in the Hassan kitchens, which reached 8,000 on the 11th August, sent Captain Clerk to introduce a better system of order and management there, giving him detailed instructions as to the nature of the enclosed relief camp he was to establish in Hassan itself. He suggested at the same time to the Deputy Commissioner the advisability of closing the *hobli*, or village kitchens, and giving food to the helpless poor in their houses; but the proposal fell to the ground as it had done before in April (see paragraph 6) when Colonel Hay first made it.

75. On the 24th August the Commissioner reported again on the Haranhalli taluk, where there were sixteen works in progress with about 600 people employed on them, and 7 kitchens with

* That is, Mussulman women who are not allowed by custom to appear in public.

† One case is mentioned of a man who received 5 acres a day for distribution to other people who sought alms from him.

2,600 fed daily. People come to the kitchens from 4 or 5 miles off and return the same day; if they live further off they stay permanently, and about 1,500 altogether live in the sheds. These latter might, he thought, be collected into enclosed relief camps at two main places and the outlying village kitchens closed. Colonel Hay was becoming seriously alarmed about the state of the taluk, for the people were weak and the earth-work hard; and he proposed to employ them instead on collecting and breaking metal along the roads.

76. The last of the correspondence about emigration to the Wynaad and Coorg, which ended in August, may be referred to here. It has already been mentioned that, on the 30th April, the Collector of Malabar reported that there were no emaciated Mysore coolies in his district; and in June the Commissioner of Ashtagram stated from the figures sent in to him that the influx into Mysore was much greater than the efflux from it. But at this very time the Commissioner and Assistant Commissioner of the Nilgiris reported that sickly people from Mysore were flocking in in great numbers, as many as 17,000 being known to be in the district; and the Madras Government telegraphed to enquire the cause. The Commissioner replied that, although he had taken every possible precaution, yet when people came and said they had relatives there, or certain prospects of employment, how was it possible to turn them back? The Deputy Commissioner of Mysore made arrangements to receive these 17,000 coolies if deported by the Madras officers, but he wrote on the 20th June that not one had been sent. At the same time an Assistant Commissioner was deputed to certain places across the borders, to look for the Mysore emigrants; and the Commissioner issued more stringent orders than ever to have relief houses ready and open, to patrol the roads, and to stop all emigration. The immediate result of this was that, on the 14th July, the Secretary to the Association of Planters in the Wynaad wrote to complain of the lack of labour in coffee plantations, and to say that he had heard, but could hardly believe it, that coolies were being stopped.

77. At one of the places beyond the Mysore border, Masnigudi, the Assistant Commissioner found 40 sick Mysore people, and examined into their history. In all cases they asserted that they had been at work in coffee plantations; had fallen sick, and been turned off, but none allowed that they had wandered from their own houses in this emaciated state. Similar stories were told in all cases by about 410 paupers, some of whom returned voluntarily, and some of whom were sent back in carts from the Wynaad. The conclusion that Colonel Hay came to in the end was that the fact that Mysore coolies were found feeble and sickly in Madras districts was no proof that they had lately wandered in in that state, but the contrary; and that the attempt to stop emigration was one the propriety of which was as doubtful as the prospect of success. In this opinion the Chief Commissioner concurred, and when it is considered how many roads there were, besides village paths, leading to the different coffee districts, how impossible it was to supervise them all except by native agency, how difficult it would be even for the most intelligent of officials to exercise a right discretion as to those who might pass and who ought to be stopped, and how impossible it was in practice to stop a determined emigrant by any means short of absolute physical restraint, it will probably be admitted that Colonel Hay's conclusion was right and rational, and that the real remedy for distress among the emigrants was not deportation, but relief in the country to which they had immigrated.

78. The history of special measures relative to the organisation of relief kitchens has now been brought down to the end of August, and it is necessary to turn to the relief works which, as has been already noticed, fell so far into the background during this period of the famine. The first point that has to be mentioned is an order that came out on the 23rd March, and which by its date belongs to the preceding chapter, but by its effects to this. Apprehending that want of method or timely arrangement might seriously interfere with the due prosecution of relief works,

and deprecating all hastily-considered projects and informal proceedings in dealing with the public funds, the Chief Commissioner laid down the following rules:—

"The Deputy Commissioner of a district should have in readiness a list of the works which may, in his opinion, be suitable for each taluk, with their cost estimated approximately, and submit it to the Commissioner in view to his allotting the aggregate amount after approval."

"The Deputy Commissioner should also apprise each amildar that the works thus approved are to be commenced only upon due sanction being received, and that he (the amildar) will be expected to apply for sanction sufficiently early to avoid the cessation of employment on any works in hand of the needy and indigent poor."

"From the foregoing report, the Deputy Commissioner will determine whether it is necessary for him to sanction any fresh work (included in his approved list) or to supply more funds for those in progress. In the former case the Deputy Commissioner having previously obtained general sanction from the Commissioner for his list of selected works, and an allotment for the aggregate amount, will issue the usual notification of sanction at once to the amildar, submitting at the same time two copies thereof to the Commissioner, one for record in his office, and one to transmit with the application for funds to the Chief Commissioner."

"The Commissioner of the Division, having a lump sum at his disposal, will be responsible that allotments are made thereof sufficiently early to meet the demands of the Deputy Commissioner, and the latter must take special care that his programme of works is submitted in due time to enable the Commissioner to examine each item thoroughly, and to submit the application to the Chief Commissioner for the necessary grant, with his careful recommendation thereon, in the form prescribed in Chief Commissioner's Proceedings No. 444, dated 9th March 1877."

"Mr. Saunders also desires to impress on all concerned, the great need there is of submitting carefully considered projects, with properly digested and condensed information on each proposition, accompanied by estimates shewing quantities and rates, on which to enable him to pass requisite orders."

The system approximates closely to that which is usually in force in most parts of India, and if it had been existing before, and if each Deputy Commissioner had had a long list of approved works waiting for an allotment of funds, no doubt the extension of relief works would have been facilitated and the labour better applied. But to introduce a new system now in the height of the famine was like adopting a new drill in the middle of a battle, or like "swapping horses when crossing a stream." And the matter was made even worse by a misunderstanding which prevailed pretty generally as to the meaning of the order. A letter from one Deputy Commissioner, dated the 4th May, shews that his reading of the circular was that the following procedure was intended: first, he had to send up an account of a project, explaining its nature, and this the Commissioner must approve on general grounds. Then and not till then, having got this administrative approval, the Deputy Commissioner could submit an estimate (with a plan in some cases) shewing all the technical details, quantities, and cost; this the Commissioner might approve, at the same time allotting to him the necessary sum; and only after all this correspondence had been gone through could he begin the work. This would, of course, double the number of letters to be written about each work, and the time it would take to get the sanction. There is reason to think that, though this lengthy routine is not expressly laid down in the circular, it is the system that was intended to be pursued, and it was in fact pursued with the approval of the officers at the head-quarters. If the relief works had been large and few, a procedure of this sort would have been possible, and in ordinary times not too laborious, though it would have had to be relaxed at a time of extreme pressure. But when there were 300 or 400 petty relief works going on at once in a district, the call for such details prior to the sanction of any one work was as unnecessary as the preparation of them was impracticable.

79. In Tumkur the effect of the new order was as follows: On the 9th April the Deputy Commissioner sent up a programme of works involving an expenditure of Rs. 1,77,310; on the 25th April this was returned by the Commissioner, on the ground that the instructions in the circular had not been completely carried out. The special relief officers were then summoned in to a consultation, and on the 9th of May an amended programme of works, costing Rs. 1,26,397, was forwarded. On the 23rd, certain works, costing Rs. 29,439, or about a quarter of the whole

list, were sanctioned, some being rejected which had already been begun in anticipation of sanction, and all works costing over Rs. 1,000 being struck out, pending the submission of regular plans and estimates. The Deputy Commissioner found himself unable to prepare these in consequence of the extreme pressure of other work, and the projects were consequently dropped.

80. In order to further illustrate the way in which the system worked, it will be useful to give some extracts from the correspondence between the Commissioner of the Nandidrug Division and one of his Deputy Commissioners. On the 4th April the Deputy Commissioner sent up a list of proposed works, in conformity with the new circular; and on the 6th he wrote an urgent request that those intended to be started in a certain locality might be sanctioned at once, as great distress was experienced there in consequence of the Superintending Engineer having stopped the repair of a tank and thrown the people out of work. On the 9th April the Commissioner gave a partial sanction and allotted him Rs. 10,000. On the 11th, and again on the 24th, he pointed out that he had asked for Rs. 16,000 worth of work, and had sent up estimates and notifications, and an allotment of Rs. 10,000 was of little use; and he again petitioned urgently for sanction to the proposed works. On the 25th the Commissioner replied that these ought to stand over till other works in the same locality were completed and again on the 4th (answering another letter of the 2nd May) he wrote that no estimates had been sent for the two proposed tanks, and that the submission of these was essential, but that the work might be begun in anticipation, and as much as Rs. 1,000 spent on it, but it must not go further without a proper estimate and sanction.

81. At the same time (5th May) the Commissioner wrote a more general letter as to the state of the Deputy Commissioner's accounts for relief works; of the sum allotted to him, Rs. 46,308 were unexpended at the end of April, and yet he was always complaining of want of funds. The only explanation he could think of was that money must have been expended on works unreported to him, perhaps unknown to the Deputy Commissioner himself; and he held out the threat that if he went on like this, Government may possibly hold him personally responsible for the money expended. He also wrote to the Chief Commissioner to the same effect. On the 11th and 14th May the Deputy Commissioner replied to this censure; he shewed that, in consequence of the system in vogue, whenever a work was sanctioned, he was obliged to appropriate at once—i. e., to allot to the amildar who carried out the work—the whole estimated cost of the work; and thus it was very natural that he should have Rs. 46,000 unexpended, while all had been appropriated, and he could not, without great confusion of accounts, divert to one work money which had been sanctioned for, and allotted to, another. He asserted that he had only started works without sanction through dire necessity, feeling bound to assume the responsibility of doing so rather than to let the people starve:—

"When out in the district," he said, "seeing hungry and emaciated creatures clamouring for work, it would be a shirking of responsibility (even when apparently threatened with heavy pecuniary loss), unworthy, I conceive, of a British officer, not to do what humanity would dictate, viz., order the immediate prosecution of some work."

In one taluk, he said, the amildar had been slow in preparing projects, so he had to start twelve works himself in anticipation of the usual course.

82. Meanwhile, Mr. Saunders wrote to the Commissioner on the 7th May to say that the Deputy Commissioner had, in conversation with him, attributed the great increase in the kitchens to the stoppage of relief works through no funds being allotted. Was this the case? Were applications made to the Commissioner and refused by him? If sanction was withheld because the Deputy Commissioner could not comply with paragraph 5 of the circular of March 23rd, the Commissioner should ascertain wherein the difficulty consisted. The latter replied by sending up the correspondence which had passed between himself and his subordinate; he said he could not

find out what that officer had and what he had not spent; and was thinking of writing direct to the amildars to find out. He had serious doubts and apprehensions as to what the liabilities of Government might turn out to be in connection with the relief works of this district. On the 12th the Chief Commissioner replied that the Commissioner was wrong to suspend grants if the lives of people depended on them, though at the same time Mr. Saunders was satisfied that there had been a want of systematic control in that district, and unmethodical working from which excessive expenditure had sprung. He ordered the Commissioner to institute a searching enquiry into the accounts, and find out if any great irregularities had occurred.

83. This the Commissioner set himself to do, and on the 23rd May he sent up a detailed statement of amounts granted to the Deputy Commissioner as of expenditure sanctioned and unsanctioned. Five large works, he said, had been commenced without any sanction, and were estimated to cost Rs. 10,475; nine more without complete estimates. Here is an abstract of the statement which will help the reader a little to understand the bewilderment of a poor district officer and his two surveyors, when they had to draw up all the prescribed forms of application, notification, plans and estimates, and appropriations, for such a multitude:—

	Sanctioned.	Unsanctioned.
Works below Rs. 50 in cost	105	15
" " " 50 to Rs. 100	103	14
" " " 100 " " 200	108	7
" " " 200 " " 300	54	8
" " " 300 " " 400	35	2
" " " 400 " " 500	37	4
" " " Above " " 500	47	6
TOTAL	489	56
Total amount sanctioned	1,50,164	
Total expended	94,391	6,241

The only answer the Commissioner received to this from the Chief Commissioner's office was that there was a discrepancy of Rs. 291 between the accounts of that office and his. Nothing was said on the matters of general policy concerned, nor on the light which the report threw upon the working of the system which had been prescribed.

84. The censure passed by Mr. Saunders on the Deputy Commissioner on the 12th May reached him through the Commissioner, and seemed to him so undeserved that, on the 26th, he submitted a firm but respectful letter, praying for a committee on his conduct to investigate these charges which he was persuaded had been based on the Commissioner's representations only, without his having an opportunity to plead his own cause. He pointed out that some 6,165 people had been deported to his district kitchens, and that he had to try and provide work for these; and that, in spite of all efforts, paupers from other districts were still flocking in. He urged that this should be taken to prove not that too much relief was given in his district, but that too little was given elsewhere; and asserted his positive and deep conviction that his own expenditure, instead of being excessive, had not been sufficiently lavish. The Commissioner sent this on (8th June) with a letter, saying that there had been extravagance, but that relief measures were better in hand now. On the 10th July the Chief Commissioner replied, admitting the difficulties the Deputy Commissioner had had to contend with, but professing himself unable to withdraw the censure. There was a want of system throughout; his sub-divisional officers had not been utilised properly in supervising relief measures; he had had larger funds than any one else had worked in anticipation of sanction, and yet had constantly complained of inadequacy of arrangements to provide for employment. His persistency

THE HEIGHT OF THE FAMINE.

sioner's control and to maintain his own views had caused embarrassment. The funds expended by him on the kitchens had exceeded the allotments made him, which was inexcusable. The censured officer replied on the 24th July, but the only passage that need be mentioned is his remark as to exceeding the allotments for his kitchens. He had applied on the 25th June for the funds required for his kitchens during the month of July, and had only received the money on the 23rd of that month. If he had refused to disburse money in anticipation of sanction, the people dependent on him for food, from 40,000 to 50,000 in number during that month, must have died.

85. On the 21st and 25th the Deputy Commissioner sent up a fresh list of works, and urged the acceptance of his projects. Of one he said that the work had virtually been sanctioned, and probably was very nearly completed; of one, that it was impossible to submit plans and estimates, as the two district surveyors were already so fully engaged, and great delay would be caused; the work was of the simplest character, and was wanted to employ the kitchen paupers, who (as has been already noted) were beginning at this time to mount up greatly in numbers. The preparation, he said, of all the plans and estimates called for by the Commissioner, would occupy the exclusive time of his two surveyors for two or three months, and meanwhile they were wanted for supervision and for the discovery of new projects; and his requests for an increase of establishment met with constant refusals.

86. About this time the Commissioner wrote the letter, 22nd May, which has already been noticed, proposing to the Chief Commissioner to close all kitchens, and to begin no new relief works, as the rain had fallen; and the Chief Commissioner, on the 25th May, had replied that he was too hasty, but that he might arrange for a concentration of relief works, so as to have only two or three in each taluk. The effect of this was that on the 28th May the Commissioner wrote (in reply to the Deputy Commissioner's letters of the 21st and 25th) saying that as rain had fallen plentifully, such works as those proposed by him could be needed no longer. Tank works would not be practicable now that the rains had filled the beds, and to go on knocking down old fort walls was a mere waste of labour and kept the people away from their fields. In fine he would not sanction any work costing more than Rs. 500 without a special reference to the Chief Commissioner.

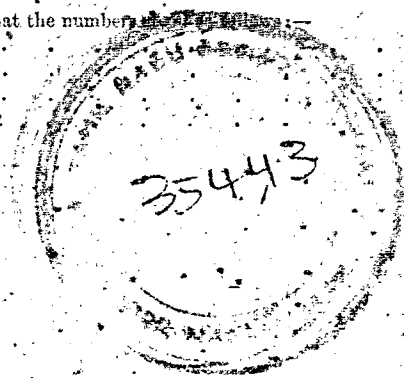
87. On the 4th June the Deputy Commissioner re-submitted the list of his proposed relief works, pleading that the rain which had fallen had not made the works unnecessary. Many tanks had received no water at all, and work could still be carried on in them; and though all the ryots were busy ploughing, there was no perceptible decrease of the numbers on the relief works. The Commissioner on the 14th June sanctioned all the works applied for in the letters of the 14th and 21st May and the 4th June, with the exception of 17 (two of which were already begun), but added that those approved of were not to be begun till the works already in hand were completed. Relief works, he said, might go on for a time, but the sooner the people can be encouraged to go back to their ordinary grooves of employment, especially to field labour, the better. Works costing more than Rs. 1,000 cannot be wanted for the employment of kitchen paupers; and if rain continues, all work in tanks will soon be impossible.

88. On the 23rd July the Deputy Commissioner feeling, to use his own expression, that "he could work up to double or treble his present expenditure if only he received the funds," made another effort to get rid of the close financial control which so embarrassed him, by enlarging the "imprest," or permanent advance to be made to amildars. The orders of the 21st February

* A reference to the Provincial figures will show that the numbers are as follows:—

Week ending 19th May
" " " 26th "
" " " 2nd June
" " " 9th "

8,806
4,495
4,979
5,424



(it will be remembered) fixed the imprest at Rs.1,000. He explained that in every taluk there were from 30 to 50 relief works going on, at each of which daily payments were made. The consequence was that the imprest of Rs.1,000 was split up into petty advances of Rs.30 or Rs.40 to each work, and could only be recouped as accounts of the expenditure were sent in. Most of the works were managed by village patels with the help of the *shambhog* (or village accountant) to keep the accounts; and men of this stamp could not be expected to be very quick in writing up accounts, or to look far ahead as to their wants. When the accounts were written, they were sent in to the amildar; next day he sent them on to the Deputy Commissioner; there they were examined and a cheque issued to the amildar; when he received it he paid out the money and sent it to the patel. All this took time, and meanwhile the work was stopped for want of funds. He admitted that so many works could not be properly supervised without an increased establishment, and for this he made a fresh application. He urged that at a recent committee, convened by the Chief Commissioner at head-quarters, his system of small and scattered relief works had been approved; and pleaded that the only way to carry it on was to raise the amildar's imprests to Rs.2,000 in ordinary cases, and to Rs.3,000 in the four taluks where there was the greatest distress. The Commissioner in sending on this letter observed that he considered the system of small works under the management of village officers to be altogether bad, and recommended that the people should be set more generally to the collection and breaking of stone for the roads. The Chief Commissioner's reply was that, as the Commissioner disapproved of the proposed system, he could not sanction the enlarged imprest that was asked for.

89. It has seemed to me necessary to enter thus minutely into the details of the controversy, because it was a typical instance of the failure of relief measures, which was brought prominently before the notice of the Government and the public. The attempt to relieve distress by petty and scattered works was more persistently and avowedly tried in this than in any other district. It was not, perhaps, tried under the best possible auspices. More fertility of resource might have been shown in devising works, more punctuality and system in carrying on the routine of the office; but on the whole it is evident that, in order to work the system at all so as to afford relief to the people, the rules as to sanctioning projects and allotting funds should have been greatly relaxed and official correspondence have been reduced to a minimum by close personal communications between the Deputy Commissioner and his superior officers. In this way money might have been spent with less check; and more people employed on the works. But there is another side to the argument, the necessity of obtaining some return for the money expended and of establishing tests to secure that relief should only be given to those in want of it, and to these considerations no reference whatever is made in this or any other district correspondence that has come before me. No multiplication of governing power, no increase to the number of relief inspectors could have made it possible to secure either of these ends when the number of works in progress was so large; and from this point of view the system of small relief works appears to be altogether condemned.

90. Thus far only the civil relief works have been treated of. It remains to give some illustrations of the way in which the works under the Public Works Department were being carried on at the period, and of the reasons which prevented them from being as effectual for the purpose of relief measures as might have been wished.

91. The work undertaken on the Alsur and Dharmarabudi tanks in Bangalore has been already referred to in the preceding chapter, but in April the Alsur tank drew near completion, and it was necessary to look about for some project to which the labourers could be transferred. Two plans were drawn up and submitted to the Chief Commissioner, one of which (the Agrara tank) was rejected by him as too expensive; the other, the raising of a road which led to the

railway station, was sanctioned at an estimated cost of over Rs.16,000. The Chief Commissioner requested the Chief Engineer "to make such arrangements as to ensure that able-bodied but really needy people from the relief kitchens are employed on the work." This was a particularly interesting experiment, as it appears to have been the first instance in which a work was specially designed by the Public Works Department to assist the civil officers by receiving labourers from the kitchens; but it was started on a mistaken principle, for the people were paid for their labour by food sent from the kitchens, and thus the Public Works Department officers had not the authority over them which the distribution of wages and the power to retain part of the wage as a punishment for idleness convey. But however well it had been designed, it hardly could have been successful as long as the spirit in which the Chief Engineer looked at relief labourers and the duties of his department towards the famine-stricken people remained what it was. The result of the attempt is shown in a note submitted by him on the 1st June:—

"I have already requested Mr. Hudson not to send the kitchen people to the railway road any more, they being very much in the way, more plague than profit, and the quantity of work they turned out being altogether inappreciable. From the 'Arab Lines' kitchen 190 men, 220 women, and 410 children were sent during the last six days. The work they did amounted to 60 cubic yards, value Rs.5-3-3, or a little more than 1 pie apiece. I have not the numbers sent from the 'Cleveland Town' kitchen, but during the three or four days they worked they earned Rs.2-10-11. I remained on the work yesterday till 10-30 o'clock, in order personally to supervise the experiment of working them along with the prisoners, but I was obliged to give it up. Under the above circumstances, it appears to me altogether useless to send the people so far from the kitchens. I had no means of compelling the people to work properly, though many of them were well able to do so, and they gave much trouble and were very much in the way."

Neither the tone of those remarks, nor the refusal to co-operate in the policy of keeping down the kitchen population—a policy on which both the Chief Commissioner and the Government of India laid so much stress—nor the disobedience of orders by which prisoners from the jail were employed on a work designed for famine relief and paid for out of relief funds, drew a word of censure from the head of the Government. He merely ordered the note to be communicated to the Central Relief Committee, and thus this attempt to divert the pauper population from gratuitous feeding to useful labour was defeated and abandoned.

92. The closing of the excavation of the Doderi Channel is an instance of the unfortunate want of co-operation which existed at this time between Civil and Public Works Department officers, and an instance the more forcible because it was purely unintentional. On the 28th June the Executive Engineer proposed to alter the appropriations in his budget, transferring a sum of Rs.16,500, which was allotted for the series of tanks and irrigation works in the Doderi taluk, which had just been begun, to another set of works (the Chinna Huggry series) which were near completion, but which had not been provided for in the Budget of 1877-78, because it was thought that it would have been finished in the preceding year. This was sanctioned as a mere matter of routine, and the civil officers were neither consulted about it nor informed of it, which they would no doubt have been if the project had been looked on as a relief work, and it had been foreseen that the sudden closure would most seriously affect the people employed. On the 11th August, Lieutenant Macintire, Relief Officer, wrote privately to the Superintending Engineer to say that, having been in the Doderi taluk a fortnight before, he had learnt the stoppage of the work:—

"The consequence is that those coolies who were employed there on really remunerative work, supervised by professional officers, are thrown on my hands, and I must either find work for them or feed them. The channel being close to Chelakere, where I have a large Kitchen, it was a great convenience, as such as were able to do a fair day's work could get enough to live on. The work used to give regular employment to the coolies from 8 or 10 surrounding villages, all of whom must be provided for until they can support themselves."

93. The Superintending Engineer sent this note up to the Chief Commissioner, saying that the work had been struck out of the budget to meet the reduction* ordered by the Chief Commissioner.

"I have nothing to add to what I have advanced in previous memoranda as regards the suitability of our irrigation projects for relief purposes, and the inadvisability of stopping these works in the present condition of the people."

* The Chief Commissioner wrote on the 16th August that the work might be proceeded with (if it had been cut out through the reduction of the budget by 3 lakhs), on the understanding that work of a similar cost, not so emergently required, would be substituted for it and held in abeyance, pending Government orders on the revised budget. The Superintending Engineer forwarded these orders on the 25th August, and the work was resumed in September.

94. The only other work specially undertaken by the Public Works Department for the purpose of famine relief was the Mysore railway. There have been frequent references to this work in previous portions of this report, and it has been seen how eagerly it was pressed on the Chief Commissioner by Colonel Pearce and by the Deputy Commissioners of Bangalore and Tumkur, and how Mr. Saunders refused to entertain the proposal and enjoined the counter-principle of employing the people on small works near their homes. In February, however, when Sir R. Temple paid his first visit to Bangalore and wrote his minute recommending that this work and the great irrigation scheme of the Mari Kanwe should be undertaken, provided that it was found that the small local works were insufficient to meet the demand for employment, the Chief Commissioner thought it advisable to obtain a provisional sanction to the commencement of the railway, and by his instructions Colonel Johnson wrote on the 13th February to the Government of India about the subject, replying to an enquiry made by them on the 29th November 1876 as to how far funds would be available. He said that the advent of famine had considerably upset the Chief Commissioner's financial calculations, so that he considered it inexpedient to start the railway works on any large scale, or saddle the finances of the province with any additions to the Public Works Department establishment for that purpose, and he feared he was unable under the present circumstances to find funds for the purchase of materials for the permanent way, rolling-stock, buildings, &c., to complete and work the line. Tank works then going on would not provide much employment, being too detached and of too local a nature to afford a general and extensive relief; whereas the earth-work on the railway was just what was wanted. Authority was therefore requested to put such portions of it in hand as might seem advisable, should the necessity arise. The existing staff of officers was sufficient to carry out the railway, and no more were needed. But it was added, in addition to the financial reason which made any rapid prosecution of the railway work undesirable, there was a danger of its attracting labour away from the tank works going on elsewhere;

"so that while it is desirable to take advantage of the present distress to get as much of the railway work done as possible, it is at the same time absolutely necessary that it should not be pushed on with such vigour as to cripple the province financially or to put a stop to the needful works now in progress in other parts thereof."

It was hardly likely that on an application so hesitating and provisional the Supreme Government would give sanction to the commencement of a large and important work. The papers had to be considered in several departments, and, it seems, the file was accidentally mislaid in one of the departments, and no second letter or reminder being sent from Bangalore, the matter was for the time forgotten. It is sufficient to read the foregoing pages to see that, even

* This statement was a mistake, for as shewn above, it was struck out through the funds being transferred to another work. At the time this note was written, the budget reduction had become a subject of eager controversy, and the Superintending Engineer, no doubt, without referring to the papers, assumed that it was the cause of this stoppage.

if a provisional sanction had been given, it would probably not have been acted on, so strong was the hope that famine would soon melt away, and so fixed the Chief Commissioner's belief that small local works were the best method of giving relief. On the 1st August (as the result of discussions, the account of which will follow directly) a telegram was sent asking leave to carry out three-mile extension of the line to connect the existing railway station with the native town at the grain market. Sanction to this was given on the 8th August, and even then no practical steps were taken to utilise the sanction. There were then 35,000 people in the kitchens managed by the Central Committee, and a great portion of these were fit for labour, and, as subsequent events shewed, most anxious to be employed on honest work rather than to eat the shameful bread of gratuitous charity. Yet the first step taken by the Public Works Department was to give half of the three-mile extension out to petty contractors under the usual rules of the department, thus making it impossible to employ the paupers on that part of the work. The end of the extension—that is, the place selected for the railway station for the town—was close to the great "Petta kitchen," where at that time 7,000 or 8,000 people were fed daily. Yet it was not till the 30th August that arrangements could be made to employ any of these paupers on the earth-work, and then only a single subordinate officer could be spared to look after them. The wages given at first were 2 annas a day and a meal of cooked food, and of course on these terms thousands of people would very soon have been attracted to the work. Even on the second day, when the numbers reached 650, the Sub-Engineer in charge was overcome by the difficulties of his position, the people being unaccustomed to orderly working, while he himself was new to the task of registering names and making daily payments, and was not supported by an efficient staff. Accordingly, on the 1st September, the money wage was reduced to 1 anna, and on the 4th this too was refused, and only cooked food was sent out from the kitchen to the labourers. The kitchen officers were also requested not to draft on more than 300 people, since that was as much as the department could deal with at that time. Matters continued in this state till the 14th September, when the new Famine Department took charge; the numbers varying from 230 to 450 daily.

95. It was stated above that when the Commissioner of Nagar drew attention to the fact that the Public Works Department were only paying their coolies every 15 days, and that this must keep famine-stricken people off their works, the Chief Commissioner on the 26th June referred the question to the Chief Engineer's consideration, and that the Government of India on seeing the correspondence wrote on the 13th July intimating their strong disapproval of the system. On the 21st July, Colonel Sankey, who had resumed his post of Chief Engineer, issued a circular with the object of amending this and other defects in the carrying on of the works. Executive Engineers were authorised to reduce the tasks by 25 per cent. in "special cases," where the physique of the coolies had been so lowered that they could not perform the tasks fixed at an earlier date. They were to satisfy themselves that a labourer doing a fair day's work should receive such pay that he might be able to earn two-thirds of a seer of rice with an extra allowance for condiments, *i. e.*, salt, pepper, vegetables, firewood, &c.

"Where daily payments were considered essential, arrangements should be made for the purpose of giving an advance to the headman of the gang."

But the conditions under which daily payments were to be considered essential were not stated, and the rule of introducing them on all works on which famine labour was employed was not made absolute. The circular was accompanied with a table shewing what the cost of $\frac{1}{2}$ of a seer of rice or $\frac{1}{2}$ of a seer of ragi would be, according as rice or ragi cost from 6 to 3 seers per rupee; the addition for "condiments" was to be 6 pies when the price of grain was from 5 to 6 seers, rising gradually to 9 pies when it was 3 seers; women were to get $\frac{2}{3}$ of the total wage thus cal-

culated, and children under 12 years old one-half. A similar sliding scale was introduced on the 8th August on the civil relief works: men were to get the value of $\frac{2}{3}$ of a seer of rice *plus* the value of 3 pies for condiments: women and children $\frac{2}{3}$ and $\frac{1}{3}$ of the wage respectively. But in neither of these orders was any explanation given how this principle of daily wage could be reconciled with the principle of payment by piece-work. In the works under Captain Bowen (the Roads and Buildings Branch) the custom had been to exact task-work, not piece-work, and to give a regular monthly pay to the coolies who performed their task. He had already found it necessary, in anticipation of sanction, to decrease the task and to raise the monthly pay, so that here Colonel Sankey's circular was at once introduced. But in the Irrigation Branch, which was chiefly concerned with earth-work, and where payment had always been made by the piece, the terms of the circular could not be applied without revolutionising the established custom; and it seems that, as a matter of fact, it was not carried into effect. Instead of it Colonel Johnson, the Superintendent Engineer, substituted a circular of his own, which he issued to his subordinates on the 25th July. In these instructions nothing whatever was said about giving daily pay; the system hitherto in force was to hold good. Nothing was said about the 25 per cent. reduction of task: as regards that point also the orders of the local Government were put aside. The only alteration made was to establish a definite relation between the piece-work rate and the price of grain. The circular started with the assumption that at the rate of 16 yards per rupee an able-bodied cooly could dig 2 yards and earn 2 annas; if, then, rice was at 7 seers, $\frac{2}{3}$ of a seer *plus* 6 pies for condiments, or 1 dig to 2 annas: and the 16 yards rate held good. But if rice was at 5 seers, the required ration of condiments would cost 2 annas 8 pies, and the cooly was to get this pay for the same quantity of work,—that is to say, the piece-work rate would be 12 yards per rupee. Similarly, if, on account of the hardness of the soil, the rate had originally been fixed at 12 yards per rupee, a man who dug 12 yards would earn 2 annas. If rice was at 5 seers per rupee he ought to earn 2 annas 8 pies by digging the same amount, and that would raise the piece-work rate to 9 yards per rupee. This is the only concession that was granted by him on account of the famine and its effects on the people. The circular was, in all probability, not shown to the Chief Commissioner for approval.

96. There is no doubt that the relaxation of the rules was received with pleasure by the Executive Engineers as a class, and by all who were actually in contact with the distressed people of the province. But strict obedience to it was not insisted on. The Executive Engineer at Mysore reported on the 27th July that he had fixed the wages of labourers thus: men 3 seers of rice, women one anna nine pies, children one anna. Now, the rate which brings a man's wage to 3 annas, according to the sliding-scale table, was a rate of 5 seers of ragi for the rupee. But if the circular had been strictly followed, women should have received two annas and children one anna and a half. It does not appear, however, that the Executive Engineer was told that he had mistaken the order. All that Colonel Sankey replied was that he would wait and see how the new rate of pay worked.

97. On the 6th August Mr. Gatherer, Executive Engineer of Irrigation Works in Mysore, submitted a representation regarding the condition of the small children belonging to people on the works: their number, he said, was very great, and the parents' wage was not sufficient to feed the children too. Moreover, the condition of many of the labourers was already very much reduced, and many were more fit for kitchens than for works, and they could not support themselves by piece-work owing to the diminished quantity of food purchasable at the existing high rates. Accordingly he made two proposals:—

(1) that he might receive permission to give to the parents who had children to support a small fixed allowance for their food; and

(2) to pay on the daily-wage system those who could not do even $\frac{2}{3}$ of an ordinary task. Colonel Johnson's note on this reference was to the following effect. As to the proposal to give an allowance for the children of labourers, it would be difficult to do this owing to the large number of works on hand and the want of officers to inspect them constantly: also it would be impossible to find out what parents really had children belonging to them, unless they bring them with them to the work, which is undesirable for the children's own sake. As to the 2nd proposal, it is impossible to employ two classes of men doing the same kind of work and receiving pay on different systems; all would prefer to go on the daily pay system and to do no more work than they liked. The Department then could not work up to its estimates, the petty contract system would collapse, and unless establishments were largely increased, works must be closed for want of supervision. The only way to employ the weak without demoralising the strong is to employ them on separate works from which all able-bodied labourers should be excluded. These works should as a matter of principle be under Revenue officers, although, if absolutely necessary, they could be supervised by Public Works Department officers as mere relief works. He wound up by censuring Mr. Gatherer's letter as vague, unsatisfactory, crude and undigested, dealing with probabilities, not with facts, and shewing the absence of consultation with the Revenue officers as to the best method of providing for the incapable. The Chief Engineer concurred, and said that if they were compelled by the Chief Commissioner to adopt task-work instead of piece-work, they must, in order to secure any adequate return to Government, concentrate their efforts on such large works as would admit of their having always a trustworthy subordinate at hand to force the people to labour, and this would necessitate cutting down most of the small works, and would cripple the scheme of tank restoration. The Chief Commissioner agreed that Mr. Gatherer's proposals were vague and impracticable: enough had been done to meet the necessities of the case by reducing the task to 75* per cent., and prescribing a sliding scale of pay which had been done at Colonel Campbell's urgent request; Colonel Johnson might communicate to Mr. Gatherer the terms of his note.

98. Thus, the most thoughtful and humane proposal made by any officer in the Public Works Department was treated with scant courtesy, and his views as to the needs of the labourers and the growing deterioration of their physique were rejected by his superiors who had hardly gone out into the province during the famine to test with their own eyes the facts which they were so ready to disbelieve. Mr. Gatherer had, however, before many weeks passed, the satisfaction of finding that all his proposals were adopted, and it was seen (what had indeed been proved already by the experience of Bombay, though the Mysore officials were not aware of it) that it was practicable to work gangs of labourers side by side, tasking them and paying them on different systems according to their different degrees of strength; and that there was nothing in the nature of things which made it necessary to apply to all one unvarying rule.

99. Meanwhile a controversy had been going on, which now became very keen and active, regarding the necessity of remodelling the Public Works Budget for the year, cutting it down as far as regards works not specially useful for relief purposes, and revising and adding to it so as to meet the requirements of the famine. In order to understand all that passed, a brief reference to the preceding history of the province is required. The usual grant made to the department for its yearly expenditure was formerly 15 lakhs (or Rs. 15,00,000), but this amount added to the ordinary cost of the Civil Administration left an annually growing surplus, which at last reached the sum of over 80 lakhs of rupees. After much discussion it was decided that it would be better to hand

* Apparently it was forgotten that this reduction had been already ordered on the 28th February, and that what was sufficient to meet the condition of the people then could hardly be sufficient now when they were so much further reduced in strength. It seems that the order of the 28th February, being permissive, had not been carried into effect. (See p. 51.)

† On the 1st April 1876 the province had Rs. 69,04,000 invested in the 4 per cent. Government loan, besides about 26 lakhs of cash balances.

over to the young Rajah in 1881 a territory well stocked with roads and with its tanks and irrigation channels in good and efficient order, rather than to surrender to him an overflowing treasury, and a province with disorganised tanks and few means of communication. A scheme was thus drawn up for spending 10 additional lakhs a year, or 25 lakhs in all, so as to work off this surplus before the cession, and the objects to which the expenditure was to be devoted were mainly the restoration and improvement of the tanks, and the opening out of the approaches from the Malnad, down the Ghâts, to the western coast. Thus the annual budget of 25 lakhs consisted of two parts: the normal 15 lakhs paid out of revenue and the abnormal 10 lakhs paid out of surplus; and as soon as the cost of famine relief began to threaten the diminution, and, at last, the utter extinction of this surplus, it naturally occurred to the Financial officers that the province could no longer afford to give to the Public Works Department 10 lakhs a year out of a fund which was rapidly melting away. It followed, therefore, that a distinction should be drawn between the two classes of works in the budget. Those which were specially suitable to afford relief as being situated in the most distressed parts and employing unskilled labour, should have been kept going; while those that were unsuitable, either as requiring skilled labour like buildings and bridges, or as being situated in unhealthy localities, like the Ghât roads, should have been stopped.

100. The first move was made by the Financial Department of the Government of India, which suggested (11th October 1876) that, as the grants for relief and the diminished collection of revenue would reduce the surplus, the Public Works Department expenditure should be cut down to some extent. A long discussion ensued between the Officiating Chief Engineer and the Chief Commissioner as to the policy of such a reduction. The former urged that the works entered in the budget were not only the most useful but the best suited for relief purposes. The latter pressed the absolute necessity for reduction of expenditure on objects not essential. It was not till the 7th June following that the Chief Commissioner terminated the correspondence by saying that it was then clear that nothing but rigid economy would save the province from bankruptcy. Little revenue had been collected, and there were not funds enough to carry on the current expenditure, the relief works and the kitchens, without selling out all the invested surplus. He did not hesitate, therefore, to order that works aggregating three lakhs of rupees in cost should be stopped for the present. It might be possible to reconsider this decision in October or November, but he would not discuss the questions of administrative policy mooted by Colonel Johnson. The reduction was accordingly made and the lists drawn up shewing the works to be postponed. Civil buildings furnished 1 lakh of rupees, roads (all of them in the Malnad) Rs. 60,000, miscellaneous improvements Rs. 15,000, tanks and channels Rs. 1,25,000. This reduction did not affect the establishment, which remained therefore very large as compared with the work they had to carry out: in the Irrigation Branch the cost of establishment, as compared with the cost of works to be carried out by them, was 80 per cent. There was therefore, it would seem, a considerable superfluous establishment which might have been utilised in carrying on special relief works.

101. On the 10th June, Colonel Sankey returned from furlough and took charge of his office of Chief Engineer, Colonel Johnson reverting to the post of Superintending Engineer of Irrigation Works. Colonel Sankey on the 22nd June reopened the question so long discussed, by referring to the Chief Commissioner's Resolution of 15th June, in which he called on all officers to make suggestions for the reduction of expenditure without public inconvenience or real loss of efficiency. How could the withdrawal of three lakhs fail, he urged, to produce these results? The reduced budget provided only 15½ lakhs for works, while the establishment cost 7 lakhs or 46 per cent, whereas 25 per cent. was the true proportion, and an establishment of 7 lakhs ought to be able to spend 28 lakhs. Mr. Saunders replied that, by following such a course as was

proposed by Colonel Sankey, the province would be run deeply into debt in order to provide for the establishment of the Public Works Department and keep their hands full; the other course would be the wiser one, to reduce the departmental staff down to the margin of the requirement of Mysore.

The Chief Engineer still pressing his views, Mr. Saunders replied that such a policy would merely have the effect of landing the Government in a state of bankruptcy and frustrating *sine die* all attempts to push on improvements. He recounted how he had ordered projects costing 3 lakhs to be postponed, and how he had been called on by the Government of India to curtail the budget still further; and now that the Chief Engineer proposed

"not only to restore the eliminated items of the budget, but moreover to double the present budget limit at a time when I am directed to reduce the amount, it becomes my undoubted duty emphatically to prohibit the adoption of any measures which might have the effect of committing the local Government to any such extravagant operations."

He then pointed out the absurdity of a suggestion to the effect that no harm would be done if the enhanced expenditure went on till the middle of October, as that would necessitate closing all works and dismissing the whole establishment for the remaining 5½ months of the year. "Under these circumstances I fail to perceive that there would be no infraction of Financial rules." In fine, he ordered that the budget should be curtailed by 3 lakhs and the monthly expenditure kept at 1/3 of the reduced amount, and reported to him month by month.

102. In the latter end of July it became obvious to most civil officers that the administration of the famine was neither successful nor creditable, and that affairs were going from bad to worse; and two of those who most clearly saw the evils brought about by the mistaken attitude the Public Works Department had taken up, Messrs. Hudson, Deputy Accountant General, and B. Krishnaiengar, C.S.I., Deputy Commissioner of Kolar, made an effort to bring matters back into a better groove. They first represented their views verbally to the Chief Commissioner and then, at his request, embodied them in written memoranda, dated the 23rd July. Mr. Hudson drew especially attention to the financial position of the province. He pointed out that the surplus fund, which formerly justified the enlarged scale of the Public Works budget, had melted away. The year 1876-77 had ended with a deficit of 42 lakhs, and 16 lakhs of this had to be paid by selling out invested funds, which had thus been reduced from Rs. 63,04,400 to Rs. 47,14,000. Since 1st April, 18 lakhs of rupees had been sold and the remaining Rs. 29,14,000 would soon have to go to meet the necessary expenditure of the next few months, and they would probably have to apply for a loan of 20 lakhs in November. Even the curtailed Public Works budget, which had been brought down to Rs. 22,15,000, was 7 lakhs higher than the old figure at which the allotment made yearly to the department used to stand, and that 7 lakhs would have "to be paid out of a surplus which did not exist"—that is, would go to increase the debt. Accordingly he proposed to cut out of the ordinary budget every work that could be "postponed without immediate inconvenience," leaving only a certain number of projects which could not be stopped, the cost of which he roughly estimated might be about 15 lakhs, and to these the employment of the able-bodied regular labourers should be restricted. The rest of the establishment—that is, all that could be spared from the supervision of this class of works—should be utilised in carrying out the relief works which were now under the civil officers, of the mismanagement and wastefulness of which he drew a vivid picture. The supervision was lax and inefficient, the works chosen were petty and unimportant, and there was no reason to believe that the rules laid down as to tasks and wages on these were obeyed:—

"Now, the remedy for this state of things is, I submit, to place relief works under the supervision of the Public Works Department and its officers, not independently of the civil authorities, but in concert with them. The

Public Works staff has hitherto been too much occupied with departmental work, it may be said, to give attention to "relief works under civil officers," and an essential part of my proposal is, after eliminating from the Public Works budget every work that can be postponed without immediate inconvenience, to set free every Public Works officer who can be spared, for the superintendence of relief works. Where a work entered in the Public Works budget of either branch is of a character suited to the enfeebled population, it would seem advisable to retain it, even at an enhanced cost, but we must not lose sight of the immediate need of such works as can give employment to that class of labourers. I speak under correction, but it will probably be found that the ordinary Public Works grant of 15 lakhs will, in all likelihood, provide for the able-bodied. One important duty of the Public Works officer, under the arrangement I have suggested, will be to send the able-bodied labourer to the nearest "public work" and to restrict the relief to such as are below par. We would then hear less of "friction" and of the employment of able-bodied men on relief works to the detriment of public works. Another and most important advantage will be the supervision of details by the Chief Engineer. There cannot be a doubt that the rigid rules of the Department Public Works, which were enforced at the commencement, have had a salutary effect in controlling the wasteful system of daily wages without task on relief works, and a central authority, such as the Chief Engineer's, is obviously preferable to any other operating through the officers of his department; it will bring system and order into our relief operations, and in this respect the civil officers should, I think, be guided by the orders which the Chief Engineer may pass. Should there be a difference of opinion (which the new sliding scale will obviate) as to rates, the point may be referred for the Chief Commissioner's decision.

"In the selection of works, again, the Chief Engineer's advice would be most valuable. Without attempting any great work, such as the railway embankment to Mysore, which it may be difficult to attract labourers except from the neighbouring villages, the Chief Engineer could doubtless propose a programme of really useful works which would be acceptable to civil officers. Money would not be frittered away as at present, and the Government would get some tangible return for the heavy outlay it is incurring."

103. Mr. B. Krishnaiengar's memorandum was less occupied with financial considerations, and more with the practical question of how relief works should be carried on. He urged that whereas a larger sum of money was being spent on the relief kitchens than on works, the reverse ought to be the case: the kitchens did but demoralise the people, as only the vagrants and professional mendicants resorted to them, and their numbers ought to be diminished so as to impose some restriction on the distribution of relief in this form; the number of relief works, on the other hand, should be increased, and they should be placed as far as possible under the officers of the Public Works Department, so as to leave the district officers free to superintend other branches of Famine work, to look after the kitchens, prevent frauds, &c. He showed that there were in his district an Executive Engineer with four Assistant Engineers under him; and he proposed that each Assistant Engineer should take charge of the works in two taluks, the Executive Engineer of the district superintending the whole: these relief works he considered need not interfere with the execution of the ordinary budget works which could be carried on by the same officers in the areas or taluks placed under them.*

104. These views made a great impression on Mr. Saunders' mind, and his first impulse was to adopt them in their entirety. On the 31st July he wrote to Colonel Sankey that it seemed necessary, as represented by Mr. Hudson, to cut the budget down to the old sum of 15 lakhs, and to apportion to the projects retained in it an establishment not costing more than 25 or 30 per cent. of the expenditure on works, so that the rest of the establishment might be utilised on the special relief works.

Colonel Sankey having expressed doubts as to the way of giving effect to these views, the Chief Commissioner summoned a conference of his officers to discuss the situation, but the divergence of opinion was so great that no definite conclusion was come to, and Mr. Saunders in the end requested the Chief Engineer to draw up a note recording the grounds on which he opposed the proposals made and the counter-scheme which he himself advocated as the best method of giving

* This agreed substantially with the proposals made by Lieutenant Kensington, the Executive Engineer, who, between January and March, had asked leave to start irrigation works on an extended scale throughout the whole district, for the purposes of famine relief. These proposals were rejected in the Public Works Department.

relief to the people. This note was completed on the 7th August and submitted to the Chief Commissioner on the 11th August. It is a paper of considerable importance and deserves to be summarised with some degree of fullness.

105. The writer first took up the financial question and argued that if the condition of the province was such that in order to avoid a deficit the Public Works budget had to be cut down and all departmental expenditure reduced to a minimum, then it was useless to talk of enlarging relief works, for what was saved on one hand would be spent on the other. "It is evident there is a radical divergence in the views between the two authorities; Mr. Krishnaiengar considers that Mysore requires 85 lakhs spent on works, good or bad" (what Mr. Krishnaiengar really said was that for his own district he would wish to spend Rs. 50,000 a month on relief works; it was illogical to assume that every district in Mysore would require as much), "while Mr. Hudson maintains that unless immediate curtailment of all outlay be decided, on ruin stare us in the face." But here he ignored the argument which he really had to meet. No one maintained that the people should be left to starve rather than the province be run into debt; but what was asserted was that useful but expensive projects, planned for the purpose of working a surplus, should not be carried on now that the surplus had disappeared, merely because they had been planned.

106. He next turned to the proposal that relief works should be multiplied and should be put under Public Works Department officers, and attacked it on two sides. He said, if you have numerous civil establishments of amildars and peshkars, serishtadars and sheikhdars, shanbhos and patels, are unable to manage those works, what can our "very small" contingent do? If the morale is so bad, our subordinates will be unable to infuse "their higher morale into the class complained of," and "will hardly escape contamination." Under the temptation of uttering these retorts he seems to have lost sight of the real contention of the civil officers, which was that they were so burdened with the multifarious duties of relief that they wished to make over one branch of them, the relief works, to the skilled professional officers, in order to have more time to attend to the other branches.

107. His second line of attack on this proposal was rather inconsistent with his general scheme. He began by stigmatising the idea of undertaking repairs of a great many tanks as

"dangerous in itself and subversive of the whole principle on which the present great work of tank restoration is being carried on," and "a return to the old utterly illogical and destructive method followed under previous governments." "The time required for framing the projects on reliable data must in itself be fatal to the idea of treating such as famine relief works for immediate execution." "The proposal is radically unsound for the reason

"(1.) To pronounce a work useful, it should be thoroughly investigated. We have no sufficient time for this, and anything commenced without complete data and enquiry must of necessity lead to useless squandering of money.

"(2.) To spend pressingly valuable time in getting up a programme of such useless work when we have already a completely thought-out and sanctioned scheme for public works, most of which are admirably suited for relief works, appears to me illogical, if nothing worse."

But having thus proved that the execution of repairs to tanks, as proposed by Mr. Krishnaiengar, was impracticable, he went on to undo the force of his objection by adopting the proposal as his own. "There is one point with reference to which no one can make a mistake unless wilfully, and that is placing earth on the top and at the back of a tank bund" (or embankment). Weak earthen bunds, he said, are still the rule, instead of the exception, in Mysore, and large numbers of breaches occur yearly which are due to their insufficient height. About 16,700 tanks are estimated to require repairs of this nature, averaging about Rs. 150 each, or 25 lakhs in all. The repairs ought to be carried out by civil officers, whose duty it is to take care of the feeble and weak, not by the Public Works Department, who should only provide for those who are able and

willing to work; but on this vexed subject he advanced no argument, thinking it sufficient to quote as his authorities the orders of 1873, "the Code rules, the lately published opinion of His Grace the Duke of Buckingham, and the various orders of Mr. Saunders." No reference is here made to the fact that the opposite policy had been pursued in Bombay with the known approval of the Government of India, nor was any attempt made to prove that measures which had been so successful in the famine in Bombay were inapplicable to the relief of famine in Mysore.

108. The Chief Engineer's own proposal was, that the operation of the Public Works Department should be very largely extended; he could employ, he said, 1,000 people on the repair of roads in the open country, 5,000 on buildings lately stopped, 7,000 or 8,000 on the water supply works, 28,000 on irrigation works completely planned; besides these there was the 3-mile extension of the railway to the town of Bangalore, and the 9 miles between Mysore and Seringapatam: the opening of the railway embankment between Bangalore and Seringapatam he did not urge. But without it he could employ from 40,000 to 50,000 able-bodied labourers, if only the civil officers would co-operate and drive them to the works. Some form of compulsory law was necessary, and "there should be no shrinking from using the requisite pressure in regard to this duty." He ended by repeating a proposal which Mr. Saunders had already rejected with much warmth to spend a gradually increasing sum rising to 7 lakhs of rupees a month on public works, showing that the country could easily bear such a debt, and that while the task of repaying it would be light, the benefit of pouring money into the country at such a time as this would be very great.

109. The outcome of this memorandum was not such as to give much help to the Civil Administration or to the Chief Commissioner in his perplexity. The Chief Engineer objected to allow his officers to assist the Civil Department in the management of their relief works, on which feeble and emaciated labourers were employed. The only share he consented to take in the campaign against famine was by considerably enlarging his ordinary works till they should provide labour for 40,000 or 50,000 able-bodied people, about double the existing number, and this he allowed could only be done if the people were compelled to come to the work. How this compulsion was to be legalised and carried into effect he did not indicate, but it was obvious that it could only be done at the cost of much additional labour to the already overburdened civil officers. They cried for help on the ground that their yoke was heavy: he replied that he could only assist them on the condition that he should add to their yoke. A real knowledge of the state of the people such as would have been obtained by a short tour through the worst parts of the country would have shewn him how impossible of realisation his condition was, and how far his proposals were from meeting the emergent necessities of the case.

110. Such, however, was the influence wielded by Colonel Sankey in right of his long experience in Mysore that his opposition was fatal (for the time) to the success of the scheme advocated by the civil officers, and nothing further was heard of it during the period treated of in the present chapter. Another lengthened discussion took place in an unofficial form, in which the irritation on either side became more and more manifest. It ended at last on the 17th August by the issue of an official memorandum from the Secretary's office to the effect that, though financially desirable, it is not practicable to cut down the budget to 15 lakhs at once. The Chief Commissioner had requested the Government of India to let the budget stand unaltered, even though the expenditure must be carried on by loans; but 3 lakhs must be postponed and held in abeyance till the reply of the Government of India to this request should be received. Meanwhile, the Chief Engineer must decide what works should be postponed in order to carry out this retrenchment.

111. A review of these prolonged and practically useless discussions leads to the unavoidable conclusion that the question of the retention or reduction of the budget had become to

Colonel Sankey almost a personal question, so engrossing that he could hardly listen with patience or reply with equanimity to any arguments used on the other side. Otherwise, it is hard to explain how so able an officer should have so totally missed Mr. Saunders' intention, and should have answered with such irrelevant arguments; or how he should have failed to support him even at the sacrifice of his own personal opinions in this time of anxiety and bewilderment, when, in addition to the cares of Government, and the distress caused by the daily increasing pressure of famine, he was visited by the sorest of domestic afflictions. For the position now taken up by Mr. Saunders was not only right in itself, but was hardly capable of misconstruction. It was, that every work put down in the budget which was not specially suitable for relief purposes should be stopped as far as possible; and that at the very outside not more than 15 lakhs should be spent in the year on such works and on the establishment kept up to supervise them: all the rest should be applied to relief purposes and charged to relief funds. The only mistake that was made—and it arose apparently from deference to the feelings of the Department—was in naming the amount of 15 lakhs at all. It would have been simpler if the budget had been abrogated altogether, as in fact was done in September. If the Chief Engineer of Mysore had seen the true policy with the clearness that might have been expected from him, or had followed the example set by the Chief Engineer of Bombay, he would have replied:—Nothing shall be carried on now simply because it was planned last year under such totally different circumstances. Every work not directly conducive to relief shall be stopped, unless the loss by stopping it is greater than the loss by carrying it on. For the rest, all works useful for relief shall be pushed on vigorously, nay largely increased, but they shall be worked on relief principles and charged to relief funds. The repairs of roads, the water-supply works, are eminently suited to employ unskilled labour and should be so utilised, and I will enter into direct communication with the district officers, ascertain from them what numbers of paupers they expect to be able to employ on works, and in what places, and prepare a scheme of relief works accordingly.—

If this line had been taken up, the people of Mysore might even yet have been saved from much of the suffering and mortality which ensued.

112. The opportunity, however, was thrown away, and thus the curtain falls on the central and most tragic act in the drama of the Mysore famine. The final scene is not a reassuring one. The rains were still holding off and the rainy season passing away; what little crop had been sown was mostly withered, and there was every prospect of another year of famine. The expenditure was enormous. In the last four weeks of August the cost of the kitchens was shewn as 5½ lakhs, of the civil relief works 1½, and of the Public Works Department works 2½ lakhs. This expenditure was neither giving effective relief to the famine-stricken, nor saving human life, nor enriching the province with useful public works. The people were reduced by disease and hunger, and the mortality was great and rapidly increasing. The kitchen returns shewed 227,000 people as fed daily, and their condition was deteriorating rapidly. The death-rate among those who were in the hospitals had risen to the rate of 200 per cent. per month. At the same time only 29,000 people were being employed by Civil and 24,000 by Public Works Department officers on works. Everybody was alarmed, distressed, and bewildered; every one saw that there was something faulty in the arrangements, or at least that they had not achieved success; but only the more thoughtful and experienced members of the Administration saw that there was one path by following which improvement might be hoped for. The Chief Commissioner inclined to their views, but the resolute opposition of the Chief Engineer discouraged and defeated him, and the struggle ended with the definite adoption of the *status in quo*, and the resolution to persevere to the end with no alteration of system and no change of personnel.

CHAPTER V.

THE DECLINE OF THE FAMINE.

SEPTEMBER 1877 TO JULY 1878.

The Viceroy's journey to the south of India and visit to Bangalore—2, Arrangements at the "Pettah" kitchen—3, Arrangements at the "Sillidar Lines" relief camp—4, The Binni Mangala and Kishenrajpur camps—5, Frauds in the kitchens and exaggerated returns of numbers fed—6, Reforms required in the management of gratuitous relief—7, Reforms required in the management of relief works—8, Colonel Sankey's scheme of operations—9, Defects in the scheme—10, Transfer of Colonel Sankey from Mysore—11, The Viceroy's arrangements for famine administration—12, Relief measures facilitated by rain—13, Decision as to uniformity of ration in relief camps and of wages on relief works—14, Management of relief camps in Bangalore handed over by Central Committee—15, Administrative reforms in the city. Street deaths—16, Causes of the mortality—17, Universality of the high death-rate—18, Estimate of the number of deaths of kitchen paupers—19, Need of medical assistance; indent for doctors—20, Additional staff required for Public Works Department—21, And in the Civil Department for relief inspection—22, Abolition of small kitchens, and conversion of the remainder into enclosed relief camps—23, Stoppage of small civil relief works—24, Constitution of the Bangalore Municipality—25, Share in relief measures entrusted to Municipal Committee—26, Drafting of paupers on to the State Railway—27, Condition of the paupers when first drafted and improvement in their condition—28, State of affairs at the time of the Viceroy's second visit to Bangalore—29, Assistance given to planters in the Wynád—30, Relief measures in Coorg—31, Defects of past famine administration in Coorg—32, Preparation and issue of the Famine Code—33, Diminution of numbers on gratuitous relief—34, The Famine Commissioner's tour through the province—35, Necessity of encouraging cultivation by advances for seed—36, Relief works in Kolar District—37, Bangalore District; causes of failure and success in marching paupers to a distant work—38 and 39, Sunday wages on relief works—40, Tumkur District; scheme of relief works—41, Comparative merits of road-work and earth-work—42, Enquiries into the sufficiency of the cooked ration as distributed in relief camps—43 and 44, Instructions issued as to testing the ration—45, Special diet—46, Importance of the subject—47, The Timanhalli tank; piece-work *versus* task-work—48, Chitaldrug District; civil relief works—49, sanguine expectations of the coming harvest—50, Injury done by excessive rain—51, The Shimoga District; scheme of relief—52, The Kádur District; scheme of relief—53, The Hassan District; compulsory relief and its effects—54, Further consideration of the subject; first, treatment of people in their houses—55, Second, treatment of beggars—56, Third, treatment of emigrants and wanderers—57, Discouragement of deportation—58, Mysore; working of the voluntary Committee—59, Prospects of the crop and excessive hopes entertained—60, Return to Bangalore—61, Administration of relief in the municipality through the Municipal Committee—62, 63, 64, New arrangements made through special officers; narrative of results effected—65, Measures for collecting beggars and wanderers in the municipality—66, Manner of disposing of them; hospitals and relief camps for the sick and old—67, The "special gang" for the emaciated young—68, The State Railway relief works for the able-bodied—69, Desertions from the relief work; their causes and the remedy applied—70, The State Railway considered as a means of relief—71, The State Railway considered as a work—72, First steps towards organisation of the gangs—73, The classification of labourers—74, Introduction of piece-work—75, Experience of piece-work—76, The difficulty of making the people understand the rates—77, Difficulty of making the gangs work honestly together—78, General conclusions as to the employment of piece-work—79, Daily payments—80, System of tasking—81, Rates of wages—82, Transfer of famine coolies from civil relief works—83, Arrival of special relief officers—84, Tour in Tumkur District in December—85 and 86, Cutting or fining for short tasks; the conditions under which it is permissible—87, Severe measures for the collection of arrears of land revenue—88, Instructions as to collection of land revenue for the current year—89, Steps taken to close relief camps under the influence of good prospects of the harvest—90, Clouding over of those prospects—91, The test census of 19th January 1878—92, Estimate of the outturn of the crop of 1877-78; first, the area cultivated as compared with ordinary years—93, Second, the average produce of food-grains in ordinary years—94, Third, the actual produce of food-grains in 1877-78—95, Comparison with the food-crop of 1876-77—96, Distribution of the food-crop and deduction as to classes requiring relief—97, Forecast of relief measures for 1878, and expenditure thereon—98, Modification of system in the new relief works—99, Scheme of relief measures in Kolar—100, Scheme of relief measures in Bangalore—101, Scheme of relief measures in Tumkur—102, Scheme of relief measures in Hassan—103, Scheme of relief measures in Chitaldrug—104, Results of these measures; monthly numbers on relief works—105, Monthly numbers on gratuitous relief—106, Administration of the charitable fund; early errors; distribution of clothes—107, Money doles—108, Principles finally adopted as to the distribution of the funds—109, System of carrying out those principles—110, Illustrations in detail—111, Orphanages—112, The future prospects of the orphans—113, Summary of the charitable expenditure—114, Imports and prices—115, Winding up of the Famine Administration.

ON the 17th of August His Excellency Lord Lytton left Simla to visit the famine-stricken provinces in the south of India. The objects of his journey were set out in his Minute of 2th August, from which the following extracts may be made here:—

"I am afraid that the situation in Mysore is, in proportion to its area and population, even more critical than Madras. The Mysore demand for imported grain has, throughout the famine, been larger with reference to the

distressed population than in the Madras Presidency. The fate of the crops now in the ground is more doubtful in parts of Mysore than anywhere else. The employment of the destitute poor on useful public works has, since April last, been quite inadequate to the occasion. At the present time the persons on gratuitous relief are three times as many as the relief labourers on public works. In Bombay, the numbers on gratuitous relief are now little more than half the total of relief labourers. In Madras the total number on gratuitous relief is somewhat less than the total on works. Reports have been received from more than one Madras district that people in the last stage of distress flock over from Mysore to British relief-houses for help. It would seem that Mysore relief arrangements are at present neither efficient nor sufficient. In this province immediate steps must be taken for reorganising the relief administration.

"As my colleagues are aware, it is my intention to visit Madras and Mysore immediately. Before starting on this journey, I have thought it desirable to place on record my reasons for undertaking it. These will be found in the foregoing general statement of the main facts of the present condition of the famine-stricken districts in Southern India. I cannot contemplate such a condition of things without the most serious anxiety, and the deepest sympathy with all those local authorities who, after prolonged and arduous exertion, are now confronted with new administrative difficulties.

"So long as we might reasonably hope that the worst difficulties and dangers of the Madras famine would by this time be passing over, I have purposely refrained from visiting the Presidency, lest my presence there should, however unintentionally, prove embarrassing rather than helpful, to the efforts of the local Government.

"But in face of the facts recorded and reviewed in the preceding paragraphs of this Minute, I can no longer question the urgency of my own duty, and that of all concerned, under the pressure of a natural calamity greater than any which, so far as I know, has in modern times afflicted India. It is now clear that the humane efforts of the Madras Government have proved insufficient to diminish the intensity, or reduce the area, of this calamity. The distress, which appears to be increasing with frightful rapidity, must, even under the most skilful, the most economical, and the most energetic management, strain to the utmost the administrative abilities of the local Government, and the financial resources of the Empire.

"In short, we are now fairly engaged in a terrible conflict with nature: our line of battle has been broken at Madras and Mysore; and it is, therefore, at these points we should now concentrate all our reserved force.

"My journey, therefore, to the famine-stricken districts of Southern India, and more especially my journey to Madras, is prompted by the hope that it may enable me to strengthen and augment the means on which His Grace the Governor of that Presidency is now dependent for the satisfactory solution of a problem as serious as any which have ever occupied the mind, or taxed the abilities, of an Indian Statesman."

After remaining a few days in Poona and in Madras, the Viceroy arrived at Bangalore on the 6th September and remained there for three days. Rain had begun to fall ever since the 1st September, and already the burnt-up brick-coloured soil began to shew signs of greenness and of reviving vegetable life.

2. There were at this time four large "kitchens" in Bangalore itself, and two outside the suburbs, at which about 40,000 people were being fed daily. The largest of these institutions was known as the "Pettah kitchen." It is a large walled enclosure with two gates, originally used as a standing-place for carts waiting for hire. There were some lean-to sheds outside the wall where a few people could sleep, and sheds inside where the food was stored and cooked. No pauper was allowed inside at night. Those who were residents of the town went to their own houses, and the argument against enforcing residence on all applicants for food was that it would be hard to compel those who had houses in the town to leave them and reside in an enclosed place. But the majority of the applicants were wanderers from outside, who took shelter for the night in any place they could find,—the open verandahs in front of shops, the chattrams or resting-places for travellers, the temples, and temple-courts. These people, when they woke in the morning, wandered about the town in troops, begging at the shop-doors, picking up offal and garbage in the streets, sweeping out of the dust or mud of the grain-market the grains of rice that escaped from the bags as they were unloaded from the carts that brought them from the railway station, or shifted from place to place. At the railway station they prowled

the 1st September; and from all I can learn, I am inclined to estimate that this was from 30,000 to 40,000 in excess of the real numbers.

6. However this may be, the numbers gratuitously fed were extremely large, and the relief thus given degraded those who received it, failed to prevent a hideous mortality, and obtained for the province no useful public works in return. To reform this state of things was the main object of the Viceroy's visit to Mysore, and having resolved to appoint Major C. C. Scott Moncrieff, R.E., and myself to carry out his views of famine administration, we were directed to anticipate his arrival so as to form an independent opinion as to the existing condition of things and the measures to be taken to remedy the evils. Accordingly, we visited the Bangalore kitchens already described, as well as some of those in the district, and in Kolar and Tumkur, and specially applied ourselves to the two questions, whether residence in the kitchens could be enforced as a condition of gratuitous relief, and whether the people now fed gratuitously could be induced to go to relief works. The conclusions arrived at were that in the outlying kitchens the test of residence not only could safely be enforced, but was needed in order to make relief efficient, and to keep away unworthy recipients; that in Bangalore itself, where most of the paupers were extremely emaciated, the system of giving partial relief in one cooked meal, to be supplemented by begging, required to be altogether altered, the people being brought under control for their own good, supplied with a sufficient ration, and housed at night; that the rumour of the increased ration given in Bangalore (nominal though it was, since only one meal or five-eighths of the ration was given in most cases) had reached outlying districts, and made discipline difficult, so that it was necessary for the ration in all kitchens to be uniform; that there was no reason now for the administration of relief in Bangalore through a voluntary committee, but that it would be simpler to bring all the machinery under a single control; and that there was no reluctance in the minds of the people to accept employment on works, but on the contrary that they would greatly prefer it, if they could secure a livelihood in that way, to being fed gratuitously.

7. One essential feature in any scheme of reform was obviously the closing of all or most of the small civil works, and the opening in their stead of a sufficient number of large works, to be supervised by the officers of the Public Works Department, on to which the paupers now in the kitchens could also be drafted. The numbers which had to be dealt with according to the figures of the 1st September in the districts most affected by famine were as follows:—

	Kitchens.	Civil Works.
Bangalore	103,172	10,268
Kolar	21,064	4,571
Tumkur	45,197	4,849
Chitaldrug	35,447	5,029
TOTAL	204,880	24,717

Assuming, as was thought at the time, that half the people in the kitchens would be fit for work and could be drafted on to it, these figures shew that it was necessary to provide work for 127,000 people to employ them at least three months. Moreover, whatever might be accomplished in time towards moving the people long distances to work, it was felt that to begin the new system on this principle would be to throw an unnecessary difficulty in its way, and that the work should be provided for the paupers not at their own doors, but at least in their own districts.

8. These views were explained to Colonel Sankey by His Excellency the Viceroy, and he was invited to prepare a scheme for giving the required employment. His programme was produced on the 7th September, and on examination was found to be composed mainly of projects in those Malnad and semi-Malnad tracts into which (even if the principle of moving thousands

of labourers over more than a hundred miles had been accepted) it would have been impossible to march labourers at all in that unhealthy season of the year, and in the valley of the Cauvery and its affluents where no distress prevailed. Out of twelve irrigation projects, estimated to cost Rs. 6,30,000, six projects, estimated to cost Rs. 4,29,000, were thus situated and were altogether unsuitable as relief works. Out of twenty-eight road projects, costing Rs. 12,68,000, twelve (costing Rs. 7,30,000) were altogether in the Malnad; ten (costing Rs. 4,13,000) were in the semi-Malnad tracts in the south of the Mysore District where no distress prevailed; two were bridges; only four, costing Rs. 96,000, were of a character suitable for relief and situated in tracts where pauper labour had to be employed. After weeding out the inadmissible projects, there remained the following scheme of works in the four districts specified above:—

	Estimated cost.	Estimated number of labourers to be employed.
Bangalore—Agrara Tank	34,000	5,000
Bhadram Tank	18,589	3,000
Hoskote Tank and series	27,650	5,000
Metalling three roads	73,307	5,000
Kolar—Extension of tank operations and road repairs	50,000	{ 7,000 2,000
Tumkur—Metalling roads	48,610	5,000
Chitaldrug—Timanhalli Tank	48,300	6,000
Other irrigation works and road repairs	...	3,000

There was also the railway embankment, the carrying on of which had not been as yet definitely sanctioned, except the three-mile extension to the town of Bangalore, which might occupy 5,000 people. In all, therefore, the scheme provided employment for 46,000 people, or about one-third only of the number which it was anticipated required employment.

9. Nor was this the only respect in which Colonel Sankey's programme for work was found deficient. In spite of the discussions at which he had been present, and the personal explanation made to him by the Viceroy that the notion that the Public Works Department should deal with able-bodied labourers alone was wrong, and that the Government of India insisted on the principle that all famine relief works should be carried on by the officers of that Department, he still failed to grasp not only the grounds on which that ruling was based, but the very essence of the ruling itself, and re-asserted his old fallacy as stoutly as ever.

"All able-bodied workers should, as far as possible, be induced by good arrangements to come upon the works of the Public Works Department, or if these fail, force should be employed in such degree as may be essential to accomplish the same end. . . . All persons not able-bodied, but who have no claim to be in the kitchens, should be provided from relief works under the civil officers. These to be thoroughly effectual will need to be of two kinds—small local works for the ryot class who will not leave their homes till almost too far reduced, and again larger ones for those of the ordinary labouring classes (not able-bodied)."

10. From this discussion and from this final exposition by Colonel Sankey of his own views, it became evident that he could not be safely employed as an instrument to carry out a policy which he was unable to understand. The following extract from a despatch of 20th September shews the manner in which His Excellency the Viceroy dealt with the case:—

"5. I was anxious to introduce an improved system of management, without any undue interference with the ordinary administration of the country; and I found that the Chief Commissioner was fully prepared to accept and carry out my views. Mr. Saunders had, in fact, previously issued instructions in accordance with the general policy of the Government of India; and these instructions, had they been obeyed, would probably have insured the timely introduction of a proper system of relief works in Mysore.

"6. His Chief Engineer, however, had objected to the employment of the Public Works establishment otherwise than on the ordinary contract system, and had omitted to provide any special works for relief purposes. Even on the brief extension of the Bangalore Railway, which had already been sanctioned by the Government of India,

the Department had declined to employ more than 300 out of the thousands who were ready to labour, and whom the civil officers were anxious to draft from gratuitous relief to works.

"7. Colonel Sankey, the Chief Engineer, is an officer of much experience in Mysore, and has the reputation of being a very able engineer. He has under him an unusually strong departmental staff in proportion to the size of the province; and I had hoped that he would prove a valuable assistant in carrying out my policy of making large relief works, under departmental supervision, the backbone of the whole relief system. I accordingly explained my views to him at some length, first in a private interview, and afterwards at the conference which I held with the Chief Commissioner and other officers.

"8. To my regret, Colonel Sankey persisted in objecting to the employment of his departmental organisation for the supervision of real relief works; he brought forward a scheme of works which were, he said, ready to be put in hand; but these, when examined, proved insufficient to give employment to more than one-half the requisite number; and, even for this instalment, Colonel Sankey repeated his unwillingness to employ any of his regular staff, or to divert them from the ordinary sanctioned works. Those works opened for relief purposes he proposed to start with only such additional assistance as the Government of India might be able to afford him from other provinces.

"9. It thus became clear to me that, to entrust Colonel Sankey with the execution of our famine policy, was to ensure the failure of it. It will, in any circumstances, be a matter of great difficulty to withdraw people from the loose, undisciplined, idle life of relief kitchens (where they are fed gratuitously; and, having got their meal, may employ the rest of their time as they think best) to the strictly enforced tasks and regular discipline of properly supervised public works; and I felt that I could not justly, or with due regard to the interests of the public, rely upon the exertions of Colonel Sankey for the successful prosecution of a policy which he seemed unable to accept in principle and unwilling to adopt in practice. I therefore took advantage of a wish expressed by Sir Andrew Clarke for the temporary assistance of a Deputy Secretary, during the pressure caused by famine work in the Central Office of the Department of Public Works, and Colonel Sankey has been appointed to this duty. I have transferred Major Scott Moncrieff, R.E., to the temporary Chief Engineer'ship of the Province, and I am quite satisfied to leave in his hands the execution of the Government policy."

11. The best summary that can be given of the views entertained by Lord Lytton on the defects of the existing famine administration in Mysore, the proper method of reforming them, and the true system to be followed in future, is contained in his Secretary's letter to the Chief Commissioner, dated 8th September, which is quoted here:

"2. His Excellency deems it unnecessary to criticise the action of the past; but he finds from recent returns* that the numbers now on gratuitous relief are 213,710; that there are on works managed departmentally 22,975; and on works managed by Civil agency 25,644. It appears very doubtful if any considerable proportion of the people employed on departmental works can be considered as "relief labourers" in the ordinary sense of the term, and the works under Civil agency are petty works, which experience has shewn to be but little suitable to famine operations, and to be specially difficult of supervision.

"3. It is also manifest that, owing to the want of sufficient relief works, the relief camps or kitchens (as they are called) have become crowded to an extent incompatible, under existing organisation, with proper discipline or control; that vast numbers are relieved at those places who are quite capable of working; that, in some of them no nominal register is kept; that different scales of rations are in force in different kitchens, rendering the maintenance of the more economical standard a task of unnecessary difficulty; and that, altogether, there is a serious want of organised and systematic control over them.

"4. The principles on which famine relief should be administered are laid down with sufficient distinctness in the Minute of His Excellency the Viceroy dated the 12th August, a copy of which is herewith enclosed, and Lord Lytton gladly acknowledges that the orders issued by you from time to time have been generally in accordance with these principles. It is only necessary that such orders should be more fully developed and acted on.

"5. The Viceroy desires that the attention of your Administration should be specially directed to the maintenance of a sufficient scheme of large works of public utility for the relief of the destitute population. These works should be managed as relief works, on the task-work system, on relief wages, and under stringent tests such as those in force in the Bombay Presidency; and to these works all persons capable of labour should be drafted both from relief camps and, hereafter, from petty works under Civil agency. Petty works under Civil agency should also be brought under the general supervision and control of the Public Works Department. The above-mentioned scheme must be the backbone of the relief system, all other forms of relief being subsidiary to it. The entire energy and strength of your Public Works Department, unhampered by the rules and restrictions which ordinarily regulate it, employment of labour and expenditure of money, must be devoted to the object thus defined. This must be done a

the expense, if necessary, of other works, which may have been sanctioned in the annual budget, but which may not be suitable for relief works. It is not absolutely essential that such works should be remunerative, nor even that they should be such as can be finished during the continuance of the famine; but preference should, of course, be given, where possible, to works coming under these two categories.

"6. The Viceroy is not unaware that, in carrying out this duty, alien as it is to the every-day work of the Department of Public Works, much disturbance of the machinery must take place, involving some deterioration in the discipline of the regular coolies on the establishment and in the efficiency of the departmental staff, of which Colonel Sankey is now justly proud. But in times of famine, as in war, all ordinary administration must give way to the one main object of the campaign; and the Viceroy cannot permit the convenience, or even the efficiency (for ordinary purposes), of any single department, to become an obstruction to what he deems the essence of a sound system of relief.

"7. His Excellency regretted to find at the conference that Colonel Sankey, notwithstanding the previous explanation of the views of the Government of India, which the Viceroy had personally given to him, still failed to grasp this principle. Colonel Sankey was apparently not prepared to close any of his ordinary works, or convert them into relief works; nor was he willing to divert any of his ordinary departmental staff from these works to the duty of controlling relief works. The scheme of works, moreover, submitted to the Viceroy, was insufficient in itself to receive the numbers which ought, as shewn by your returns, to be drafted on to them; whilst, at the same time it was mainly made up of petty works ill-adapted to the concentration of control, and consequently to the discipline essential to the due execution of relief works.

"8. Lord Lytton, therefore, in order to obviate any failure of the policy hereby entrusted to your execution desires you to forego your budget scheme of Public Works during the present crisis. Those of the sanctioned works which are adapted for relief purposes, should be carried on as relief works, and those that are not so adapted must be closed; the departmental establishment employed thereon being transferred to relief works properly so-called. His Excellency looks with confidence to your co-operation in carrying out these instructions, which he has every reason to believe are not out of harmony with your own views.

"9. All gratuitous relief should be as far as possible understood to be a temporary concession, subsidiary to the main object of getting people, when in condition to labour, on to the relief works, or back to their ordinary avocations. At relief kitchens, i. e., unenclosed feeding-places, it is certain that neither can proper tests be applied, nor can efficient discipline be maintained; it should be an object, therefore, to confine the gratuitous distribution of food to properly enclosed relief camps where the people may be kept under strict discipline and properly registered and set to such light labour as they may be able to do. The efficient organisation of these camps should receive early attention; it will be necessary to maintain them for some time to receive and support the starving, helpless wanderers and infirm persons, with a view of getting them into condition to labour. But the ultimate object of these camps, as receiving places only for people hereafter to be drafted to works or to their ordinary occupations, should ever be kept in view.

"It is essential that all relief camps, whether in Bangalore or elsewhere which are kept up by Government money, should be placed under Government organisation, so that one system of control and one scale of rations may be applied to all. The responsibility of Government in this matter cannot with propriety be delegated to an irresponsible committee.

"The Viceroy learns that the people in relief kitchens have, through long idleness, become so demoralised, that there will be much difficulty in keeping them on works. It will be necessary for your Civil subordinates to give the assistance of the police (taking on if necessary extra men) to maintain discipline in the camps attached to the works. It will also be the duty of those in charge to prevent aimless and uncertain wandering, and to see that people do not leave the works, without some security for their being able to support themselves in other ways.

"10. Village relief is not given in Mysore. Should it become necessary to give village relief at all, it should be confined to resident villagers who are house-ridden or otherwise unfitted for, or incapable of, labour, and should on no account be given in the shape of cash.

"11. In order to assist you in the arduous task of introducing these changes and of supervising the famine administration of Mysore generally, the Government of India have been pleased to place at your disposal as Famine Commissioner, Mr. C. A. Elliott, C.S., with Mr. Wingate of the Bombay Civil Service as your Additional Secretary in the Famine Department.

"12. The Famine Commissioner will assist the Chief Commissioner in directing all famine operations in the Provinces of Mysore and Coorg, and, subject to your approval on matters of importance or principle, will issue orders on your behalf through the Commissioners or through the ordinary official channel under the signature of the Famine Secretary. He should have authority when travelling in the interior to give instructions in your name to the local officers, in accordance with the policy of the Government of India and of the Chief Commissioner, such instructions being, of course, reported to you, and being likewise communicated to the Commissioners of Divisions. The Famine

Commissioner should, moreover, have an opportunity of laying his views before you on *all* correspondence connected with famine matters that may come up to you for orders."

In pursuance of these instructions Major Moncrieff, Mr. Wingate, and I took charge of the offices respectively of Chief Engineer, Famine Secretary, and Famine Commissioner, on the 10th September.

12. The task which we had before us seemed in those earlier days an almost hopelessly impossible one. But we were supported with the utmost zeal and loyalty by the district officers in general, and above all, the tension of the position was relieved by the abundant rain which, beginning on the 1st September, continued to fall heavily till the end of October. It revived the almost withered crops, enabled a great breadth of colthi and late ragi to be sown, cheered up the hearts of every one, lowered prices, filled the tanks, and emptied the kitchens by sending the people in thousands to field labour and to collect the spontaneous produce of the earth for food.

13. The necessity of laying down a uniform scale of ration in relief kitchens (so as to prevent the mischief which had followed from the grant of a larger ration in Bangalore than elsewhere), and a uniform scale of daily pay on relief works (in supersession of the petty contracts, piece-work rates, &c.) had already engaged attention, and on the 11th of September a circular was issued prescribing these rates. The 1-lb ration was taken as the basis of this scale, it being generally agreed that 1 lb of ragi flour, together with a small quantity of "condiments," *i.e.*, pulse soup with vegetables, salt, and pepper in it, was sufficient to sustain an adult non-worker, and half as much for a child under 12; but for a working man it was thought necessary to assume a larger quantity of food, and the amount fixed by the circulars of July 21st and August 8th, *viz.*, 1½ lbs of flour, was therefore accepted. It was also advisable to give a larger wage on relief works under Public Works Department officers than on those under Civil officers, both because the amount of labour exacted was greater, and also more especially with a view to make the former works more popular and attractive, and thus to assist in carrying out the policy of transferring paupers to them from the kitchens and non-professional works. The scale of wages was as follows:—

	Both classes of works.	ON PUBLIC WORKS DEPARTMENT WORKS.	ON CIVIL RELIEF WORKS.
		(A wage.)	(B wage.)
Adult male	Value of 1½ lbs of flour.	plus 9 pie in cash.	plus 3 pie in cash.
" female	" 1 lb "	" 9 "	" 3 "
Working child	" ¾ lb "	" 6 "	" 2 "
Non-working child under 7	" ¼ lb or 4 pies.		

In this way a man or woman got half an anna a day more on the professional than on the non-professional works; and the extra wage was intended to enable them to buy condiments and firewood, and to lay by a small sum daily for their support on Sundays when the works were closed.

14. Effect was also given at once to the Viceroy's orders quoted above, regarding the inadvisability of leaving the management of the relief kitchens in Bangalore in the hands of a voluntary committee. In truth, there had ceased to be any *raison d'être* for this arrangement ever since the charitable funds with which at first the committee worked were exhausted, or so much reduced as to bear no commensurable proportion to the expenditure of public funds. The subscriptions at the end of March had amounted to Rs.16,000 against Rs.22,000 granted from the Treasury. By the 1st September the private subscriptions had grown to Rs.25,211, and the Government expenditure to Rs.2,14,135. Accordingly, a letter, from which the following extracts are given, was written to the President, Mr. Gordon, thanking him and the committee for their

exertions, and asking them in future to direct their charitable labours to another channel. At the same time Major R. A. Cole, Superintendent of Inam Settlements, was placed in charge of the relief measures within municipal limits, acting in direct communication with the Famine Commissioner

"But in relieving your Committee of the onerous charge which they voluntarily undertook, and which they have discharged for so many months with such zeal and humanity, Mr. Saunders cannot withhold an expression of his sincere thanks for the efficiency with which your supervision of the kitchen management has been carried out and for the self-devotion with which you personally, and the members of the committee generally, have applied yourselves to the benevolent task of relieving the destitution of the famine-stricken people under your charge.

"There is still, however, abundant room for the application of charitable relief, provided they have fund supplied them by private charity to deal with; and the Chief Commissioner would be sorry to see the Committee, of which you are President, dissolved, especially as there is reason to hope that the Madras Committee will remit to Bangalore part of the money which is subscribed in England. Mr. Saunders would particularise as suitable object for the expenditure of such funds the supply of hospital comforts, of beds and clothing for the sick, and of clothing for the infirm and aged people who will remain as inmates of the relief camps when the more able-bodied are drafted on to relief works. The orphans of the famine, too, are peculiarly suitable objects for the care of the Committee, and the Chief Commissioner would very gladly see one or more orphanages established and placed under the care of Protestant missionaries. There are many other suggestions too which may possibly occur to the Committee, as shewing openings in which the administration of private charity may wisely supplement the relief which Government is bound to give, but to cut down to a minimum; and such suggestions, Mr. Saunders is well assured, you will be ready and glad to adopt."

15. The first and most urgent duty on our hands was to introduce the prescribed reform in the town of Bangalore itself, and in the great kitchens where a multitude equal in number to a *corps d'armée*, but in the last degree disorganised and undisciplined, were being fed gratuitously. We had to enforce a stricter system in these places; to insist as far as possible (for it could not be done all at once) on compulsory residence as a condition of feeding; to arrange for the employment on works of all who were able to do any task at all; to relieve at their own homes those residents of the town who were crippled, bed-ridden, and unable to labour; to employ weavers and other artisans in work suited to their training and habits; to institute a stricter search into the back streets and portions of the town in order to bring the sick and dying to hospital. How needful the latter step was had become evident in a morning's excursion made with the police in a single part of the town, when in about an hour's time we came on six corpses, mostly of children, who had died in the night. This question of the number of street-deaths attracted the attention of the public at the time, and was warmly discussed, but the conditions under which the mortality occurred were misunderstood, and the conclusion generally drawn, that it was due to the refusal of food to any who applied for it, was mistaken. The simple explanation was that, for the most part, the deaths which occurred in the streets were those which would have happened in the sheds or hospital of the poor-house had the paupers been compelled to reside there. The extent of the mortality in the enclosed camps will be seen by the following figures. The Binni Mangal camp was a partially enclosed one, and those who fell sick from among the residents in it were sent to hospital. The average number in hospital in August was 280, in September 262: the total number of deaths was in August 974 and in September 865. Thus, out of an average number of about 5,000 residents fed daily, there was a daily mortality of about 30. Similarly, in the Sillardar Lines which was strictly a place of compulsory residence, out of an average number fed daily of about 1,500 in August and 2,500 in September, the numbers sick in hospital were 86 in August and 223 in September: the number of deaths was 15 a day in August and 22 in September. Thus, in the two months of August and September, those two relief camps contained an average daily number of 6,75 residents, among whom the average number of deaths was 49 per diem, or 7·3 per mille. Now compare this with the figures of the Pettah and Cleveland Town kitchens, which, as has been said, were open feeding-places, but which had hospitals attached to them, to which a few sick persons

voluntarily resorted, and to which all those who were found by the police too exhausted to move, and generally at the point of death, were brought. The number fed in these two camps was about 15,000 in August and 7,000 in September, or 11,000 on an average, and the daily number of deaths was 32. This would seem at first sight to shew a far lower rate of mortality than that of the enclosed relief camps; but on reflection it is plain that the number of street-deaths must be added in. The number of dead bodies picked up by the police is shewn below:—

Month.	Daily average of dead bodies picked up.
January 1877	2
February, March, and April	3
May	4
June	8
July	11
August	20
September 1st to 10th	41
„ 11th to 30th	33, 36
October 1st to 20th	23
October 21st to 31st	9
November	2

Adding these figures to those of the deaths in hospitals, we arrive at the result that about 36 a day died in August and September, out of a daily number fed of 11,000, or 6 per mille daily, or very nearly the same proportion as was found in the enclosed camps. That the latter was a little higher may be explained in two ways: (1) that not all the bodies of those who died in the suburbs were found; (2) that the paupers, in enclosed camps, and particularly in the Sillidar Lines, were rather in worse condition than the general mass. But, on the whole, it may safely be said that nearly all of those who died in the streets must have died whatever their subsequent treatment had been. They were too far gone for medical aid to save their lives at that stage. All that could be done was to enable them to die in some degree of comfort, with human creatures about them and not the dogs of the streets.

16. Some few, perhaps, of the corpses found in the streets were those of people who had wandered in in the last stage of emaciation, and died before they could obtain any relief. But even in such cases the relief would probably have come too late, for had they been a day in the place and had they applied for food at any kitchen, they would have been fed. No one was turned away; even the able-bodied were not rejected and left to find employment for themselves, but were sent on at once to the relief works, and were paid wages for the day they arrived. The emaciated were received and admitted without any demur, and there was no additional difficulty imposed on applicants for relief beyond that contained in the enforcement of the two conditions, of residence wherever arrangements had been made, for residence, and of performing such work as they were capable of.

17. Some part of the increased mortality of September and October was due to the inclemency of the weather, for in the cold rainy nights they died like flies. But the medical evidence as unanimous and clear, that when people have been subjected to long-continued and severe privation, a destruction of tissue sets in which no medical skill can cure. The heavy rate of mortality was not peculiar to Bangalore, but extended also to all the relief camps of the province, and lasted on till the end of the famine. If the average number of patients in any hospital for a week was 100, the average number of deaths in a week was 25, so that the hospital would be entirely cleared out in four weeks. After January, the period began gradually to creep up to five weeks, and then to six, to eight, and at last to ten weeks. In the Tumkur relief camp, with about 1,000 people fed daily, the number who died in September was 1,735, or 57·8, or 11 per mille daily; the daily number in hospital was 330, the daily deaths were 23; their average duration of life was

only 15 days. But the majority of the deaths (1,041) did not occur in hospital, but among the paupers who were supposed to be well. They did not complain of illness or volunteer to go to hospital; the medical establishment was not strong enough to go round and examine the physical condition of each; but when the horn blew in the morning to awake the paupers to their daily task and daily meal, there were found 35 in the sheds every day who would never wake again. Their case was exactly like that of those who died in the Bangalore streets, except that such a death is more shocking to the feelings; but in neither case can it be set down to any harshness or refusal of relief.

18. If we calculate (which seems to be a moderate proportion, considering the figures that have been given above) that a daily death-rate of 5 per mille prevailed among all the recipients of gratuitous relief in the three months of July, August, and September, we arrive at the following conclusion:—

Month.	Average number fed.	Deaths at 5 per mille per diem.
July	145,000	22,475
August	199,000	39,907
September	179,000	26,850
Total mortality		89,232

With such a death-return as this, no wonder that it became a common phrase among the villagers when asked after any absent member of the family, "he went to the kitchen, and died."*

19. Little though medical aid could do to save the lives of those who were far gone in famine-diarrhoea, it might have done much to relieve the suffering and comfort the last hours of the dying, and more to search out the signs of incipient disease and take it in time; but the establishment in the province was altogether too weak to cope with the requirements of the time. In the Tumkur hospital there was but one native doctor to look after 330 patients: the first time I visited the place he had been absent for two days to get his pay, leaving no one in his stead. Other great relief camps, containing from one to three thousand paupers, were not provided with any doctor at all. Where there was a doctor, he constantly ran short of medicines; no special arrangements had been made to supply these, and every indent had to be drawn up by the native doctor in charge and sent in by various official channels to Bangalore, from whence (if the indent was not returned for informality) the medicines were in due time sent out, and reached the hospital after a long delay. It was not till some time later that depôts of medicines were established at the head-quarters of the districts most in need of them; but fortunately the majority of the simple medicines used for debility and bowel complaints could be bought in the bazars and made up on the spot. Before the Viceroy left Bangalore, an estimate had been made that 34 native doctors were needed, and these were applied for and soon began to arrive from Upper India.

20. An additional staff was required no less in the Public Works Department to aid in carrying out the new relief works, and in the Civil Department to assist in the ordinary measures of relief. Colonel Sankey had estimated his requirements at 20 departmental officers and 30 upper subordinates; but by adopting the principle of cancelling the budget and re-distributing his existing staff so as to utilise them for relief purposes, it was necessary to indent only for 10 officers and 6 subordinates. Besides these, several subordinate officers of the Topographical Survey were utilised, and they proved most useful. Subsequently, when several of these and of the permanent staff fell ill, in consequence of the very unhealthy season that followed, a further reinforcement of 10 subordinates was obtained in March.

* From October to July inclusive the registered mortality in relief camps was 28,347. In October the death rate per mille per day was 4·3; in November it was 3·3. After that time the relief camps became purely infirmaries and hospitals, containing no inmates except the sick and the extremely emaciated, and as a necessary consequence the ratio of mortality per mille of resident population rose considerably.

21. On the Civil side I considered that it was necessary to place a special relief officer in charge of each of the most distressed taluks, and allowing for 9 officers of the Revenue Survey who were already so employed, I estimated the wants of the province at 30 officers, and of these I hoped to have got 10 from the Bengal Army, 10 from Bombay, and at least 10 from the Madras Army, whose efficiency would have been increased by their possessing some knowledge of the languages, Telugu and Canarese, current in Mysore. But the Commander-in-Chief of the Madras Army was unable to permit any officers serving under him to be thus employed. The result was that a larger indent had to be made upon Bombay, and that the balance was made up by the appointment of members of the Uncovenanted Service or gentlemen not in the employment of Government.

22. One of the first matters which engaged attention was the reduction of the number of open kitchens, which were too numerous to be properly supervised, and the conversion of the others into enclosed "Relief Camps" at which residence was insisted on. It was found on consultation that all the district officers agreed in the advisability of the step, but the reduction was made in a gradual and tentative way. The instructions issued as to the manner of closing the kitchens were as follows (10th September 1877):

"It is hoped that, before long, when sufficient relief works are opened to which to draft all the paupers who are at all fit for work, it will be found possible to provide for all the sick and infirm who require gratuitous relief in one camp at the head-quarters of each taluk. But the time for this has not come yet, and for the present only those camps have been selected for extinction which are not near large towns, or on important lines of road, or which are so near to other camps which have been retained that the paupers can easily be concentrated in those camps.

"Great caution should be used in closing the camps, and it must not be supposed that it can be done in a day, or by a mere order conveyed to a subordinate. The Deputy Commissioner, or one of his assistants, should be present in each case and personally superintend the operation. The sick and infirm, who are unable to walk, should be moved in carts to the nearest relief camp or to such one of the surrounding relief camps as they may prefer; and those who are able to work should be informed that relief works will very shortly be opened in their neighbourhood, and that if they choose to come to the adjacent camps, they will be received and fed as hitherto until they can be drafted on to relief works."

The following is the number of the kitchens to which these orders were applied:—

District.	Relief camps to be maintained.	Kitchens to be closed.
Bangalore	20	9
Kolar	12	10
Tumkur	16	4
Mysore	11	12
Hassan	14	19
Chitaldrug	13	22

23. The second most important question was the manner in which the multitudinous small Civil relief works should be dealt with, the number of which on the 1st September amounted to 1,746. Instructions on the subject were issued on the 14th September. The orders of the Government of India that the petty works under Civil agency should be brought under the general supervision and control of the Public Works Department were quoted, and it was ruled that no new Civil work was to be undertaken except if specially sanctioned, or in a case of emergency. Deputy Commissioners were to go through the list of their works in progress, and were to decide whether the work could be stopped without loss, as having been undertaken more in the view of employing available labour than because the work was necessary and important, and what works it would be unwise to stop (such as the repair of a breached tank), and more expedient to push to a conclusion. With regard to the latter class of works, they were to ascertain what number of labourers were engaged on each on a given day, and what number could be conveniently employed so as to finish them in a short time, and the requisite number of paupers was to be drafted to the work from the nearest relief camp. Each work was to be placed under a responsible Government officer as supervisor, who was to see that the newly prescribed rate of

wages was paid daily to each labourer, and was to exact a task at the rate of about 50 per cent. of the quantity of work which the Public Works Department expects from an ordinary able-bodied cooly, the rate being, as far as possible, proportioned to the strength of the labourer.

"By the time the works now in progress are completed, it is hoped that the Public Works Department will have matured their schemes for large relief works, to which the paupers can be drafted. But it is desirable that the Civil officers should also have a list of suitable relief works ready, on which employment may be given to applicants for labour in case there should be any delay or break-down in the arrangements of the Public Works Department. The minimum standard for a Public Works Department relief work has been laid down to be that it should employ 1,000 men for three months. In the same way the Chief Commissioner is pleased to decide that no work is suitable for a Civil relief work which will not employ at least 300 labourers for one month. It is therefore necessary that Deputy Commissioners should at once submit to Commissioners of Divisions a list of works in their districts which fulfil this condition, and which they would desire to take up as Civil relief works if any necessity arises, together with a brief explanatory report on the work, and an estimate of the cost. Commissioners are requested to forward those lists to this office with the least possible delay. These lists will, if sanctioned by the Chief Commissioner, be returned to the district officers, who will understand that the works are intended only as safety valves for labour which cannot otherwise be employed. Deputy Commissioners will not be authorised to start any work on this list without special sanction, except in the case of a sudden emergency, when they must act on their discretion, reporting their proceedings at once for approval."

24. The third subject which required immediate handling was the making suitable arrangements for the relief of the city and cantonment of Bangalore. These are two distinct towns, lying about a mile apart, with a population of about 60,000 and 80,000 respectively; the city or "pettah" being the head-quarters of the trading community, while the cantonment is mainly inhabited by retail shop-keepers, pensioners, and camp followers. Both are comprised in the jurisdiction of the municipality, which is anomalous in its constitution, the President being independent both of the Deputy Commissioner of the District and of the Commissioner of the Division, and being subordinate only to the Chief Commissioner; while the Municipal Police, again, are a separate body distinct from the District Police, under an officer who is not subordinate either to the President of the Municipality or the Deputy Commissioner, or the Commissioner, but to the Judicial Commissioner, who is also Inspector General of Police. It need hardly be said that this singular distribution of authority gave rise to some inconvenience in the introduction of a uniform system of relief throughout the province.

25. The President of the Municipality and the Municipal Committee were entrusted with the duty of bringing relief home to all residents in the Municipality who were suffering from famine and who were not able-bodied labourers who could earn their living on the relief works. The following instructions were issued as to the manner in which this should be done (September 26th):—

2. "Under the orders of the Government of India, all open kitchens, at which paupers receive food which they can take away uneaten or which they can eat and depart, must be abolished. The pettah kitchen has therefore to be closed as soon as possible; and it remains to make proper arrangements for the people who have hitherto been fed at this place.

3. "Those people consist of two classes; first, paupers who have crowded in from the villages and other districts; of these the able-bodied will be removed to relief works, and the infirm and sick alone retained in the hospitals and in the Sillidar Lines. Secondly, the townspeople: these are—(1) sick; (2) able-bodied and accustomed to labour; (3) able-bodied but unaccustomed to manual labour and earth-work, only to some trade such as weaving, tailoring, working in leather, &c.; (4) infirm and unable through old age or bodily weakness to earn their bread. The two former classes will be provided for at the hospitals and on the relief works; the two latter should be cared for by the Municipal Committee in the manner I am now to describe.

4. "The town and cantonment should be divided by you into portions, the size of which must be regulated by the number of houses inhabited by members of the two classes referred to; and as a rule there should not be more than 100 of such houses in each beat or portion. These beats should then be put under the charge of some one gentleman who will undertake to perform the duty required of him and who will be called the Inspector of the beat. His duty is to make a house-to-house visitation of his beat; to ascertain what persons in the beat are either infirm (class 4) or fit for other than manual labour (class 3), and to prepare a register of them. He will give to each person who is too infirm to labour in any way, and yet not sick so as to be a fit case for hospital, a ticket with

a number on it (corresponding to the number in his register), which shall entitle that person to receive 1 lb of rice a day from a grain-merchant in the neighbourhood, who is to be fixed on by the Inspector of the beat with your concurrence. He should make out a separate register of such grain recipients in the form annexed, and will revise it every week, and every Monday he should give an order on the grain-merchant shewing how many pounds of rice he is entitled to supply every day. The distribution of rice to ticket-holders should take place at a fixed time every morning. Either the Inspector or some municipal officer should, if possible, be present at the distribution to see that there is no fraud, and that the infirm persons receive their dole in an orderly and seemly way.

5. "The Inspectors of beats will be expected to visit their beats weekly, and the tickets for grain must be renewed every week by them; or the grain-merchant will not be authorised to serve out the grain to the ticket-holders.

6. "To those persons who belong to some trade and are unable through poverty to carry on their trade, the means of doing so should be given; cotton should be supplied for women to spin, yarn or wool for weavers to weave, leather for shoemakers, and so on, exacting from each of them the return of a due quantity of the manufactured article at the end of the week, which Government will buy from them at a fixed remunerative price. It seems best that this, which is a technical and difficult task, should be performed by a special official to be called the distributor of work; one such official will probably be sufficient for the pettah and one for the cantonment.

* * * * *

26. Meanwhile, the work of drafting the paupers from the Pettah kitchen on to the railway works was going on actively, in spite of very considerable difficulties, under the energetic supervision of Mr. Wingate and Major Cole. Five young officers of the Bengal Army had already arrived, and of these one was put in charge of the Binni Mangala camp, one was sent to the Nela Mangala taluk, where there were three large relief camps and a new relief work was being started, and the remaining three were placed on the railway in charge of the different gangs. Everything had to be provided—tools, tool-sheds, huts for the labourers, cashiers, small change, a staff of mustering clerks, and a number of similar small details had to be looked to which are easy enough when a work is started in a leisurely way under a Department which is able to meet the demand made upon it, but which gave great trouble to persons who had to provide suddenly and rapidly for the employment of great crowds of undisciplined labourers. But by dint of infinite perseverance, and by remaining on the work from morning to night, these officers in a few days succeeded in introducing order and system on to the work. It was necessary to begin at first with small numbers. On the first day about 200 men and women of the best physique were selected, and with their food carried in front of them were induced to move outside the gate. At a little distance the tools were ranged, and they were told to work. They cried, lamented, implored to be let go, promising never to return. At last, first one, then another, took up a spade and began to scratch the ground. After a little time they each got their meal and one anna in money, besides a ticket, and were told to be at the same spot next day. All returned except two or three, and another party was selected from the kitchen, this time without trouble. On the third day the whole mass rose and eagerly cried to be led to the work. The result was that instead of the place in front of the kitchen being nearly deserted till 10 A. M., while the streets and lanes were crowded with beggars, thousands gathered there in the early morning, and were employed on the railway as fast as officers and tools could be procured. They began to know their gangs and their places, and to assemble at the proper places for the roll-call in the morning; and the business of payment in the evening, which for the first few days lasted far into the night, was soon reduced to reasonable limits. The people were at first employed on the platform of the new station and on part of the three-mile extension before referred to, but very soon the embankment of the Agrara Tank was taken in hand. The road dips here immediately after leaving the station, and crosses a deep valley. It was necessary to embank this for the railway, and it was resolved at the same time to carry the road over at nearly the same level, and thus to throw up a great embankment which should also serve to retain a reservoir of water, turning the upper part of the valley into a tank, which would benefit the town. Meanwhile, inside the kitchen, a space

was railed off and a hasty selection was made of the young and middle-aged who were most emaciated, of mothers with miserable children, and of all who were in the worst case but whose lives might possibly be saved. To these tin tickets were given; they were directed to come early in the morning and again in the evening, and they received two meals of more generous diet. At the same time attention was turned to the sick. The hospital accommodation was largely increased, diseases were classed and separated, the dying as far as might be were taken apart, the convalescent removed to more cheerful wards, nurses were secured, bathing-places erected, the diet improved, and everything possible was done to lessen the horrors of a famine hospital. These reforms could not be made in a day, but they were made as quickly as ceaseless toil and attention were capable of carrying them out. And all this time the promiscuous mid-day meal was kept up for the relief of those not otherwise provided for, and not only was relief not curtailed, but in efficiency and cost it much exceeded what had been given before.

27. The reader has been able to form, from the description of the Pettah kitchen, some idea of the physique of the paupers who were thus set to work, and he will not be surprised to learn that the outturn of their labour at first was small. In a letter written about this time the following description occurs:

"As to the 5,000 who are now at work there, though they have hardly been employed for more than a fortnight, the change in their appearance is already remarkable. None of them were able-bodied, and many were in an advanced stage of emaciation. The professional officers said of many of them, 'Call that fellow a labourer? Why, he can't lift a pickaxe.' Well, they could not lift a heavy pickaxe, so we gave them a light one; they were treated considerably and kindly; they were not tasked above their strength, and now almost the whole of that gang are able-bodied labourers, doing nearly a full day's work, all cheerful, healthy, and contented. Had they continued as they were, recipients of gratuitous relief, fully half of them were marked for death."

But once they were set to wholesome adequate disciplined work in the open air, and paid a sufficient wage, their improvement, unless famine-diarrhoea had set in, was rapid and manifest. One of the earliest gangs was carefully examined by myself in January 1878. I do not mean to say that every person in the gang had been one of those taken from the kitchen and set to work in September, for some had died and some had left, and new labourers had taken their place, but the gang itself was the same and had remained from the first under the same officer, and the majority of the people who composed it had been in it from the beginning, and they were then as fine and strong a body of labourers as would be met with anywhere. Where one policy resulted in bringing people into the state in which they were found in September, and the other was instrumental in rescuing thousands of them from the jaws of death and restoring them to the condition they had attained in January, there is little room for argument about the merits of the two.

28. On the 19th September the Viceroy, who had paid a visit to Ootacamund, returned through Mysore to Bangalore, and although it is at the risk of some repetition, still it may be well to include here extracts from memoranda submitted to him by the Chief Engineer and myself shewing what had been done up to that time:—

"It was decided first of all to take in hand the worst and the largest of the Bangalore kitchens—those at the Sillidar Lines and the Pettah. The former, which is an enclosed place, was first weeded of its able-bodied residents, and their places were filled by drafts of the worst cases relieved at the Pettah kitchen. The able-bodied paupers were all put on the railway works close by. At first some difficulties were experienced owing to the great numbers which had to be dealt with and their want of discipline, the unpreparedness of the Public Works Department officers to receive such large additions, and the want of tools and overseers and establishment. By great labour and patience on the part of Mr. Wingate and Major Cole, to whom this duty was specially entrusted, these difficulties were successfully overcome, and we now have about 5,000 labourers on this work, all doing fair work, and brought into good order and system, paid in cash and able to house and feed themselves, and our kitchens are relieved to a more than corresponding extent of the crowds which thronged to them. A special officer has also been put in charge of the Binni Mangala camp, and the conditions of residence and labour have been enforced there, and 1,000 people

have been sent to work and are paid in cash, and struck off the kitchen rolls. One kitchen (that at the Arab lines) has been abolished. The following table shews how the Bangalore numbers stood on the 10th and 19th September:—

	10th September.	19th September.
Pettah	11,615	5,548
Sillidar Lines	2,675	2,747
Arab Lines	1,709	...
Cleveland Town	4,159	2,247
Binna Mangala	10,575	2,759
TOTAL	30,733	13,301

“The decrease is probably due to three causes: (1) the seasonable rain and the prospect of field employment in weeding, ploughing, &c.; this cause had already begun to operate in the week ending September 8th, and the numbers had fallen from their highest point; (2) the employment of about 6,000 people on public works, and the dread of others, who had accepted food without being really in want, that they would be compelled to work; (3) the enforcement (though as yet only partial) of the rule of residence in the camp. A further cause has perhaps operated here, and will certainly operate when the outlying kitchens are taken in hand, viz., the stoppage of peculation under close supervision.

“Besides the railway the Chief Engineer has notified his readiness to receive about 18,000 people on 15 works in different districts, and by the 8th October he will have made arrangements for starting three other works, and will employ 24,000 more. The district officers have been informed about the works which are ready to be started, and they are arranging for the transfer of labourers from their relief camps; but no facts are at present known as to what has been done up to date, except in the case of the road from Bangalore to Tumkur through Nela Mangala.

“The Famine Commissioner has just visited this road and the Nela Mangala relief camp and three others in the neighbourhood. The system of transferring the paupers from gratuitous relief in camps to works under the Public Works Department has been started here with such remarkable success that it deserves to be narrated with some particularity. The Nela Mangala relief camp professed to have fed 2,163 persons on the 13th, 2,479 on the 14th, and 2,505 on the 15th. On the morning of the 17th he found about 1,700 people assembled to be fed. Of these, he picked out 488 as able-bodied and sent them to the overseer in charge of the road. Of the rest, he found only about 20 to be too infirm for work (besides about 200 in the hospital and convalescent ward), and he divided 956 into gangs, and apportioned light work to them. Of these, more than half (487) were children whose parents sent them to be fed, but did not come themselves. On the morning of the 19th, the overseer had all the 488 drafted from the kitchen on his work, besides a few more drafted on the 18th, and 279 more, volunteers from the neighbourhood; and he had many more applicants, but no tools for them. He had treated them kindly, tasked them with due consideration for their strength, and paid them punctually, and in consequence numbers were flocking to his work. The relief camp, on the other hand, presented a very changed appearance, and its capacious sheds looked all too wide for its shrunk numbers.

* * * * *

“The Famine Commissioner and the Chief Engineer are satisfied that those officers were mistaken who believed that the kitchen paupers would refuse to go to public works, or would not do a fair day’s work on them. On the contrary, they believe that the opening of these works will be a real blessing to the famine-stricken population, and that when once they are convinced that the work is lasting and is fairly paid for, they will flock to them in large numbers, leaving the relief camps almost empty.”

Chief Engineer’s note.

“The first thing was to issue orders that famine relief was to be the main duty of the Public Works Department; that all budget assignments for works in progress were cancelled; and that whether any particular work was to go on or not was to depend on whether or not it was fitted for famine relief. The limit was fixed that each single work should give employment to at least 1,000 unskilled labourers for at least three months. The system of petty contracts was ordered to cease, so that no labourer should get more than a subsistence, however strong, nor less than a subsistence, however weak, a task at the same time being required from each. Superintending Engineers were directed to send in at once lists of works that might be taken up for relief, and to consider where new works could be begun.

“Earnest efforts have been made to empty the kitchens of Bangalore and to transfer the inmates to the new railway. Contiguous to this work is the site of the proposed Agrara Tank embankment. These have both been laid out, and day after day an increased number of labourers are employed. To-morrow there will be about 5,000 on these works, and a week hence there should be as many more.

* * * * *

“To sum up, relief works have been begun and will expand day by day until, by the beginning of October, there should be 32,400 employed as below:—

In Bangalore District	15,800
„ Kolar „	4,200
„ Tumkur „	2,400
„ Chitaldrug „	3,000
„ Kadar „	2,000
„ Hassan „	1,000
„ Mysore „	4,000
TOTAL	32,400

Should the demand arise, this number can be increased a week later to 42,000. Nor is the list exhausted. The postal service in Mysore is not very rapid, and reports are coming in daily from Executive Engineers of new works suitable for relief.”

29. During his visit to Ootacamund and his stay at Mysore on the return journey, the Viceroy met two deputations of planters from the Wynád and Coorg who asked that some relief measures might be adopted in those territories in behalf of the Mysore wanderers who came to seek employment.

“The coffee estates in the Wynád habitually give employment to large numbers of labourers from Mysore; but this year, in consequence of the famine, the numbers thus seeking employment are infinitely in excess of the labour requirements of the estates. Numbers of these wanderers, too, arrive in a weak and emaciated condition, which renders them utterly unfit for labour. Many of these, as soon as they are fit to travel, are deported back to Mysore by the Madras Government, but several of them, it is feared, die, and others linger on fed either by private charity or in relief houses. The Planters’ Association urged the expediency of starting relief works for the people in the shape of preparing and collecting metal for 80 miles of road, and they offered to contribute in money and supervision.” *

Accordingly, His Excellency sanctioned a contribution of Rs.30,000 towards this object from the revenues of Mysore.

30. The case of the Coorg planters was much the same; only they were a less united body and less certain as to what it was they wanted.

22. “The coffee planters of Coorg, like those of the Wynád, are mainly dependent on Mysore for their labour supply, and, as in the Wynád, multitudes of immigrants unable to find work, or unfit to work, are to be found in Coorg in a state of extreme destitution, and the mortality among them has been very grievous indeed. A memorial purporting to come from the Planters’ Association at Coorg was submitted to my Private Secretary for presentation to me, but, as it was not presented through the local authorities, and in fact had been refused by them, I declined to accept it formally as a memorial, but expressed my willingness to receive the two gentlemen who had come as a deputation to present it, and to hear all they had to urge.

23. “These two gentlemen accordingly waited on me on the 18th, the Chief Commissioner of Mysore and the Superintendent of Coorg being present at the interview. They dwelt specially in the conversation that ensued on the great mortality among the wanderers from Mysore—a mortality which had, they asserted, been greatly underestimated by the local authorities. They complained that no relief works had been established, and said that the planters were through poverty unable to support the starving wanderers. Many of their assertions were traversed by the local officers, but it was clear that, as a matter of fact, relief works had not been established in Coorg, and that there was urgent necessity for them. I learnt that, while roads were numerous in the province, a considerable portion of them require to be metalled, and that one or two good roads, the need of which is admitted, still remain to be made. Finally, I offered to grant either from Mysore or from imperial revenues a sum of Rs.50,000, if the planters would consent to contribute one-third of that amount either in money or supervision.” †

Finding, however, that the two gentlemen forming the deputation had no authority to accept such an offer, and that they did not actually represent the whole body of planters, His Excellency determined to depute Major Moncrieff to Mercara, the capital of Coorg, to ascertain

* Despatch of His Excellency the Governor General of India to Secretary of State, dated Bangalore, 20th September 1877,—*Vide Famine Blue Book*, No. IV, page 197.
† Rev. A. Fennel and Mr. Hunt.
‡ Despatch quoted above, *Blue Book* No. IV, page 198.

personally what the actual wishes of the planters were, and what might best be done with their co-operation in starting relief works.

Major Moncrieff travelled to Mercara immediately after receiving these instructions, and the result of his enquiries and consultations there with the planters and officials was to convince him that it was useless to start any relief works, as the number of able-bodied coolies was not large, and the coffee estates provided ample employment for them all. It was the sickly and feeble emigrants from Mysore for whom provision was required, and he was extremely dissatisfied by what he saw and heard of their condition, by the mortality which had taken place among them, and by the want of any arrangements for their relief. He directed the establishment of relief camps at seven suitable places, where the sickly and starving could be fed and could receive medical treatment, so that they should recover strength and become fit either for labour in Coorg, or for the journey back to their houses. The total cost of these relief camps was estimated to be Rs.10,000, assuming that 50 paupers would be fed at each for about three months. The actual expenditure was, however, less than this. Five of the camps were closed by the middle of January, the sixth on the 20th April, and only the head quarters camp at Mercara remained open to the end. The cost up to the beginning of June was Rs.6,905. The largest number fed at any time was 450 a day in the earlier part of November.

31. This was the only visit paid by Major Moncrieff to Coorg, and I myself never went there, since the need of relief had almost passed away, while my presence was useful and needed in many parts of the Mysore Province. From this want of personal knowledge, and also from the fact that hardly any official correspondence with Coorg on famine subjects exists, it follows that I have not attempted to give any history of the famine in that district. But it seems right to put on record that, as far as my information goes, the district officer failed to take proper measures for relief, or to keep his superiors informed of the real condition of things. The planters unanimously asserted that a terrible mortality was going on; the Executive Engineer informed Major Moncrieff that he had seen as many as four corpses on the road in one day; the test census of January 19th shewed that among eleven coffee estates 313 coolies or 27.6 per cent. had died; and yet the Superintendent declared that hardly any deaths occurred. Not a single relief work was started to employ those whom the coffee plantations had no work for: not a single relief camp was opened to receive the infirm, the sick, and the emaciated wanderers: all that was done was to deport indiscriminate and crowded cart-loads of men, women, and children, sick and dying, to Mysore.

32. The rest of September was mainly occupied in drawing up the Famine Code which was published with the Chief Commissioner's approval on the 2nd October. Its main object was to elaborate the principles as to the management of relief works and relief camps which had been laid down by the Viceroy, and to make better provision for the relief at their homes of such people as are in severe distress, but being bed-ridden, cripples, blind, and infirm, could not, with advantage, be collected in a relief camp. The Code is printed as an appendix to this report and need not be further referred to here. It was found useful at the time as an authoritative declaration in detail of the new policy, and as a subject of reference from which chapter and verse could be quoted in any doubtful case; but it was issued as a tentative measure, and in several respects alterations and additions had to be made to it. Some of these were absolute corrections, based upon increased experience, of passages which in a revised edition should be amended altogether; some were modifications of general rules suited to the peculiar local circumstances, or to the principle that a different treatment is sometimes required for the height and for the close of a famine. All such emendations of rules or alterations in principle as are of any importance will be mentioned in the course of this narrative.

33. Meanwhile the numbers on gratuitous relief were rapidly decreasing, owing partly to the

closing of outlying kitchens and the greater strictness of the system enforced, but mainly to the abundant and much-desired rainfall, while the numbers on relief works under the Public Works Department were steadily increasing. The table in the margin shews the variation in the numbers week by week. The fall from 227,067 to 103,750 in the relief camps is very great, but not larger, as far as could be ascertained, than the circumstances of the case justified. There is reason to believe, as has been observed above, that the numbers in receipt of relief had been fraudulently exaggerated, especially in the Bangalore District, and the stricter supervision introduced, together with the closure of the smaller outlying kitchens, put a stop to most of the grosser peculation that was going on. Of those actually receiving food, a considerable number were able-bodied adults not in acute want, and a still larger number were the children of fairly well-to-do parents; the enforcement of the condition of residence led all of these to withdraw themselves. To every one who had any connection with the land, whether as ryot or as hired labourer of a ryot, the bountiful rainfall offered the prospect of raising remunerative crops, and even to those villagers who could not obtain employment in the fields a new source of sustenance was opened by the outburst of vegetable growth, the collection of leaves roots and berries supplying a means of subsistence which was preferable to the bitter bread of beggary.

34. In the beginning of October I started on a tour of inspection which lasted nearly two months, and in the course of which, somewhat delayed as it was through heavy rain and the badness of the roads, I visited all the parts of the province which were affected by the famine. A brief account will here be given of some of the chief points of interest and importance which were brought to light in the course of this tour.

35. The first thing that observation and consultation with the district officers impressed upon me was the extreme importance of doing everything possible to encourage the spread of cultivation. The high prices alone were a great stimulus, and would, in ordinary circumstances, have been sufficient to bring every available acre under the plough; but, on the other hand, we had to reckon with the severe mental depression of the cultivators, the loss of their plough-cattle, and their inability through poverty to buy seed-grain. The two main crops which could then be put in were colthi or horse-gram (*dolichos uniflorus*), and the late or "Vaisakh" rice. The season for sowing colthi was fast passing away. It is a grain not easy to keep, as it is liable to get weevil-eaten; the usual plan of preserving it is to make it up in bundles with its own chaff, wrapped up in twigs, and to hang the bundles to the roof in a current of air. As there had been

	GRATUITOUS RELIEF (KITCHENS AND CAMPS),				CIVIL RELIEF WORKS.				PUBLIC WORKS DEPARTMENT RELIEF WORKS.				RAINFALL.			
	1st Sept.	8th Sept.	15th Sept.	22nd Sept.	29th Sept.	6th Oct.	13th Sept.	20th Sept.	27th Sept.	4th Oct.	11th Sept.	18th Sept.	25th Sept.	1st Oct.	8th Oct.	15th Oct.
Bangalore District	61,017	59,425	61,573	64,755	69,335	6,333	6,333	6,333	6,333	6,333	6,333	6,333	6,333	6,333	6,333	6,333
Municipality	18,067	18,433	18,573	18,755	18,935	1,933	1,933	1,933	1,933	1,933	1,933	1,933	1,933	1,933	1,933	1,933
Kolar	21,003	20,803	21,455	22,455	23,455	2,455	2,455	2,455	2,455	2,455	2,455	2,455	2,455	2,455	2,455	2,455
Tumkur	42,137	42,335	42,535	42,735	42,935	4,235	4,235	4,235	4,235	4,235	4,235	4,235	4,235	4,235	4,235	4,235
Mysore District	23,084	22,911	23,381	23,555	23,735	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335	2,335
Municipality	3,082	3,092	3,092	3,092	3,092	309	309	309	309	309	309	309	309	309	309	309
Hassan	10,501	11,393	12,285	12,117	11,195	8,884	8,884	8,884	8,884	8,884	8,884	8,884	8,884	8,884	8,884	8,884
Channarayana	3,178	2,734	3,068	2,923	2,552	2,032	2,032	2,032	2,032	2,032	2,032	2,032	2,032	2,032	2,032	2,032
Shimoga	3,088	3,739	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244	4,244
Chitaldrug	35,447	35,056	35,434	35,434	35,434	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534	3,534
TOTAL	227,067	221,170	205,685	191,892	170,204	103,750	27,764	23,883	31,250	31,083	27,000	24,817	24,912	23,971	27,655	35,007

was extremely small (I heard of its selling at $1\frac{1}{2}$ and 2 seers per rupee in some places), and most of the seed used was imported from the Madras districts. So much land ordinarily devoted to ragi had been left unsown, or the crop had withered after sowing, that there was room for raising a very much larger crop of colthi than usual; and in fact the breadth of land sown with it this year was extraordinarily great. For "Vaisakh" rice there was plenty of time, as December is the usual month, and it can be sown with safety in January if the supply of water in the tanks is large. Rice was at this time costing about 6 to 7 seers per rupee; good paddy, fit for seed, about 10 seers; and the cost was estimated to come to about Rs.5 per acre. This was almost prohibitive in the case of the poorer ryots. Accordingly the Chief Commissioner (on the 12th October) sanctioned the granting of advances to cultivators ("Takavi") for this purpose on the hypothecation of the crop. Altogether, advances to the extent of Rs.1,22,500 were sanctioned, and these were mostly spent on paddy, very little in comparison being given for the cultivation of colthi. The result was that the ensuing cold weather saw the largest area under "Vaisakh" cultivation that had ever been known in the province.

36. Having already paid a flying visit to the town of Kolar, I began my tour by inspecting an outlying taluk of that district, Chik Ballapur, one of those that had suffered most. There were many points that required correction, but only one or two need be mentioned. In the relief camp the Superintendent (a Eurasian) had understood the "condition of residence" to mean confinement similar to that of a jail; husbands were separated from wives, and parents from children, and the paupers were not even allowed to go outside the gates to wash in a tank. In a dark corner of the enclosure were a lot of people extremely debilitated; and I learnt that they were thrust aside there because they were thought to be dying, and were not even put under the native doctor's care. The relief works had not yet been reorganised; the amildar's return shewed 41 works in progress, but work was only going on on 18 of them. On one work I found that wages varied from day to day instead of being fixed for at least a week at the prevalent rate on market day; and the 4-pie wage, which was appointed for non-working children under 7, was given to working children over 7. The labourers were put every day in different gangs, instead of being always kept together in the same gangs and being classified according to strength and sent to the same kind of work day after day. The following note was recorded at the time on another case:—

"I visited a Civil relief work on the way this morning. It was a tank bund carried on under the patel and shanbhog. There were 207 people returned as employed on it yesterday, and they said the number was about the same to-day: I counted and found 156 only. This is very suspicious. The head writer of the taluk is said to go out every evening and pay them. The people were not getting the exact wage laid down, young women being only paid as children. There were no non-working children at all, and hardly any working children over 7 and under 12. The importance of encouraging whole families to come on the work is not understood."

I went over the list of existing relief works in progress with the Deputy Commissioner, settled which should be stopped at once and which were important enough to deserve to be pushed on to completion, and made out a scheme of ten large Civil works which he might carry on, seeing that the Public Works Department was unable at that time to propose or undertake any relief work beyond a scheme of tank repairs in the south-east corner of the district. Five of these were tanks and the rest were new roads, the construction of which was much needed.

37. The course of my tour in the Bangalore District took me through its three worst taluks, Devanahalli, Dod Ballapur, and Nela Mangala: the two former taluks were then under Captain Cowie, an active and zealous officer of the Revenue Survey Department, and the latter had just been placed under a young officer of the Bengal Army. The physical condition of the paupers in the Devanahalli camp was the worst I ever saw, worse even than in Bangalore, and it seemed clear that they had not been receiving the full Government ration. Captain Cowie undertook to look into this question, and his researches were afterwards most useful to

me. The Superintendent was thoroughly inefficient: no attempt had been made to run up sheds and make an enclosed camp: the hospital was miserably deficient in medicines. An effort had been made a few days before to draft about 1,000 of the paupers off to a tank at 10 miles distance, and had not unnaturally failed; the people were seized by a panic and broke and fled in all directions. This illustrates the necessity of moving by gentle and gradual steps, and doing nothing *per saltum*. They should have been classed together in gangs of 50 and put to light work in the neighbourhood: and when they had got to know each other and their gangsmen and overseer, and had been broken in to this system, the further step of marching them off to a distant work could safely have been taken. This was done now, and after a few days of such preparation Captain Cowie took off a large party to the Bhadram tank with complete success. The only *contre-temps* that occurred was that when they passed by a field of nearly ripe jowar the temptation was too great for the hungry demoralised wretches; they rushed in and plundered it. The owner was compensated, and some of the ringleaders punished; but to the last these Devanahalli paupers were among the most difficult we had to deal with, the poorest in physique and the lowest in morale.

38. The Dod Ballapur taluk had been the one that had suffered most in the district, and perhaps in the whole province, but already, under the influence of more than a month of rain, the crops were sprouting, the fields were covered with verdure, and as one stood on the top of any of the rolling hills and looked round on the fertile and smiling villages, the tanks full to overflowing, and the labourers at work in the fields, it was hard to realise that the famine had but lately been so sore in the land, and was only now beginning to relax its grasp. But on reaching the town a visit to the relief camp soon convinced me that it would be some time yet before the starved and emaciated paupers ceased to present visible signs of the misery they had passed through. The new system was being well carried out by Captain Cowie here. He had separated, some 18 days before my visit, nearly 300 people as too weak for any work; but they had already so much improved that about 20 per cent. of them were fit for labour now. All the paupers who could do any work at all were employed on the only useful relief work that could be proposed for them here—the road to Nela Mangala. The day that I arrived was Sunday, and the people flocked round complaining that the work was closed on Sunday, and they had nothing to eat. The justice of their complaint was obvious, for they had only recently been put to work, and could not have saved enough for the Sunday's food, considering how little margin above a bare subsistence the B or Civil wage afforded. In this case I gave them all half a day's pay, with which they were quite contented; but the subject was long and fully discussed, and has to be looked at in so many lights that it seems hardly possible to lay down any uniform rule.

39. In the case of relief works under natives of the country, there is no reason for stopping work on Sundays: neither supervisors nor labourers have acquired by inherited habits any absolute need of a rest for one day in seven, though it is a great convenience to the supervisor to have a day in which to make up his accounts. But as a matter of fact, it was found in Mysore that (except in the case of the poorest and most famine-stricken) most of the labourers preferred to absent themselves on the market-day and go to the nearest town to lay in their stores, and to get a little relaxation by mixing with the world. In such cases there is obviously no reason for giving them payment on that day. But there are always some who are worse off and cannot afford this relaxation: and in their case to shut up the work and refuse them employment on that day would be a great hardship: while, again, to keep the work open for the sake of only a few people would disorganise the arrangements made for measuring the tasks of whole gangs, and is likely to be thought hard by the overseers, &c. On the whole, therefore, it was decided that the best compromise was this: to give half a day's wage on account of the weekly holiday to all those who had attended regularly and worked properly for six days. But when the work is under an

English supervisor, the difficulty is greater. No one can plead that on religious grounds he objects to doing such work as that of famine relief; but the loss of the weekly holiday which is enjoyed at all other times would be severely felt; and indeed to any one who throws zeal and pity into his work, the labour of the six days is so exhausting that only the very strongest can dispense with the periodical rest. There are two alternative methods which can be pursued in respect of the people. They can be paid an extra day's or half day's wage on Saturday; or their daily wage can be fixed on the assumption that they will save a portion out of it and the six days' savings will provide the seventh day's food. There are objections to either course. The extra wage on Saturday attracts an influx of people on that day or Friday, who do not return on the Monday; and even if the extra payment is refused to those who have not been six days at work, much confusion is caused and the larger the number of people at work the harder it is to ensure accuracy in such cases. In the other case, they are often too improvident to save for the Sunday. One officer reported that when he started this system of payment, the people at first had nothing whatever to eat on Sundays, and were so weak with hunger on Mondays that he was obliged to pay them and let them go at noon, not cutting them for the small task of the day: but after three or four weeks they mostly learnt to save. On the State Railway this difficulty continued to be felt to the last: the closing of the work on Sunday had a demoralising and scattering effect on many of the labourers, though those who were steadiest, and who had been longest on the work were quite satisfied, so that it seemed that to give extra Sunday pay was to shew an unnecessary favour to those who were bad workers, which was not needed by the good, and which would increase the expenditure of the State; and, on the whole, the conclusion came to in Mysore was to leave matters as they were, giving for six days fairly liberal pay to cover the food of seven days.

40. In the Tumkur District, I visited five out of the eight taluks, and took measures to start relief works on the new system. It was to the last a difficulty to plan useful projects in this district. The Deputy Commissioner, ever since the order he received in November 1876 (see Chapter 3, paragraph 16) to stop the numerous small works he had started in the Sira taluk, had principally employed his relief labourers on collecting and breaking stone on the roads; and the Public Works Department proposed to start an extension of this system of labour. The Executive Engineer, however, had as yet made no arrangements for actually beginning relief work. He had at that time three overseers under him in charge of three important roads, employing 1,400 labourers who were on the regular establishment and were paid every 15 days; two new overseers had been sent to help him. With these he undertook to employ 2,300 relief labourers at different points along the roads in a week's time and 8,000 ultimately. There were at that time 9,000 to 10,000 people on Civil relief works, and about 20,000 in the relief camps who were fit for labour, and useful occupation had to be found for all of these. Accordingly, a scheme was made out under which about 26,000 people might be employed on 12 of the second class roads, under the Civil Officers, till such time as the Public Works Department Establishment should be strengthened sufficiently to take them over.

41. The relative merits of road-work as against earth-work for relief purposes was a subject that came under frequent discussion. Major Moncrieff was, on the whole, distinctly hostile to road-work, and I think rightly. By road-work here is meant the collection and breaking of stone for metalling a road, not the laying out and embanking a new line of road, which is decidedly most unsuitable for unpractised labourers in a hilly country, requiring a great deal of care and supervision and very difficult to measure up. The arguments are mainly as follows. In road-work it is urged that the work is easy to test; so many people can dig or collect, and so many can break, a cubic yard of stone; and when broken and stacked by the road it is always useful, does not deteriorate by keeping, and is sure to come in eventually and save expenditure at some future time. If all the

money expended on small relief works had been spent in this way, Mysore would have had four or five years' supply of broken stone collected along its principal roads, and there would have been no further expenditure under this head for years. On the other hand, even in stone-breaking, owing to difference in the hardness of the stone, there is nearly as great a difference in tasks as there is in digging earth in varying soils; and it was found necessary to order that the harder classes of stone should be let alone. The collection of metal is not always easily tested. For in some places it is thickly, in some thinly, scattered on the ground; it has to be brought from varying distances, so that only a rough approximation to an average task can be made. Moreover, it is found that such work requires a good deal of supervision: the people are scattered over a considerable length of road, and one overseer cannot look after as many labourers as he can when they are massed together on a heavy piece of earth-work. The work moves rapidly; a body of 1,000 coolies would soon have finished stacking metal for 2 or 3 miles of road, and then the camp has to be moved to a new site, which costs time and money. It is almost impossible to enforce the distance test on the people who live in the villages near the work and who apply for admission; and thus as a working party moves along a road, it consists of two parts: the permanent coolies from a distance who live in the huts, and the casuals from adjoining villages who are glad to accept work near their doors, but who drop off as it gets too far for them to reach it without leaving home. It was also found that road-work is much more popular than earth-work; the latter is generally in out-of-the-way places; on a road the coolies chat with passers-by, and hear the news of the world. This would ordinarily be a serious objection, for relief work, if it is to act as a test, ought not to be attractive; but in the then circumstances of Mysore, where the famine had been so severe and its prevalence so universal, the objection was not so strong, since the danger of employing persons not in want was slight, and the reluctance to come to work was so great that it was desirable to make labour as little repulsive as possible, as far as that could be done consistently with certain fixed principles.

42. At the time I reached Tumkur, one of the special relief officers, Mr. Barker, was just recovering from a severe attack of cholera in which he nearly lost his life. He was most anxious to set to work again the moment he should be strong enough; but he was sent in to Bangalore, where the doctors pronounced him too much shaken in constitution to return, and he had to go to England on medical furlough. Captain Ludlow had two other special relief officers under him, Mr. Meiklejohn and Mr. Betham of the Revenue Survey, between whom the district was divided, the charge of each being, however, far too large for any one man to look properly after. Much attention had been paid to the proper management of the kitchens, and especially to the feeding of the paupers, but the organisation was still defective, and the arrangements for enclosing the kitchens and converting them into relief camps were far from complete. It was while making inspections in this district that I first thoroughly realised the great importance of establishing some system of weights and measures by which to test the quantity of cooked food distributed as the daily ration. The seer in common use in Mysore is a cylindrical measure of capacity, not a weight,* and the weight of its contents varies with the kind of grain put in, and with the degree of close packing. But though the Government order was that a certain weight of flour should be given for each ration, in most places the grain or flour was still measured out by the seer, and many relief camps had no weights and scales. The weight of a seer measure of different kinds of rice was found to vary somewhat, and that of rice differed considerably from that of ragi. In some places rice was given, measured out in open pannikins, a method open to much fraud; in some ragi flour was given boiled into a pudding and made up into balls by the hand, the weight of the contents being untested; in some the pudding was measured in a mould

* Where it is used for a measure of weight, as in the case of spices, ghee, and several things which cannot easily be measured, it denotes 24 tolas or rupees in weight, not 80 as in Upper India.

like a brick mould; in some places rice and ragi were given mixed together; in the north of Chitaldrug, jowar flour was given instead of ragi. A little experience shewed that the weight and capacity of the cooked food varied very much according to the quantity of water with which it was boiled: 1 lb of rice boiled in as much water as it could absorb would be very wet and sticky and would weigh over 4 lbs; boiled in double its weight of water it would weigh about 3 lbs, and would be comparatively dry. It loses weight by cooling, and therefore if a cold ball of ragi is lighter than a hot one, that does not prove that the pauper is being defrauded of his due weight of food. A circular was therefore issued (17th October) drawing the attention of officers to the difficulty and importance of the question, and asking them to institute experiments as to the weight of the ration given out in the establishments under their care, and as to the proper weight which should be obtained from the prescribed ration of dry grain or flour. Replies were received in the course of a month, and on them, and on my own experiments, was founded a standard average scale of the proper weight of the cooked ration, which was laid down in a circular issued on the 28th November.

43. The rice most commonly sold in the market was imported rice from Madras, usually known as "boiled," *i. e.*, rice which has been scalded in order to facilitate husking. The dry rice (*i. e.*, rice which is husked without wetting it) was a little dearer and less common. The former weighs about 88 rupees, and the latter about 90 to the seer (40 rupees equal 1 lb in weight). The rice was always dirty, and had to be sifted before using; from 3 to 5 per cent. was lost in sifting. Ragi weighs 80 rupees or 2 lbs to the seer when uncleaned, but it contains a large proportion of dirt and husk. The dirt is separated by sifting: the husk may be pounded off with the pestle like rice (this was done in the Bangalore jail), or may be ground up with the grain and then the coarser parts of it separated by a fine sieve: if this is not done, the food is very gritty and likely to aggravate the bowel-complaints from which the people were commonly suffering: this can only be discovered by the taste, and it is essential that every officer inspecting or in charge of a relief camp where ragi is given should constantly taste the cooked food. The loss by sifting in ragi never amounts to less than 10 and often rose to 20 per cent., where a trader thought that the goods he supplied would not be closely examined.* The routine, therefore, in every well-managed camp should be as follows: The stock-keeper receives his rice or ragi in bags, weighs them, and enters them in the stock register. He then gives them out for sifting or grinding, and receives back the clean rice or the sifted ragi flour, as the case may be, weighs them, and writes off the loss to Government. Unless this is done, the loss has to be borne by the paupers, and this was very commonly the practice: a bag of ragi weighing 100 seers was made to provide 200 rations, whereas if it was very dirty it would, perhaps, only furnish 160 rations: each pauper, therefore, was defrauded of 20 per cent. of the "bare subsistence" ration ordered him by Government.

44. Ragi being the natural food of the people, and containing much more nutritive qualities, was prescribed as the preferential ration wherever it could be procured; and by December

* Unfortunately in the different sliding scales drawn up before my arrival this fact was not recognised; it was known that ragi was more nutritious than rice, but it was not known what large deductions had to be made from the nominal food-contents of a seer. A question I frequently put to officers in charge of works was: which is cheapest, rice at 6½ seers per rupee or ragi at 8 seers per rupee? Of course the answer was generally, "ragi at 8 seers." But the seer of rice weighing 88 rupees, while that of ragi weighs 80 rupees, the calculation runs thus:—

Rice 6½ seers at 88 rupees per seer	= 572	
Loss at 4 per cent.	23	
		549
Ragi 8 seers at 80 rupees per seer	= 640	
Loss at 15 per cent.	96	
		544
	Balance weight in rupees	544

So that, practically, the two may be taken as identical values, *i. e.*, 6½ seers of rice and 8 seers of ragi furnish an equal quantity of food.

it had completely ousted rice from the relief camps, as far as the more healthy paupers were concerned. In hospitals and to convalescent gangs it was generally necessary to give either both meals or one meal at least of rice. The average weight of 1 lb (or 40 rupees) of ragi flour when boiled in so much water as to make up easily into a ball and not to be too wet, was found to be 106 rupees, so that the ball given to an adult for each meal in the day ought to weigh 53 rupees. This was prescribed as the standard weight, from which no large defection could be permitted; the cook-room was to be provided with scales and weights, and the cooks were to make up each ball (not as hitherto by the eye but) by weight; and the superintendent of the relief camp was to test some of the balls every day. The system of moulds was found to be too uncertain: it was always possible to pack more or less into a mould according to the wish of the operator. Rice, if used, was to be given out in the same way in balls and by weight; each ball of rice (the rice being boiled in double its weight of water) ought to weigh 66 rupees; pannikins were to be utterly abolished. A recipe was also added for the materials of the condiments, which formed a very appetising soup, and half a pint of which only cost 3 pies or 1½ farthings.

45. Instructions were issued at the same time as to the diet for the "special gangs." The gangs are composed of young adults and adolescents who are reduced to great weakness through innutrition, but whom it is hoped by rather generous feeding to restore soon to health and strength, and of nursing mothers the number of whom was lamentably few; the old were not treated in this way. In the Famine Code it was laid down that extra food should be given them, but the kind and quantity of this food was left to discretion: and it was found during my tour of inspection that very little had been done, and that in a somewhat unintelligent way, to carry out the orders. Rules were therefore required fixing the diet in such cases. On relief works the "specials" were to get the higher or A pay, together with a chupatti, or scone, or ball of ragi containing 4 oz. of flour in the middle of the day. Children under seven were to get 2 oz. of rice-conjee (*i. e.*, broken rice boiled in plenty of water) in the morning, and the same quantity at noon, besides 3 pies wage to be paid to the parents for the child's evening meal. In the case of children at the breast the nourishment was to be given to the mother. In relief camps children under seven were to receive 2 oz. of conjee in the morning, 2 at noon, and a ball containing ½ lb of ragi flour in the evening. Adults were to receive a ration of 1½ lbs every day in two meals of 12 oz. and 8 oz., and a light meal of 2 oz. of conjee in the early morning; also ½ lb of meat every other day, boiled in their "condiment" soup. The recipe for the soup was of much the same character as in the case of ordinary paupers, but it contained less chillies and more pulse.

46. The details of such arrangements may seem petty, but they are worthy of record, and will prove valuable wherever famine relief work has to be done again under similar conditions, on account of their immense importance to the recipients of the food. Where a ration is calculated (as it should be) on the basis of bare subsistence, the loss of a tenth part of it, possibly even of a twentieth, may make the difference between life and death; and the responsibility which rests on a relief officer to see that no speculation or mistaken economy interferes with the distribution of the full ration, is a serious one. Visiting relief camps day after day, spending many hours there, making a special study of the quantity of cooked food distributed, and of the physical character of the recipients, it is possible to gain such experience as at last to be able, with fair accuracy to predict from the look of the paupers whether the ration distributed was a full one, or was cut down (as was only too common) by some fraud or mistake. On the 20th December, in forwarding to the Government of India a copy of the diet circular already summarised, I wrote as follows:—

"The Famine Commissioner has satisfied himself by personal inspection of nearly every relief camp in the province, and by careful weighing and testing of the food served out, (1) that the one pound ration is sufficient to

maintain in good condition those who are not much reduced by famine, and that in many cases they improve upon it; (2), that wherever the inmates of a camp who have been in residence for some time are found to be specially emaciated it has been proved that they have not been receiving the full ration, but have been defrauded of it through some peculation or stupidity; (3), that in the case of paupers who have been very much reduced by inanition, an increased scale of diet called 'special treatment' is necessary, and that with this assistance they often improve with surprising rapidity."

47. From Tumkur I entered the Chitaldrug District, visiting first the Timanhalli tank, a large relief work under the Public Works Department, the previous history of which has already been given in this report. There was now a large number of labourers drafted on it from the Chitaldrug and other kitchens, but the place was still very unpopular, from being far from any town or road, buried between two ranges of hills, and reputed unhealthy. Prices, too, were very high, and the stock of the local traders scanty. Under these circumstances, I approved the proposal of the local officer to pay the stronger portion of the labourers who elected to accept the terms at piece-work rates, the rate being 3 annas per cubic yard, or treble what was paid when the work was opened in February and failed in March. It was admitted that this was contrary to strict relief principles in ordinary cases which condemn the system of piece-work on the following grounds: (1), a skilful labourer may earn a good deal more than a "bare subsistence," and thus the work becomes too attractive; (2), if coolies are stimulated to work with extra vigour, extra expenditure is incurred, the project may be completed before the famine is over, and the necessity may be imposed on Government of opening a new relief work, not because the work is needed, but solely in order to employ the labourers; (3), if a piece of work is paid for in the lump, we cannot be sure that the payment will be fairly distributed between the men, women, and children, in cases where they are not members of one family nor working together by mutual choice; (4), the strength and capacity of famine coolies vary so that it is impossible to apportion the piece-work rate so as to bear in all cases an equal relation to their ability to work. In this case, however, we had to deal with a large work which would probably be left unfinished on our hands when the famine closed, so that there was little risk of the result anticipated under head (2); and as to (1), it was desirable to encourage the labourers by the hope of a little extra profit, so as to counteract the influences of the unhealthiness and bad reputation of the place. This question of how far a piece-work system could be introduced engaged a great deal of Major Moncrieff's thoughts and attention, and it will be treated of again in a later place.

48. There were at this time in the Chitaldrug District three sets of relief works under the Public Works Department: the Timanhalli tank, some irrigation works near Doderi, and the main imperial road through Chitaldrug, on which last, however, only the regular old establishment of coolies was engaged. The Civil relief works employed 2,785, and consisted mainly of small scattered gangs occupied with road-work. Nothing had yet been done to reorganise the system of works, or even to carry out the rules issued in earlier days. An examination into the works carried on in the taluk of Budihal under the amildar brought to light several mistakes which no doubt were not peculiar to this taluk or district. The following is an extract from a note recorded at the time (October 18). In the amildar's weekly statement he entered 4 roads.

* * * * *

"The facts appear to be as follows: On six different roads there used to be a gang of regular coolies employed, who received, men 4 rupees, women 3 rupees a month, and who were usually paid every ten days. Besides these an additional number of relief labourers were employed at the rates laid down in the B scale, and these were also paid every ten days. They had to come in to Hular to be paid, and if the amildar's imprest was exhausted, which seems usually to have been the case, they were sent away unpaid.

"Chiknaikanhalli road—a regular gang of ten men and nine women employed. On the 3rd October they were paid Rs. 20-12-5 on account of September 20th to 30th. Since then imprest was exhausted, and no payments made.

Hosdrug road—regular gang sixteen men, thirteen women, paid on October 3rd for September 10th to 30th, and on October 12th for October 1st to 10th: also relief labourers twenty-four men, twenty-nine women, paid on 12th for October 1st to 10th.

"Banawar road—regular gang twelve men, eleven women, paid on October 3rd for September 10th to 30th: Since then no imprest and nothing paid. Relief labourers, eight men, eleven women; nothing paid in either week from above cause."

49. At this time the Deputy Commissioner of Chitaldrug was extremely sanguine that the famine was fast coming to a close. He had not of late seen much of the eastern taluks, which were under Lieutenant Macintire. There the cultivation is sparse and the country wild and hilly; the ragi and other crops were of the same character as in the rest of Eastern Mysore; and the breadth of land sown seemed to be below the average. But in the north and west, the character of the landscape changes to the flat expanse and the black soil of the Deccan. The crops are chiefly jowar and cotton; the jowar had endured the drought better than the ragi, and was now standing green and tall, giving promise of luxuriant harvest. There were on the 13th October 17,300 people in the relief camps; but of these, 5,000 had left of their own accord within the week in consequence of the improved prospects, and it seemed then improbable that relief would be needed much longer and unwise to open relief works on any large scale. It was resolved, therefore, to concentrate the labour on the metalling of certain roads, and sanction for these was given.

50. Within a month a large deduction had to be made from the hopes that were then so freely entertained. Rain fell incessantly and heavily from the 20th October to the 3rd November, measuring in one fortnight at Chitaldrug $8\frac{1}{2}$ inches, or almost as much as the whole rainfall of 1876. The ripening jowar heads were blackened, and the stalks turned yellow and rotted in the ground. The earliest-sown crops were saved, and wherever it was possible the ryots cut off the unripe heads on the later sown fields in order to save something from destruction; but where it was left uncut, the grain turned to black soot, or else the seeds germinated and sprouted in the ear. No doubt a considerably larger crop was got in than had been obtained in the preceding year, but not the less did it fall much below the anticipations formed by every one.

51. In the Shimoga District the famine had never been severe. Five out of eight taluks are comprised in the Malnad or forest tract on the slope of the Western Ghats, and these I did not visit. The unanimous opinion of the local officers was that there was no need of any relief works there, as the population of the place would not work for relief wages, and the people of the Maidan taluks would not leave their homes and travel so far for work with a harvest coming on and the prospects much improved. It was decided, therefore, that the Famine Department should have nothing to do with those taluks, and that relief rules should not be held applicable to any works going on there. In the other three taluks but little evidence remained of the distress which had formerly prevailed. There were several works in progress, but they were poorly attended, and the jowar crop gave a great deal of employment. All relief camps had been closed except one at Shimoga itself. The decision came to was to keep two of the chief roads which ran through all three taluks open and organised for relief; to carry on a tank work near Shimoga, in order to draft the camp paupers on to it as they became fit for work, and to close or push on to completion all the other schemes that were then in hand.

52. The Kadur District was similar in character to Shimoga. Of its six taluks, three and a half are in the Malnad, two and a half in the Maidan; in only one had the famine been severe. The officer who had been Deputy Commissioner of the district throughout the famine was a native gentleman: he had arrived at the end of his service, but before quitting it he committed a great error. Misunderstanding the intention of the circular of September 14th (see paragraph 22) he put upon it an interpretation which it certainly could not bear,

and summarily closed every relief work in the district. This was observed as soon as the weekly report came in. Stringent orders and a call for explanation issued at once, but no answer was received, and at the beginning of October he retired on pension. His successor did all he could to revive the works, but the demand for labour had become very slack, as the harvest was drawing on. A scheme of relief works was drawn out and sanctioned, it being left to the Deputy Commissioner's discretion to open them or not according to the needs of the people. As a matter of fact, only one new work was begun, and as it never attracted many labourers it was soon closed.

53. The Hassan District had also just changed hands. The new Deputy Commissioner, who returned from furlough in September, had not witnessed the famine at its height, but the sights that he did see filled him with horror and pity. He knew the people well, being more than most district officers in the habit of entering into familiar conversation with them, and felt deep sympathy for their sufferings, but he shewed this sympathy in an injudicious way. He thought that they were starving themselves to death through unwillingness to receive relief, and that the only way to save them was to use compulsion. He would enter a bazar on market-day with a posse of police behind him and seize on every one whom he saw begging, or who looked thin, and drive them off to the relief camp in spite of their protestations. Not having had previous experience of the effects of famine his selections were not good, and several people thus arrested were respectable persons, ryots and others, who, thin though they were, had come into the market to buy necessaries. The majority of his prisoners, either escaped on the way to the camp, or on arriving there represented to the Superintendent the real state of the case and were let go, or scaled the enclosure at night and got away. The relief camps were not meant to be jails, nor were they so constructed as to serve as such. Thus, while these well-meaning efforts were altogether fruitless, they filled the district with panic and distrust. As I passed through on my tour, if I turned aside to inspect a village near the road, I was frequently met by the patel and shanbhog, who cried, "We are all quite well, and there is nobody sick here, and nobody has died of hunger, and no one is in want of work, or money, or relief of any kind; for goodness sake don't come any further into our village." In more than one case the money I offered was rejected, and tickets for the grain dôle were flung in my face by widows with half-starved children, who openly expressed their belief that it was a device of the Evil One to entice them and their offspring into a relief camp. It took months of perseverance and kindly treatment on the part of one of the best of my relief officers to overcome this suspicion in his taluk; and in the greater part of the district our attempts at relief measures were, up to the last, to a great extent defeated by the feeling thus engendered.

54. The question of compulsory relief is a very difficult one and capable of much argument on both sides: at first it seemed almost impossible to lay down any rule, but gradually the experience of the different relief officers worked out a tolerably practical solution. The relief officer would visit a village and find in it a family that had no visible means of living, or a sick man or woman, or a couple of parents with emaciated children. He would invite and urge these to go to a relief work or a camp, and if they refused, it seemed a lame and impotent conclusion for him to leave them to the consequences of their own folly, and he was tempted to use force. But against this it was to be urged that although he might think the people could not live without relief, they probably knew their own state best, and perhaps had stores of grain or money which they concealed from him, or the means of employment in the village. Moreover, if they were taken by force there were no means of retaining them on the work, and little means of retaining them in the camp: and it was an error to use compulsion which could not be effective, and which, as the Hassan case shewed, was sure to excite alarm and to set the people against us. Thus the instructions received by the relief officers were to rely on persuasion and perseverance: if they

came across a village where such cases were found, to visit them again and again till the paupers either proved that they could live without relief, or till they found it less trouble to go to the work than to remain in the village. But where the persons concerned were children, the relief officers were authorised to say to the parents, "You may starve yourselves if you like, but you shall not starve your children;" they were to give them warning, and if on a second visit the children were found still emaciated and not improved in condition, they might be removed to a relief camp and taken care of.

55. These were the rules which were arrived at after some experience, as to the treatment of persons found in their own houses. But where people had left their homes and thrown themselves on the world, and especially where they lived by begging, the argument against compulsory relief was much less strong. Such persons confessedly had no regular means of subsistence, and abundant experience showed how fallacious and fatal was the hope of living on the charity of the public. We might not be able to keep these people on the works, but at any rate we were able to stop begging in the streets of a town, and in such cases accordingly compulsion was permitted, and the relief officers were directed to use the police to catch all beggars and to send them to work.

56. The case of emigrants, which had occupied so much attention in the earlier part of the year, did not come up for decision during the later stage of the famine, but the conclusion that I came to was that if a stream of emigration should set in afresh, whether we thought it unwise or not, it ought not to be interfered with. This conclusion mainly rested on my conviction of the impossibility of stopping them: we might as well try to arrest the flight of migrant birds. An uncontrollable impulse seemed to animate them, and they evinced a persistent tenacity which no commensurable efforts could have overcome. This was witnessed, on a smaller scale, in the determination of paupers to come in to Bangalore. Whatever road they came in by they must have passed a relief work, where they would have been admitted if they had merely wanted relief; but no, they had made up their minds to try their luck in Bangalore, and to Bangalore they would go. Mr. Ozanne once persuaded a party of such people whom he met on the road to stop and set to work on the railway: I never succeeded myself in doing this, often as I made the effort, and I never knew of any other instance of success. The only thing that could be done was to spread our net in the town of Bangalore to catch the wanderers as soon as they came in and take them on to the railway works.

57. On the same principle deportation was discouraged: if people had left their homes, it was on the ground that they could not, or thought they could not, live there; and if they were resolved to come away no power on earth (or at least none that could be used with results commensurate with the effort) would keep them there. The officers of the adjoining Madras districts followed a different policy, and deported into Mysore any people who said they belonged to that province. Sometimes they came by rail. One day a carriageful of paupers was received at Kolar, from which district they had said they had come. When they arrived they said they belonged to Vellore, and the Deputy Commissioner sent them back again by train. If he had referred to me, I should have instructed him to draft them on to a relief work, and to employ them there: if they chose they might leave it and walk home. Another party was sent by train to Bangalore. On arrival it was found that they were all Tamil-speaking people, so that they could not possibly have been emigrants from Mysore. However, they were set to work, and all left the work the first day. They probably were relations of camp followers of the Madras regiments at Bangalore, and chose this method of obtaining a free passage by rail. In April 1878 the Collector of a frontier district wrote that he had some 40 paupers from Mysore in one of his camps and was going to march them to his boundary on a given day, where he wished them to

be met by an official and taken over and conveyed home. On that occasion the following correspondence passed between the Mysore and the Madras Governments :—

* * * * *

"The principles which have been laid down for the guidance of famine relief officers in Mysore differ altogether from the system on which the Collector of * * * * * is acting. They are, that famine relief should be altogether independent of nationality or of geographical limits, that the same treatment should be applied to every person found in receipt of relief in this province, whether he be a resident of Mysore, of Madras, of Bombay, of Hyderabad, or of any other quarter. If he is sick he is sent to a hospital; if weak and in need of food, to a relief camp; if able to work, he is drafted to a relief work. If, after being kept in a relief camp for some time, it appears that he will never be able to work, he is allowed, if he wishes it, to go to his home with sufficient money to pay for the expenses of his journey, and a letter, which he can present to the relief officer of his own district or taluk on arrival, stating his case. The same course is pursued whether his home be in Mysore or across the border.

"The opposite policy proceeds on two assumptions, which are demonstrably mistaken. One is, that the statement of a pauper that he belongs to a certain place may be presumed to be true; the other is, that the habit of wandering, which the famine-stricken naturally fall into, can be stopped by the means of deportation or by any other governmental action. It further entails much useless labour to the local officers who have, under such requisitions, to go to the frontier to the neglect of other important work, in order to meet and receive the deported paupers. If Mr. * * * * * had given them money for their road expenses (as is done in Mysore), the same end would have been obtained with no trouble, as will have been obtained in this case with considerable trouble, to the local officers. If the paupers wished to go to their homes, they would have been enabled to do so; if they did not, no force which can reasonably be applied will make them.

The reply of the Madras Government was as follows :—

"I am directed to * * * * * state that His Grace in Council is unable to concur in the views propounded by Mr. Elliott in the communication under consideration, relative to the relegation of paupers to their homes and the checking of the habit of wandering; but concurring with him in regard to the difficulty of ascertaining the real homes of wandering paupers, will instruct the relief officers, under this Government, to institute the most searching enquiries on the point prior to the relegation of paupers to any place."

58. The next district in order after Hassan was Mysore. There had never been acute famine here, except in the Mandia taluk which lies to the east of Seringapatam, but the large town of Mysore had, as usual, attracted many wanderers. The administration of relief had originally been in the hands of a voluntary committee, but in August it was placed in the hands of the Town Magistrate, Mr. Abdul Kadir, and the enforcement of stricter rules at once reduced the number of recipients very largely. An outcry had been raised that some harshness had been shewn in these measures; but it was clearly shewn on enquiry that the stricter measures had not passed due bounds and had not been introduced too early. The decrease in numbers consisted mainly of children whose parents were not in great need, and of ragi-grinders whose services were no longer required. Residence within the camp was insisted on only in the case of outsiders and beggars, not of inhabitants of the town, over 700 of whom were receiving raw grain; these were mainly Mahomedan women who could not appear in public, and very old and infirm persons who were in absolute poverty. Besides this, the charitable funds provided relief for about 2,000 families who were in distress, but not utterly unable to support themselves, and whose small earnings were supplemented by moderate doles of grain.

59. The Mysore water-works project acted at this time as a depôt to which all wanderers who drifted into Mysore could be sent, and it was carried on in a useful and practical way as a relief work. In the Mandia taluk there was also a relief work going on, but it was not well attended, and the prospects of the crop were at this time so good that the people of the country generally could not be induced to leave the neighbourhood of their ripening fields. It was now the end of November. The rain had stopped ever since the first week of the month, and it was hoped that both ragi and colthi, which had suffered from its excess, would revive and recover their strength and yield a fair crop. Such rice as had escaped the drought was being cut; and as the great extent irrigated from the Cauvery channels and other perennial sources was independent of the

shortcomings of the season, the price of rice had already fallen sensibly. Ragi was nearly ripe, and in this part of the country looked fairly well. Colthi, through the excessive wetness of the season which followed its planting, had run to leaf, and its leaves were covered with yellow patches of mildew, which made the cultivators anxious; but it was hoped the dry weather would prevent these from increasing; and the area sown was so unusually large that it was a common remark that the colthi crop alone would feed the country for a year.

60. From Mysore I returned to Bangalore, travelling along the line of the State railway, on which at this time (the end of November) about 20,000 people were employed. The next few days were occupied with examining into the relief measures in the town of Bangalore, both as regards the grain dole to residents and the assistance of artisans, and also as to the arrangements for collecting wanderers and sending them on to the railway works. It will be better completely to dispose of these subjects in this place.

61. Little had been done as yet by the Municipality for the assistance of weavers and other artisans, and no definite plan had been framed for carrying out the rules laid down on this head. The streets had been divided into beats (20 in the city and 21 in the cantonment) and an Inspector appointed to each, and a large and rapidly increasing expenditure was being incurred by them for the distribution of grain. The following extracts are taken from minutes recording the result of my inspections :—

"I visited the beats of two Inspectors, and am satisfied that they have done their duty carefully and laboriously, and with considerable knowledge of the circumstances of each case. But they have not been very judicious in their gifts, and have not understood the limitations which are necessarily imposed on gratuitous relief. These limitations are, that the recipient should be in severe distress, almost amounting to starvation, and that he should bear the marks of emaciation on his person,—in fact, that he should be such a person as would properly be received and fed in a relief camp if he applied there, and would not be sent away to work or rejected as unfit. Now, of the people I visited to-day in their houses, and of those whom I saw collected before the grain dealers' shop, certainly 9 out of 10 had not suffered from innutrition and were not fit cases for gratuitous relief. No doubt most of them were suffering from a certain degree of distress, though in some cases it would have been hard to guess this when noticing the plumpness of the children; but if Government undertook to relieve every case of distress, it would be involved in an enormous expenditure which no treasury could stand.

62. Although a good deal had been done by the Inspectors appointed by the Municipal Committee, it appeared advisable to place these measures under the supervision of a special officer who could devote his whole time to them; and besides this, a new element had been introduced which necessitated some alteration in the system propounded in the letter of 26th September. This new element was the charitable fund, consisting of the subscriptions collected in England and the colonies to assist the sufferers from famine in Southern India. Of the effects of this magnificent contribution, more will be said hereafter. Certainly no one at the first moment could have realised from his imagination how great and beneficial they would be. It was, however, seen from the beginning that the relief of distress in the town was a legitimate way of employing such funds as these, either by giving help in money or food to those who could partly, but not completely, support their families, or by assisting artisans to start again in their trades and professions.

* * * * *

"Nothing has yet been spent out of the charitable relief money given for use in the Municipality, though during my inspection I observed numerous instances in which it would have been of immense benefit. I noted down case after case of weavers who had sold their looms (or had them sold by the harsh proceedings of the Municipality) or who had no thread to weave, or no sale for the woven cloth; and of the embroidery makers who had little or no sale for their tinsel thread: these were being relieved by a dole of grain at Government expense, whereas it would have been far wiser and better, and more conducive to their self-respect and to the good of society, to buy them looms or give them thread, or take over their produce at a price, and so encourage their trade and the power of supporting themselves. This might have been done with Government money, under the orders contained in the letter of 26th September, but there are some difficulties in the way of working those orders which it is well to avoid if possible. The cloths usually woven by most of the distressed weavers, and for which their looms

"Taking five as an average for each weaver's family, the expenditure of Rs. 14,247 has enabled 10,905 souls to gain a livelihood, who before were in the depths of despair and feeling the pangs of famine becoming daily more severe on them."

Not only was the selection of fit persons to receive this assistance made with much care, but their subsequent career was watched, and the inspectors were cautioned to put all necessary pressure on them to ensure that the money given was used properly. In spite of this, some conversations and frauds could not but occur.

"Deception has been practised, and detected by us to a large extent. I have sometimes gone into a weaver's house and, searching to find out any looms or other instruments, have found them out in the roofs or kitchens. Each beat inspector has his list of persons relieved, and I have made after-inspections of them as often as possible.

"I am glad to say that such after-inspections have, in most cases, shown that the money has been properly used; only in one or two cases have the persons run away with it, and used it for drink. I regret to say that one person in Mr. * * * beat received Rs. 40 to buy bullocks. The bullocks were brought to me, and I saw them, but I believe that the man afterwards sold them, and drank the produce."

But making all allowances for such mistakes and failures, the general result produced was most beneficial.

"I will give two beats as specimens: on 26th February in Mr. * * * beat I visited 31 houses; Rs. 486 had been expended. I found 69 looms at work, which supported 211 persons of different ages. On 6th March I visited Mr. * * * beat and saw 51 houses. Rs. 592 had been expended and got to work 95 looms, which, when I first visited the beat in November, were idle; in fact, were sold. These two beats give a fair average of the effect of the money."

"Besides the weavers, the market-places began to be filled by women selling vegetables, whose stock in trade had been purchased by Mansion House Funds. Various small shops were set up, and the establishment of other small trades gave evidence of the success of the operations.

"I am quite satisfied that the donors of Mansion House Funds would be satisfied could they have seen the effect of the distribution of their money. The people of this country are not demonstrative; but the occupied and happier appearance of their faces, and cheerful sound of the looms and winding wheels at work, would be sufficient to have shown them that their generosity was not misplaced.

The total account of Lieutenant Anderson's expenditure is thus shown:—

	No.	Rs.
Grants to weavers and other artisans	2,181	14,243
to petty shop-keepers and itinerant vendors	601	2,655
Repairs of 94 houses		552
Purchase of 32 bullocks for ryots		465
Doles in money to the sick		380
Clothing		5,841
Purchase of raw materials for weavers, &c.		1,505
Distributed by sub-committees		8,170
Grain dole		14,252
Miscellaneous		584
TOTAL		48,882

64. On Lieutenant Anderson's departure the duties of relief officer in both Pettah and Cantonment were made over to Captain Mander, who worked on the same lines and with the help of the same beat inspectors. His expenditure up to the 31st July was as follows:—

	Rs.
Capital to weavers	5,540
to other petty traders	7,413
Grants for house repairs	4,470
for bullocks and carts	1,247
Carried over	18,685

	Rs.
Brought forward	18,685
Grain dole	5,482
Money	965
Journey expenses	165
Miscellaneous	825
TOTAL	26,122

The names of the beat inspectors and my appreciation of their services are recorded in the minute written on my leaving the province (Appendix IV of this report), and on the 1st of July the Chief Commissioner was pleased to hold a Durbar and to confer on them *sanads*,* or certificates of honour, granted by the Government in recognition of their humane and useful exertions.

65. Another duty which had to be carefully looked to within the Municipality was the collecting together of wanderers and beggars, and making arrangements for their relief either on the railway works or in the camps. These orders had been carried out with very good effect by the municipal police; street deaths had been almost entirely stopped; the troops of beggars had dwindled down, and the distribution of broken victuals at the houses of officers in the cantonment, which had been both effect and cause of the prevalence of beggary, had come to an end. There were, however, a few small points still to be looked to, and vigilance had to be exercised by the superior officers to prevent the growth of laxity in the subordinates. A strong special establishment had at first been appointed for the service of the Municipality; there were fifty special police for the prevention of crime in the streets, and four to watch the railway goods station, where the grain-wagons were unloaded, twenty-five men and three officers to collect the sick and wanderers in the Pettah and the same numbers in the cantonment, thirty men to carry coolies or stretchers to convey the sick when unable to walk to the hospital, and twenty men to carry away the dead found in the streets. Towards the end of December it was found possible to dispense with nearly all of these, only two officers and six men being kept on to assist the regular police and six coolie-bearers for the sick. The system was as follows. Every morning at day-light a party was sent out accompanied by a cart or wagon from each police station to search for the sick and the beggars in their habitual haunts, and all these parties converged at a central police station, arriving there before 8 o'clock. The special relief officer would sometimes go with one party, sometimes with another, to see how they did their work, sometimes alone. Only the sick and weakly were collected on Saturday or Sunday, because it was impossible to send labouring people to the relief works on those days. On Sunday the work was closed, and if they arrived on Saturday afternoon they would have nothing to eat on Sunday. The ordinary number collected in this way was about 50 in the pettah, and 20 or 30 in the cantonment every morning; but on Monday mornings, after the two days' interval, the number collected was much larger, amounting often to 300 altogether. From these two central places they were marched, or if too ill to walk carried in a cart, with an invoice shewing their number, so as to arrive by 9 A. M. at an open space in front of the Pettah relief camp, where they were received by a special officer, who signed the invoice after counting them and returned it to the police officials. His duty then was to sort them and dispose of them in four different ways. The sick were sent to hospital, the very infirm and old to the relief camp, the emaciated and feeble to the special gang, and the able-bodied to the railway. The convalescents discharged from hospital were also drafted into the special gang after being retained for a short time in the relief camp. Children

* The *Sanads* were printed on parchment in gold letters, and were drawn up in the following terms:—

"Presented to Mr. * * * Beat Inspector, in recognition of good service freely rendered at Bangalore in aiding in the distribution of relief during the Famine of 1877-78."—Signed, J. D. Gordon, Chief Commissioner.

who had no parents with them, but declared that their parents lived in the town, and that they were not begging but playing about when caught, were sent back to the police to enquire into the truth of their story. The power thus given to the police of making what may be called indiscriminate arrests was a very large one, and required the use of more discretion than the ordinary police constables can be expected to possess, and it was necessary therefore to guard against its misuse by incessant supervision. The two special relief officers and the Assistant Superintendent of Police were instructed constantly to accompany the parties on their beats or to inspect the paupers when collected by them at the two central posts or at the Pettah camp, in order to see that no error was committed and no one improperly seized. They were frequently visited also by Major Moncrieff, Mr. Wingate, and myself at the latter places, and their history enquired into, and the cases were extremely rare at first, and soon ceased altogether, in which any one was brought in who had any employment or objected to relief work. The system was soon understood by the people, and those who voluntarily applied for employment used to come of their own accord to the place, finding this the easiest way of being set to work, as it avoided for them all the difficulties in the way of obtaining admission which beset those who apply by themselves.

66. The weekly provincial statement recorded after the beginning of February, the manner in which these paupers were disposed of, and the following table, giving the numbers for two months, sufficiently illustrates the procedure adopted:—

	WEEK ENDING									
	FEBRUARY					MARCH				
	2nd.	9th.	16th.	23rd.		2nd.	9th.	16th.	23rd.	30th.
Relief works	1,025	911	860	785		882	799	761	975	1,038
Special gang	329	442	218	158		134	100	86	110	216
Pettah camp	75	80	32	45		92	31	57	59	10
Hospital	64	55	65	42		31	68	34	113	30
TOTAL	1,493	1,489	1,175	980		1,079	998	898	1,257	1,294

The hospitals were now much concentrated and brought into fair order. The great Binni Mangala camp was closed on the 8th December; there being then only about 160 people in it, instead of the 15,000 who were fed there in September; and these were disposed of by sending them to work, to the special gang, or to the Pettah camp, according to their circumstances. There were 304 sick in hospital. No new cases were received; and as the patients recovered or died, the institution was gradually closed. The Sillidar Lines had long ceased to be an ordinary relief camp, no one but the sick being received; and on the 28th December the numbers in the infirmary were 261; in the hospital 224. These were transferred to the Pettah institution, and there was now only one relief camp and one hospital in Bangalore. The numbers in the hospital generally stood at about 400 to 500. A civil surgeon was in special charge of the place, with a staff of four native doctors under him, and a body of nurses, some of whom were paid, while others (the nuns from the Roman Catholic convent) gave their services voluntarily. In the relief camp the numbers were not large. They consisted either of convalescents from the hospital who required no more medical treatment; but were allowed a little time to recover strength before being put to work, of children about whose parents enquiry was being made before they were put into an orphanage, of a few very emaciated young men not fit even for labour on the special gang, and of old and feeble creatures who would never be fit to do any work, and who were sent to their homes with a little money for road expenses and a letter to their relief officer, asking that they might be put on the grain dole at home.

67. The special gang was employed on the earth-work of the new railway station close to the Pettah camp; it was at first the sole charge of a young military officer, and afterwards

was put under the same official who received the daily collection of paupers sent in by the Bangalore police. They were huddled close to their work, and a wall thrown round their huts to keep them from wandering off to beg in the town in the evening. The number of the gang stood at about 600; and as the average number sent in weekly was about 150, the average duration of the time that each one spent in the gang was about four weeks. In this time they recovered strength and flesh; often with surprising rapidity, and were then drafted off to work. But a difficulty was found to arise from the great difference in the scale of pay. On the special gang they received full or A pay and also a meal of cooked food, and they did very little work. When sent to the railway, they were classed as in the B class, received the civil or B rate of wage, and efforts were made to task them up to 50 per cent. of the ordinary labourer's task. The change from high pay and little work to low pay and more work was of course distasteful, and they would constantly desert the working gangs and try to shrink back into their old places in the special gang. To meet this difficulty, the special gang was divided into two classes, only the most emaciated getting A pay plus food, the majority getting pay only. But it was still found that the fall from A pay and little work here to B pay and more work on the railway worked ill; so on the 3rd January a further step was taken, only the most emaciated were allowed A pay, the rest received only B pay, and neither class got any food. The object of this was partly to lessen the change they experienced on being drafted to work, partly because we had some doubt as to the real effects of the large wage they got on the former scale,—that is, whether they really expended all the cash wage on food in addition to the meal of cooked food they received, or whether they saved part of it. The result of experience soon disposed of this doubt, for it was obvious that they did not improve so fast as they used to do, and some of them became disappointed and broke away into the town. After giving the experiment a fair trial, it was revoked on the 14th February; the two classes in the special gang received the A and B wage respectively, but each received also a half-pound meal of cooked food. This was found in the end to be the best solution of the difficulty, though the drop from B wage plus one meal with little labour to B wage alone and harder labour was felt still.

68. The rest of the daily police collection, i. e., all the able-bodied, were sent out to the extreme point at which the railway gangs were working: this was a place called Kingeri in January, about 10 miles from Bangalore; but in April the most distant gang had pushed on to Bidadi, 20 miles off. At first we had a great difficulty in compelling them to go; they would break away in bodies at a cross road, or would sneak off under shelter of a ditch. Two remedies were employed for this. These people were caught early in the morning, brought to the Pettah camp about 9, sent off about 10, and walking slowly and wearily along the road did not reach their destination till 4 or 5, and it was very late before they got any food at all: a place was therefore established half way, at which a meal of cooked ragi was given to all. At the same time a body of special police were enrolled, half of whom went out every day to conduct the coolies to the work. The combination of these two methods of encouragement and pressure was quite successful; and from this time the invoice, which went with the party, was daily signed by the receiving officer for almost the whole number that was despatched. On arriving at the place where they were to work, they were received by the Civil Officer in charge; Mr. Ozanne, paid a day's wage (or half a day's wage after the mid-way meal was established), huddled for the night, and next morning classed according to their strength and sent to the different gangs.

69. It was found, however, that the entire number who arrived and were paid at night never turned up in the morning, and even those who had seemed to be fairly settled on the work left it after a few days in an unaccountable way. This was especially the case on Sundays, when the work was stopped, and multitudes having nothing else to do strolled into Bangalore for a little

change, and instead of coming out by themselves preferred to be caught by the police on Monday morning, and sent out as new-comers, thus getting a full day's pay for the walk only. But Mr. Bride at the Pettah camp and Mr. Ozanne at Kingeri soon learnt this trick, and became in time able to recognise these habitual Sunday-goers; if recognised, they did not get more than half a day's pay on arrival, and if very incorrigible they received nothing at all. Besides these deserters, who were mostly able-bodied, there were a great many who fell out, and left the work through sickness. The majority of the people when they first came on the works were suffering from two diseases which frequently appear as the results of privation, itch and ulcers. If a man struck his foot with a pick-axe, a sloughing sore generally followed; and some cases of itch were so severe that the sufferers could not close the fingers of the hand or walk a step without great pain. Several men slightly trained in dispensing medicines were employed to go up and down the line with a pot of sulphur ointment and oil to anoint the itch cases, and a supply of warm water, simple dressing, and rags for the ulcers.* By the end of January these had nearly disappeared, but fever then prevailed in a very uncommon degree. The people who suffered from these diseases often felt too ill and dispirited to do their day's task, and would leave it to lie down under a tree. Efforts were made to have them hunted up and paid their day's wages, if it was clear they were not malingering; but among a great mass of people it was hard to do this, and the consequence often was that they lost their pay, and refusing to go into hospital grew weaker and weaker till they were at the point of death. About this time the huts were in great disfavour by reason of their being infested with fleas, which increased immensely in the cold weather; and very few people would inhabit them, the majority preferring to lie about in the open ground or under trees. This made it more difficult to find the sick when they first fell off the work, because of the population generally being so much scattered. The little town of Kingeri was the point they usually made for in the end, and although we had a large relief camp and hospital there, especially for such cases, many died in the lanes and gardens round the village, and on the road between Kingeri

* The following instructions were drawn up by Dr. Henderson, and circulated by the Chief Engineer, as to the treatment of these distressing diseases:—

"The best remedy for itch is sulphur made into a thin paste with oil in the proportion of about 1 lb. of sulphur to a bottle of oil. This is applied and well rubbed into the part affected once a day. The people suffering under it should be collected in one spot at the close of the day, and the remedy there applied under the eye of a trustworthy person. About 1 oz. to each person is an average quantity, and this may be placed in a plate round which four persons can sit, and apply it for themselves."

"For small ulcers an ointment should be made as follows:—

Gingely oil	14 lbs (one and a half)
Bees' wax	1 " (one)
Turpentine	2 ounces

"Heat the first two, and add the turpentine when cooling; or a very useful dressing can be made from

Carphor	1 part,
and	
Gingely oil	4 parts;

which also makes a good liniment for rheumatic pains in the joints.

"The ointment should be applied spread on a piece of cloth.

"If water can be had for washing both kinds of patients, the cure will be more readily effected.

"The following would be the probable daily requirements of 100 of these patients:—

Sulphur	6 lbs
Oil	6 bottles
Bees' wax	2 lbs
Oil	2 bottles
Turpentine	4 ounces
Cloth	6 yards
Chatties	6
Baskets	4
Scissors	1
Spatula	1
Plates, Mullays	24

"To each working gang or group of working gangs when contiguous should be attached—

1 Pandit, or man in charge, who can dress sores and supervise,

1 peon, and 2 coolies,

to receive Rs. 10, Rs. 7, and Rs. 6, respectively.

"The cost of their pay as well as of the materials required to prepare the remedies (amounting probably to Rs. 20 or Rs. 25 per man) per gang, should be debited to the work."

and Bangalore many sickly and starving people were to be met. The only remedy for this state of things is an active system of patrolling. A cart was sent out from Bangalore every morning accompanying the party of labourers despatched from the Pettah camp, with a special patrol in charge, and a small stock of cooked food, and with orders to pick up any persons found on the road unable to walk and to convey them to the Kingeri hospital. Another cart started with similar orders from Kingeri for Bangalore, and another patrolled the road beyond Kingeri, extra police were put on to visit the suburbs of Kingeri, the gardens, out-houses, temples, &c., in which the sickly people lay about to die. These measures were to a great extent successful, and after they were adopted no more of such deaths occurred. But every day the carts picked up from 10 to 20 sick persons on the road. Afterwards a similar system was extended to beyond the furthest point at which the railway gangs were working, or over 40 miles of road.

70. The State railway to Mysore was the one large relief work started under the new policy in the later period of the famine; and it is probable that every difficulty and every crucial question that are to be met with in the task of prosecuting relief works in time of famine were encountered here. Every relief work may be considered in two lights: first, as relief; second, as a work. Looked at as a means of giving relief to the famine-stricken, it was on the whole very successful, and its success was mainly due to the interest taken in the welfare of the people by Mr. Penny, the Executive Engineer, and most of his subordinate officers, and more especially to the admirable qualities displayed by the Civil Officer, Mr. Ozanne, who was put in charge of it towards the end of January. He lived on the work and gave the whole of his thoughts to the improvement of the system in all its details; every item connected with the welfare of the labourers was looked into personally by him; the bazar, the supply of food, the price of food, the sites for the huts, the sanitation, the hospitals, the medical treatment of out-patients, the police arrangements, the admission of new applicants, the classifying and ganging of the coolies, the measuring of the tasks and the payment of wages, and all was done in perfect friendliness and concord with the officers of the Public Works Department. The great mass of people who came to the work improved in condition and spirits and health, and were cheerful and contented on it. There was, however, as has been observed, much sickness, and there were a considerable number of determined idlers who never had worked hard in their lives, and whom no compulsion could force to work. Even those, too, who were good and steady workers, but not habituated to work as coolies, were seized in time with a craving to return home, and see how matters were going on in their villages and their fields; probably none of these stayed more than two or three months on the work, but many returned to it after a visit home. Again, when the work was first started, and heavy embankments had to be raised close to the town, it was impossible to enforce the distance test, and crowds of camp followers and townspeople flocked to the work, who fell off as this portion was completed, and the party was moved forward and huddled in a distant camp. The result of all these co-operating causes, sickness, nostalgia, idleness, improvement of prospects and the distance test, was gradually and steadily to reduce the numbers on the railway. They stood as follows:—

Beginning of November	20,398
December	20,700
January	18,387
February	15,600
March	14,647
April	12,332
May	10,809
June	10,806
July	10,419

And this decrease went on in spite of the daily additions sent out from Bang. amounted, as we have seen, to about 800 or 900 a week. But most of these, there is no doubt,

THE DECLINE OF THE FAMINE.

mile-stone on the Mysore road labourers should not be obliged to return every night to the Pettah. The tools must all be stamped, and, to lessen the temptation to receive them in Bangalore, none should be bought in the local market. Proper store-houses must be provided for the tools. Officers complain of being swamped by new arrivals. When they are fully employed as it is, suddenly 1,000 fresh coolies appear, and they are required to pay them forthwith. This is apt to throw out all the machinery. With a view to meet this difficulty it is best to go into the whole labour organisation of a famine relief division on this railway. I begin with the unit of the cooly gang. It should consist of 50 work-people besides children under seven years of age. There may be from 12 men, 24 women, 14 children, to 20 men, 20 women, 10 children. There should never be more men than women. The women should never be more than double the number of men. Perhaps the best proportion is 15 men, 25 women, 10 children. It should vary according to the length of lead. Over this gang is a head cooly. To every 4 gangs or 200 coolies there should be 1 mustering-writer. To every 24 gangs or 1,200 coolies there should be a sub-overseer or mestri. To every 48 gangs or 2,400 coolies there should be an overseer or supervisor. Two overseers' charges, or 4,800 coolies, is as much as should be given to an assistant or sub-engineer as his sub-division; and he will only be able to manage so many if the organisation is in thoroughly good order. Such a sub-division as this ought to occupy about 2 miles, the officer in charge spreading out or massing his labour according to the work to be done. The Executive Engineer's division should consist of not more than three sub-divisions, employing labour amounting to not more than 14,400 coolies, exclusive of children under seven years old. It will be seen from the above that each overseer will have attached to his section one cashier. While the numbers are daily on the increase, one of the first duties of the Executive Engineer must be to procure cashiers, mestris, mustering-writers, and head coolies. The Superintending Engineer will give him every assistance in this matter. The Executive Engineer should see that his sub-divisions are working up to full strength, and that the gangs have their proper proportion of men, women, and children. He should be in daily communication with the civil relief officer, and endeavour to the utmost to take on the labour he may have to give him. But he must take care that it is not sent where the sub-divisional officer is not ready to receive it, and generally a sub-divisional officer ought not to have his numbers increased from day to day. He ought to be able to take on fresh labour of, say, eight gangs (400 labourers) every alternate day, and they will be easier managed than if sent 400 daily. At this rate the numbers in the division will increase by 3,600 weekly. The relief officer ought not to deal direct with the assistant, but always with the Executive Engineer, who should know exactly where the fresh labour should be sent.

The following points have struck me to-day as requiring attention:— There is a general entire disregard for sanitation. Latrine trenches should be dug at convenient sites, and labourers forced to resort to them. If they do not, the head coolies should be fined. In the camps, especially, sanitary law must be stringently maintained.

The coolies sit a long time in the morning, waiting to be mustered or for their tools. This will be remedied, I hope, when proper camps are formed. In each camp there should be a drum sounded at sunrise, and each head cooly should thereupon carry off his gang (who would be in adjoining huts) and set them to work forthwith. The writer should muster them when on the work and not before beginning. The drum should sound again at 5 p.m., when all work should cease.

One of the camps I noticed unprovided with drains. Attention is required to this, as heavy rain may be expected.

Assistant Engineers must bring to notice any want of medical attendance, and they must be responsible for the sick in their camps. They should report if they are not visited by hospital subordinates properly supplied with drugs.

Code orders, Chapter I, Sections I-VIII, had not been carried out as to providing shelter for infants at a little distance from the work parties. This must be seen to, and officers must pay special attention to the condition of these children.

Complaints have been made of the coolies wandering into adjoining fields and stealing heads of grain. To stop this, and generally to keep order and decency, the Executive Engineer may entertain three police peons for each camp, paying them Rs. 7 per mensem, and giving them some distinguishing badge.

These orders were afterwards altered in a few minor respects, daily payment continued to be more common than was here contemplated, and the numbers under each overseer were lowered, so as to be more manageable, but in the main this minute formed the basis of the subsequent organisation of the relief work.

73. The next point that called for attention was the classification of the labourers. Under the Famine Code they were divided into A's, *i. e.*, able-bodied who could do 75 per cent. of an ordinary task; B's, *i. e.*, old and infirm people who could do 50 per cent., and specials who were not tasked at all. But, as has been mentioned, so long as work was offered near Bangalore, a crowd of people flocked to it, who apparently were not famine-stricken and were fully able-bodied; and as the distance test could not be applied here, without great trouble, it was decided to increase the task, demanding a full day's work at ordinary rates from such people; and thus to introduce a new class on a modified "piece-work" system. They were to be paid according to the work they performed, but not to be allowed to do more than a full day's task, or to receive more than a full day's pay; but if they did half the task, they received half the pay only. There were at this time two civil relief officers attached to the railway, and they were directed on the 7th December to muster all the coolies and to class them according to this scale; the new class of fully able-bodied labourers were termed A1's; the old A's who were tasked only 75 per cent. were termed A2's. The instructions given on the subject were these:—

"You should be careful, in classifying people in the 1st class, to see that they are not persons who have suffered from long innutrition, and have only recovered lately from a state of emaciation; the class should consist of persons who bear no signs of having suffered severely, and who are in good condition of body, and fully deserve the penalty of a fine for malingering."

In the gangs working near Bangalore, almost everybody was classed as A1; the gangs further off, to which the daily collection of beggars caught by the police and of new applicants for admission to work was sent, contained comparatively few. Thus, an Assistant Engineer, with 3,000 coolies under him, extended over 2 miles of the line, would have three different classes of labourers ganged together, and working about half a mile apart; the A1's who had to do a full task and received a wage proportionate to what they did, and could be cut down to nothing if they did nothing, the A2's who did a task less by a quarter, and received the A pay if they performed it and could be cut down to the B pay if they failed; and the B's who were expected to do half a full task, but could not be punished further than by cutting 3 pices of their pay, and that only when the non-performance was clearly contumacious.

74. This classification of the fully able-bodied as A1's was at first a purely restrictive measure: it implied—

"We doubt if you are fully entitled to famine relief, but as it is almost impossible to say for certain, and we don't wish to run the risk of refusing relief to any applicant, we will impose a heavier task and pay you only for what work you actually do, never paying for more than a bare subsistence rate as a maximum."

The step was acquiesced in willingly by those who lived in Bangalore and received work near their homes. But among the parties at the end of the line, where work on any terms was not so attractive, it led to desertions, and constant attempts were made to slip back among the second class or A2's. It seemed advisable, therefore, to encourage these labourers by the hope of reward, and with this object a further change was introduced in January. The A1 class were allowed the advantages of piece-work rates, that is they were permitted to do more than a full task if they could, and if they accomplished it, they received a proportionate increase in their pay. This was a considerable stimulus to those who were of a thoroughly strong physique and accustomed by the habits of their life to this kind of labour, and many of them were able to earn more than an ordinary day's pay at relief rates. But there was still a listlessness among many of them, which even this prospect of larger earnings could not overcome. The ordinary full task, unless the soil dug was exceptionally hard and rocky, was for a man to dig 4 cubic yards of earth, which one or two women carried, according to the length of lead and the lift: and one might see two such diggers side by side, both of them apparently equal in throws and muscles,

but one turning out double the work and receiving double the pay of the other. The conviction was forced upon us that famine, even when the tissues have been restored and the frame seems to have recovered its fulness and outline, leaves as its effects certain constitutional changes which the most practised eye cannot trace, but which incapacitate the individual from great physical exertion. Something, too, must be attributed to the depression of mind which necessarily followed on such losses as most of the labourers had experienced, and their hopelessness of ever recovering their former position in the world.

75. I have already stated, in the case of the Timanhalli tank, the principal theoretic objection to the introduction of piece-work into famine relief,—and it is useful and interesting to compare these with the practical experience gained on the State Railway,—and the opinions of the engineering officers engaged in carrying it out. Of the four heads of objection there set forth, two did not apply to the present case: there was no danger of getting the work finished too soon; and as only the fully able-bodied were employed at piece-work rates, there was no question of exactly proportioning tasks to degrees of strength. The other two arguments were (1) that the work might prove too attractive; (2) that the payment for the piece would not be fairly distributed between the men, women, and children engaged on the work. These points are illustrated with curious fertility by a report drawn up by Mr. A. Penny, C.E., the Executive Engineer in charge of the work, and a memorandum submitted to him by one of his Assistant Engineers, Mr. Hoernle. It so happens that each of these two officers devoted his attention mainly to a different head of objection, Mr. Hoernle's paper mainly touching on the first, Mr. Penny's on the second, of the topics specified above.

76. Mr. Hoernle's chief conclusion is that piece-work is unsuitable to most classes of labour, and is unattractive where it is suitable. In two cases where earth had to be dug from pits and carried to an embankment, the rate was fixed at 8 cubic yards per rupee. The task was such that one man and two women, who at subsistence wages rates would receive 5 annas 10 pices per day, earned as much as 12 annas, being skilled labourers and accustomed to digging; but the average receipts of the whole gang were only annas 5-8 in one case and annas 5-3 in another, the relief wage being annas 5-10. The piece-work system, therefore, did not achieve the results claimed for it. Even in a spot where it was easy to carry it out, where the pits were all of the same size, and where the labourers could easily judge for themselves how much they had dug and what they had earned, still the prospect of earning more than enough to subsist on, did not stimulate the majority of them to increased exertions. The other instance quoted was a cutting about 9 feet deep, where the difficulty arose from the varying hardness of the soil as they dug through it and from the gradual narrowing of the cutting, which made it difficult for those inexperienced labourers to judge for themselves the quantity of work they had done. At first for every running foot of the cutting, a layer one foot in depth represented so much work done; but as they got lower and the superficial area decreased from the sloping of the sides, the layer had to be 1 foot and then 1½ feet, in order to represent the same cubic contents, and this the coolies could not understand.

"I found, in practice that whenever I specified a certain depth, the pit contained less than it should have when measuring up the work in the evening, owing to the length and breadth having been reduced at the bottom and the depth varying, being perhaps 1 foot 7 inches at one end, and only 1 foot 4 inches at the other, so that the men could not be paid the full amount. This used to make them suspicious that they were being cheated."

"Later on I merely told the men that they would be paid at a certain rate per cubic yard, and that they would be paid every evening for every cubic yard or fraction of a cubic yard excavated. This arrangement, however, had the disadvantage that the men never knew exactly how much they had done, and consequently how much money to expect, and curiously they invariably over-estimated the amount of work done, and were almost always disappointed when they received their pay."

than two-thirds finished. This used to discourage the non-professional labourers: they could not be brought to see that the fault lay in their own lack of co-operation, not in the hardness of the task given.

"I am distinctly of opinion that it would be impossible to carry on a relief-work satisfactorily on the piece-work system alone. The associations to undertake a 'ripee-pit,' or any other unit of work, must be perfectly voluntary ones; and there must be the regular task-work for each malcontent to fall back upon as soon as he or she ceases to agree with his or her temporary partners in the pit. This perfect liberty is the only check upon the innate rascality of some of the headmen, or representative men, who undertake the pit or piece of work with the sub-divisional officer, and draw the whole of the money for the job when finished.

"As a means of encouraging the best of the famine labourers to rise above the dead level of the famine wages, the piece-work system is invaluable."

78. These views appear to me to be thoroughly sound and practical, and I think the general conclusion to be drawn from the facts and experience then gained is as follows: that on all large relief works there should be a piece-work gang into which the able-bodied should be drafted, and which others not classed as able-bodied should be allowed to join if they wish; that the system should only be tried in places where the quantity of work can easily be estimated by the labourers themselves, and the rate remains unaltered for a long period; but that the attempt to carry on famine relief solely on a system of piece-work payments must necessarily result in failure.

79. In the earlier days the task of paying the coolies took (as Major Moncrieff's note records) an undue length of time; and this made the system of daily payment unpopular with the departmental officers; but before long, when the system began to settle down and the writers knew their work and the overseers their people, the business became easier and was got over much more quickly; and the people preferred it so much, that although sanction was given by the Code to the introduction of two-day and three-day payments after a short period, most of the parties were paid every day to the last. The payments were ordinarily made on nominal rolls. On these the attendance was marked off in the morning, and in the evening the roll was called again and payment made as each one answered to his name. When the gangman had his gang marshalled in the order of the roll, this took very little time. Sometimes, again, they were paid at the morning roll call for the work of the preceding day: this had the advantage of collecting them early to work. Mr. Rigg, in Hassan, elaborated an ingenious system of tickets. The roll was called in the morning, the tools distributed, and the coolies sent off to work. At some time during the day, the overseer or Assistant Engineer would come round and distribute tickets to those found at work in their places. The tickets were made of tin, stamped differently and of different shapes for men, women, and children, for the A and the B class. In the evening no roll call was necessary; the people marched up in order to the pay table headed by their gangmen, each presented his or her ticket and was paid the sum it represented. In this way he found it easy to pay 1,000 or 1,200 coolies in an hour. A further extension of this system is possible, though it was never actually tried, under which the tickets should pass, as token coins, with the local trader: this would save the trouble of daily payments. Once a week or once a fortnight the officer in charge might bring out his pay table and cash all tickets which any of the coolies had preserved, but as a rule they would pass into the grain dealers' hands, who would present them for encashment in a lump. The only danger this method involves is the danger of forgery; but that risk would hardly be a serious one, except, perhaps, near a large town like Bangalore. It would be extremely unlikely that any plausible forgery of tickets could be executed on a work carried on in a rural district.

80. The most difficult detail of all to carry out efficiently on a relief work is the exaction of the prescribed task. There is no duty which requires more careful attention, more unflinched temper, or a stricter sense of justice. On roads where metal is being collected or broken, it is easy: a gang of 5 has (for instance) to break a cubic yard of stone, and it is easy to go round in the

evening and measure 100 heaps, and decide what wages have been earned by each set in a party of 500. But on the railway embankments and cuttings this was more laborious, and much work, such as smoothing, levelling, sloping, tamping, and watering, can hardly be measured at all. To measure each individual cooly's work is, of course, impossible. The smallest set conceivable would consist of 1 digger and 2 or 3 to carry away the earth; and the sets often consisted of 3 or 4 to dig, and 9 or 12 to carry. These would be treated as a unit, their task marked out in the morning and measured up in the evening, and punishment would follow on any considerable deficiency in the amount done. But here, too, discretion is required, for this implies punishing all for the fault of a few. If the group consists of a single family, or has come together of its own choice, this would be just; but if it consists of a number of individuals who do not know and cannot influence each other, the punishment often comes hard on the diligent. Hence it is necessary to observe the groups, and if certain members obviously malingers, to take them out and fill up their places with better coolies, putting all the idle ones into one group. If the diggers finish their task but the women do not carry away all the earth, the women only should be out; if the women carry away all that is dug but the men have not dug the proper quantity, the men only should be punished. Mr. Penny's remark on this subject may be quoted with advantage here:—

"The *modus operandi* was to divide a large gang of two or three hundreds into small parties, and task each party according to its strength. A unit of two 'getters' of earth and four 'carriers' (where the lead did not exceed 100 feet) was fixed at. The getters used indifferently a pickaxe or a mamati, being supplied with both tools. From two such men a task in ordinary soft soil varied from two to eight cubic yards per day according to strength. The men who could 'get' between 6 and 8 cubic yards per day between the pair of them were called A1; those pairs who could not 'get' more than from four to six cubic yards were considered A2; while the pairs who could turn out no more than from two to four cubic yards were termed B; below this outturn the workers were called 'specials,' and were treated with especial tenderness. The number of carriers (always women) was increased or diminished according to the length of lead. The carriers were always paid in full when none of the earth excavated remained unremoved at the end of the day, no matter how lazy the men may have been.

"Unceasing vigilance was required to prevent comparatively strong people from slipping quietly into the category below them, and there easily earning the daily wage without cuttings. The difficulties, however, were surmounted, and task-work soon became the normal state of affairs all along the railway. Not only did every overseer know how much work he had to exact for a full day's wage, but every labourer knew precisely how much he was expected to do in order to avoid cuttings.

"Still they would not always do what they knew had been allotted to them."

The main point is to keep the groups small enough to be able to distinguish where the fault lies if the task is unperformed, and yet so large as not to make it impossible for the supervising officer to have a discriminating knowledge of the amount of work done by each.

81. The system of the sliding scale requires constant changes to be made in the rate of wages according to the changes in the price of grain; this, though equitable in itself, was not the custom of the country, and it was found to be a frequent source of suspicion and irritation; the people, if on one day they received less than they had received the previous day, could hardly be persuaded that they were not being defrauded by underlings. It was therefore thought better to strike an average and to lay down a general rate which should approximate to the rate of the sliding scale, and should not be altered for every change of price as long as prices ranged within certain definite limits. At this time the price of common rice varied between 12 and 14 Rs in most districts. The rates of wages, therefore, were fixed as follows on the 14th November:—

On the 28th December, prices having for the most part got cheaper, the B rates were lowered to Re.0-1-9 for men and Re.0-1-4 for women; and on the 11th February, as there had been a slight rise in price, the rates were raised again to the figures fixed on 14th November. The grain used in these calculations was rice, as it was found that this was almost universally consumed. Most of the labourers had never eaten rice as a regular diet before; they were more accustomed to ragi, and it is the more nutritious of the two, but the efforts made to induce them to return to that diet were in vain. They would not buy ragi flour for fear of adulteration; and they were too tired when they came off work to grind their own ragi, although on several works grinding-stones were provided for them by the officer in charge of the work. It was therefore found necessary to base the wage rates on the price of the food they actually consumed, —rice, —although ragi was a little cheaper and would have been better for them to eat. On the whole, it seems to me that this modification of the sliding scale system is the best, —namely, not to alter the wages for every slight change in price, but to keep it uniform so long as the variations in price do not exceed certain limits, and to change it from time to time, as occasion arises, by an order of the head of the department, not of the local officer in charge of each work.

82. The more the numbers decreased, the more desirable it seemed to concentrate labour from other scattered works upon the railway, and great efforts were made to do this. There were at this time (early in December) about 4,000 labourers employed on some civil relief works (collection and breaking of stone on the road) in the Anekal taluk of Bangalore, from 20 to 30 miles distant from the railway; they were doing very little good there, and it was obviously desirable to move as many of them as possible over to the railway. The Chief Engineer and I visited the roads first of all to satisfy ourselves what the character and condition of the people was.

"The great majority of the labourers were found to be in good case and apparently in no need of Government relief. But some of them may have families depending on them, who would suffer severely if employment were withdrawn. About 20 per cent. of the whole number were, in our judgment, emaciated and in great distress, and these at least must be provided for and not turned adrift."

The following instructions were given as to the method of procedure in closing the works and transferring the labour to the railway:—

"The first thing to do is to declare that that portion of the work is stopped, but that all labourers on the nominal register will continue to get pay till they are disposed of in the manner to be laid down; this will probably take from one to three days in each case.

"Next, the special officer should enquire into the case of each labourer and see how far the Charitable Relief Fund will go in supporting them. To those who are cultivators and have land and crops, he can give as much money as is needed for their sustenance till their crops are ripe; if their land is waste, and they have no means of cultivating it, he can give them money for bullocks, seed-grain and food till the next crop comes. To those who are weavers, he can give money to re-purchase looms if their looms are sold, to buy thread, and to start again in their profession. In this way a large number will, it is hoped, be restored from the road work to their natural employment. As all the labourers come from adjoining villages, the enquiries necessary for these gifts will not take long to make.

"He should next separate the remainder of the labourers into two gangs:—

- "(1). Those who are emaciated, feeble, and sickly, or those who are able-bodied but who can satisfy him that they, or those dependent on them, are in absolute want and would suffer severely if not employed.
- "(2). Those who are able-bodied, and of whom it is obvious that they are not in immediate want, and who are not fit objects for charitable relief.

"The first class should contain all those who, on a liberal interpretation of the rules, would be admitted to a relief camp if they applied.

"The people in class (2) should be told that if they will volunteer to go to work on the railway, they will get an advance for the road and a ticket of admission; but no compulsion should be used. If they refuse to go, they will not be re-admitted on any civil relief work. Those in class (1) should be urged and induced by every kind of persuasion to go to the public works. They should be told that they will be marched there by easy stages, and fed or paid on the road; a day should be given them to collect their cooking utensils, &c., and they should be paid for that day, and on arrival they should be placed on the special gang and fed, as well as paid, till they grow strong."

* * * The prospect of full pay on the A scale, plus a medal, should be held out to them, together with the promise of a cloth and blanket on their arrival there. With these inducements, and the exercise of tact and firmness, it is hoped that they may be induced to go. If they refuse, they should be told that they will be received in the relief camp in case they are in want. Their names should be taken down and given to the special relief officer of the taluk, and their case must be entrusted to the operation of the rules for village inspection, the sheikhdars and patels being ordered to look after them carefully."

The people on one of the roads were inspected by Mr. Ozanne, whose report shewed that very few of them were absolutely in severe distress, or would be unable to support themselves by local labour on the work being closed, even if they refused to go to the State Railway. It is but fair to add that the labourers on this road were in much better condition than those on other works in the taluk.

The following extracts are of interest, as describing their position in life:—

"Gangs Nos. 3, 4, and 5.—Two men, 27 women, and 3 children are willing to go to Kengeri, but 5 men and 105 women refuse. Of the refusals, 3 men and 24 women belong to the Commissariat slaughter-house, and are the wives and children of persons there in receipt of pay. Eight of Baisandra, of whom 7 are wives of stonewaddars, fat and strong; and the 8th is an old sonar woman who has children at home. Two are barbers of Begur, to whom I have promised a money dole to enable them to eke out a living at their usual work. Five are women, low-caste weavers of coarse cloth, of Katalpalyam, whose husbands ply their usual trade. Nine of Blackpalli; all women, but 2 boys. Of these, 6 are market gardeners, who have gardens; 1 barber and 2 baniahs, all in good condition. These will no doubt go to Kengeri, though they now refuse. Two of Arguda, wives of earth-waddars, whose husbands are now employed in field work. Nine of Begur, of whom 5 are weavers whom I have assisted by advances, 1 beggar and 1 gollar woman (the latter shall receive a money dole), and 2 others with parents at home. Eight belong to Siddapur near the Lalbagh. These usually live by selling grass, and there is no reason why they should not now. Eleven are from Channepalya, who are usually employed as grass-sellers and will go to Kengeri if they cannot make their living otherwise. Three are weavers of Upparhalli, to whom I have given a note to their beat asserter requesting him to give them advances. Two are ryots, who say that they have husbands and that their crops are fair. Of Palypalya, there are 8 persons; 4 of whom are Mussalman stone-breakers. Three Mussalman waddars and 1 Vokkaligar who is a day labourer. Of Waddarpalya, there are 7 women, wives of professional stone-breakers. Of Madavar, there are 12 women, of whom 8 are low caste; all are day labourers."

"I think that these details will show that the people on the work who are likely to desert, if it is stopped, are persons who are not in present need of Government assistance, and are not the class of persons whom it is desirable to keep on a civil agency work, where little work is done, and which is intended to help the better class of village residents who have been thrown into great want by the famine. I carefully inspected the work-people, and with scarcely one exception they are well clothed and in first rate physical condition. Many will earn more at Kengeri, and the outturn of work will be more productive to Government than it is now."

In the end a considerable number were moved over to the railway, arrangements being made for halting and feeding them midway, and for admitting them immediately on their arrival; but the majority declined to go; and as at this time the harvest was being cut, and there was no anxiety about their means of supporting themselves, this refusal was not felt to be a matter of serious regret.

83. The special relief officers who were applied for in September, and whose services were granted by the Bombay and Oudh Governments, and the Bengal and Bombay Military Departments, arrived during the course of October and November. The new contingent consisted of three Bombay civilians, ten officers of the Bombay Army, seven of the Bengal Army, and one of the Oudh Police. Nine officers of the Mysore Revenue Survey had already been transferred to Famine Relief work, and seven other gentlemen, either belonging to the Uncovenanted Service or not previously engaged in Government service, were employed in the same way. With this staff, and with the assistance of such officers of the Mysore Commission as could be spared from the regular work of the districts, the Famine Department was now fully manned. Two of these officers were employed in the Municipality, and three (at first) on the State Railway; the rest were placed in charge of taluks under the immediate orders

of the Deputy Commissioner of the district. They were distributed thus: in Bangalore seven, to seven taluks, the two taluks in the south-west corner not requiring special attention. In Kolar, five special relief officers had charge of five taluks, the rest being looked after by the district staff. In Tumkur each of the eight taluks had its special officer. In Chitaldrug the five worst taluks, those in the south and east, had each a special relief officer. In Kadur there were two officers to the two bad taluks; in Hassan six, the remaining three taluks not requiring special supervision. In Mysore only the Mandia taluk needed help, and two officers were posted there, one of them being in bad health and unable to move about much. Thus thirty-five taluks in all were provided with special supervision. In the minute which is printed as Appendix No. IV to this report, I have recorded my appreciation of the services of those who most distinguished themselves in this work; and it is only necessary to add here that the zeal and intelligence shewn by many young military officers, who had been hitherto unaccustomed to deal with natives of the country and were altogether inexperienced in civil administration, seemed to me quite remarkable, and did the highest credit to themselves and to the honourable service to which they belong. The duties of the special relief officer were at first mainly three: first, to watch over the relief camps and see to the careful carrying out of orders as to the food, the treatment of the sick, the discipline, and the relegation of those fit for it to relief works; secondly, to assist and co-operate with the Public Works Department officers in charge of relief works, and to look after the classifying of the gangs, and the sanitary and bazar arrangements of the camps; thirdly, to inspect in turn all the villages in their taluks, and gain the confidence of the people, to watch every indication of improvement or deterioration among the poorer classes, to use all means short of compulsion to induce those in need of relief to accept the means provided, and to see the grain-dole system properly enforced. Each special relief officer sent up to me direct (through the Deputy Commissioner) a weekly diary giving a summary of his proceedings and a report of all noteworthy circumstances observed by him. These were found very useful, both in keeping me informed as to the condition of the country, and also in enabling me to check any indiscretion of judgment or excess of zeal, and to stimulate any want of energy that might be observed. I give below some extracts from these diaries which are interesting and valuable, as giving the vivid and recent impressions made on the minds of the writers by their inspections.

Extract from diary of Lieutenant C. H. Des Voeux, Taluk Hoskote, District Bangalore, dated the 22nd November 1877.

Orehalli inspected; a good deal of distress. I found four women and one man in different stages of starvation suffering from dropsy, ordered them to be fed. Out of 35 houses in the village, there are only five left with people in them. Patel is dead. Little or none of the land about this village has been cultivated. Injenhalli inspected; not very much distress; people living on roots and herbs; one woman starving and suffering from dropsy, and one sick man starving. Very little land is cultivated about this village.

Extract from diary of Captain E. S. Ludlow, Deputy Commissioner of Tumkur, dated the 23rd November 1877.

The crops around this village are decidedly good. Setting aside the lands that in ordinary years lie fallow, only three out of 27 numbers (i.e., survey-fields) are reported to be waste this year. Three people go to the works, and some of the villagers are employed by the Forest Department. Village, on the whole, decidedly good.

In sad contrast to the above stands the village of Mumarkenhalli, which adjoins Doorgadaballi. Visited every house in the village with the following results—

- (1). Ahmed Sabi, husband and wife alive. Gone to works. No land, was a shikmidar (i.e., under-tenant of a ryot). Lost both his children in the relief camp.
- (2). Chikka Wokligar, four persons. None died. Three present, one gone to work. Woman had. One calf left out of the family cattle. Pays Rs. 6-10-3 assessment; only paid Rs. 0-3-0. Land waste. Sent the family to the works. Gave them Rs. 10.
- (3). Ramah Wokligar died ten days ago. Wife gone to her

- (4). Chickappiah Wokligar dead. Wife died. Three children alive. Two of them bad, supported by aunt, who pays Rs. 7-15-3 assessment, and has three head of cattle. Gave to aunt Rs. 5.
- (5). Ramah, dead. Wife alive, from home, being at work. Has no land. Deceased cultivated as a shikundar. Went carefully through the house, and at first could only find one pretty little girl, who was, of course, terrified to a degree, but the promise of rupees if she would accompany me to my camp elicited from her the fact of there being another child in the house. The child was then discovered stowed away in a dark corner, and a more frightful object it would be difficult to conceive. The child was being evidently starved to death. Gave the family Rs. 5, and gave orders about the children being taken to the relief camp.
- (6). Hunoofnuttea gone to work with his wife. Two children dead.
- (7). Henniale Talwar. Has a wife. No children. No land. Works as a labourer.
- (8). Dodda deserted.
- (9). Dalee Wokligar dead. Wife died some years ago. No children. His brother Narsiah, who also lived in the house, dead. Three children alive.
- (10). Chickee gone to the works.
- (11). Dalee in the relief camp.
- (12). Narsiah gone to works.
- (13). Telegar Ramah dead. Wife and two children deserted.
- (14). Somanhalli Byrabis, wife's house, woman dead.
- (15). Venketappah, man and woman being sick; child bad with fever.
- (16). Redgur Esah Wokligar. None died. Land waste. Say they are badly off and no cattle. This I am sure is not the truth.
- (17). Seelingrah Setti, Bunjigar caste, all right.
- (18). Dalee dead.
- (19). Kal Bhyra, dead. Sister dead.
- (20). Fakrodin. No children. Deserted his wife.
- (21). Pette Harwomali, dead; widow Sunjeenie and two children go to work; very poor; gave her Rs. 5.
- (22). Rungah and wife. Both alive. None dead. Village tulwar in good condition.
- (23). Lalla Meah, wife and family deserted.
- (24). He and his family have deserted.

I remember this place before the famine as a well-to-do village, but it is now deserted-looking to a degree. Very little land under cultivation.

Extract from diary of Lieutenant C. Nicholetts, Taluk Chicknaikanhalli, District Tumkur, dated the 22nd November 1877.

There were formerly about 100 inhabitants in the village. But this number, through death, has been reduced to about 25. Many of the houses are quite empty. The patel himself died in the kitchen. The people live on wild ragi. All the cattle have died. There is no cultivation in consequence.

Godanahalli.—Between this and the last village the ground is entirely uncultivated owing to the villagers having lost all their cattle. The village is a very large one, almost destitute of inhabitants, they having about all died. Those surviving live on wild-ragi.

Extract from a diary of Major Armstrong, District Chitaldrug, dated the 27th November 1877.

This village had perhaps the most severe outbreak of cholera of any in this province in 1876. It one time contained about 275 or 280 souls, and of this number about 100 fell victims to the disease in about 48 hours, and a large number besides were attacked. I at the time visited the village and several times afterwards, and from the enquiries I made I am perfectly convinced that the outbreak was solely attributable to one cause, viz., the pollution, by some cartmen journeying from Bellary towards Shimoga, of the only drinking-water well of the village, situated on the high road. One of their number having died of cholera, the others washed deceased's cloths in the well.

Extract from diary of Major W. Hill, District Hassan, dated the 28th November 1877.

When returning to Nursipur, went some distance out of my way to visit a small group of villages in which casually heard that great distress prevailed.

Had time only to make a house-to-house inspection of the first-named village; the Circle Inspector had never visited it. There was no patel, and no register had been opened. Found two cases of starvation, one woman, widow of a ryot, with four children, all very emaciated. Half the house fallen down; another widow of a kurber (shepherd) in a thatched hut with a girl of 7 dying of starvation. She had lost a boy two days before from the same cause. Tried

to get food cooked for them; but all the villagers said they had none to give, as they were living on aloe roots and greens themselves. So gave out a few annas wherewith they could buy grain in the neighbouring villages. Visited every house and poked into every corner, looked into pots, but found only roots and greens. The houses of ten of the ryot caste were in ruins, the occupants in two cases having been reported to be dead, and eight gone to Coorg. The houses of five kurbers were in ruins, two dead, and three gone to Coorg. Two houses were shut up, the owners being absent. Six ryots had a few head of cattle and sheep, and seemed from their emaciated condition to be in distress. Urged one old man, whose son of 22 was very ill and emaciated, to sell some of his sheep (he had 13); but he refused, saying he was keeping them to meet the assessment which he would have to pay. The five kurbers remaining in the village seemed also badly off, though they had all a few sheep and wool collected in their houses to make cumblies (blankets). One of them, who had sold half the roof of his house, offered me a newly-made cumby for four annas, saying he could get no sale for them. Half of the lands in these villages are uncultivated, and the only crop put down is a late gram crop for which I was told they paid as much as 1 rupee for 2 seers of seed.

Extract from diary of Mr. G. K. Betham, Taluk Tumkur, District Tumkur, dated the 3rd December 1877.

Went on to Godahally and did house-to-house inspection there, visiting every house. Population by census 318. Number said to have died 47. Population remaining 271. Houses last year 70; this year 32. Total acres in village 652, of which about 488 are cultivated in a good season and about 300 this. Relieved a good many cases from the Mansion House Fund.

Extract from diary of Captain D. Cowie, Taluk Devanahalli, District Bangalore, dated 9th December 1877.

Norayenhally is an Inam village. On visiting this village I was at once struck by the fact that every ruin was occupied by one or more people, and it was very apparent that the remaining families had split themselves into detachments in the hope of each detachment getting a separate help. The amount I have been giving to each house-owner has depended partly upon the number of mouths to be fed, the means of livelihood, and the condition of the occupied house or houses. This was clearly an attempt at deception, and not being able to place any faith in the statement of the jemadar, I had to rely entirely on my own observations. The amount of cultivation is about half the usual extent, and the crops are fair, while about seven or eight houses out of a total of twenty are deserted.

This is a Government village, and has a number of deserted houses, none of the owners of which have returned. I found here one case of a ryot who had sold everything, but still had possession of his land, which I inspected and found with a miserable crop of kulthi on it. This man and his brother (in-like case) were keeping themselves by cooly work, and are fit persons to be assisted by the gift of a pair of bullocks to enable them to take the status of ryots once more.

Extract from the diary of Mr. W. E. A. James, Taluk Anekal, District Bangalore, dated 3rd December 1877.

I visited the village of Udigar Kulhulli. This village has suffered more from famine and disease than almost any village I have seen. It was a prosperous village of more than fifty houses. Now there are not twenty, and they are hardly inhabited.

Last year the crops completely failed, and many of the inhabitants left to find work elsewhere. In March the cholera came, and in one week fifty-three people died, so the patel and shanbhog informed me. In one house were two boys about 12 and 13, the sole survivors of a household of fifteen, the rest perished in two days of cholera. The bullocks have all died, and the villagers were unable to cultivate ragi, but they managed to sow a little cumboo (bajra) and kulthi; the former crop was attacked by a blight and perished, and the latter does not look flourishing. I had a bag of 180 rupees with me, which I immediately distributed to nine ryots, and I have promised them some more. The whole of these people have been earning their living on the Kadgodli Relief Road.

Extract from the diary of Mr. E. C. Ozanne, District Bangalore, dated 15th December 1877.

Jusultanj Poollya, the patel, says the madigars numbered 200, and now not 50 are left, and most of these are emaciated. They went in a body to the Binni Mangala Camp, and are now back. In Devanahalli, the villagers boast that no one has from the commencement gone to a relief camp, but the 51 on the register, chiefly drowsical and emaciated, show that it would perhaps have been better if they had. Of these 51 I picked out 11 for Mr. Lamb's special gang, 5 for the Mansion House Fund, and 16 I kept on the grain register. Of these 6 belong to one family, all women. At Madiwal and Jarganahalli there were relief camps, and it was an object in my visit to-day to detect any outsiders still living near the old closed camp in Madiwal and Jarganahalli. I did find a few, but less than I expected. One family of Hoskotta and another of Vurthur I found living in roofless houses,

very emaciated, and living by begging; in the sheikdar entered some of them in the register. The Hoskotta family of five persons I persuaded with great difficulty to go to Lieutenant Lamb's gang, and the Vurthur family I relieved with a dole and started them off to their village, promising to visit them in a few days and give them money to re-build their houses. These were all Holaras. I met an emaciated weaver woman from Anelal at Jarganahalli. She says she was turned out of doors by her family, and she gladly started off for the special gang. I sent one orphan and one old woman, Agolea, who had been absent on the day that the inmates of the camp were taken to Kengeri, to the Sillidat Lines. The villagers at Karaganahalli are chiefly tiglars (market-gardeners), and they are now prosperous. Their gardens are flourishing, and they resented my curiosity in looking into their houses.

Mudval.—On the road-side meeting with a large number of low castes, and with many disabled ryots, gave scope for considerable expenditure from the Mansion House Fund. Gave 800 rupees for bullocks to-day. In the evening visited Bomanahalli and its hamlet, which is composed of tenants of a Bangalore landholder. The total number in the hobli on the register is 214, therefore I have seen more than half, and I am satisfied the sheikdar has done his work well. He has visited the villages thoroughly, as the fact of my having had to add none proves. Those whom I took off were emaciated and require relief. With great trouble they were persuaded into promising to go to the special gangs. This last remark refers to the villages, except Yellahanka itself. The ryots of the villages I saw to-day are rarely without exception prosperous. Their crops are not good, but they have cattle, and are clothed and in good condition. As a rule, the only ryots I have found suffering extremely are the gollars and tiglars, and they are all vakligars in this part of the taluk. Except Narsingpur, the houses are all standing. A part of Jalpulli must be excepted too, but the houses there were destroyed by a fire. I gave four of the ryots money to re-build. Narsingpur is half depopulated, though I think its downward career began before the famine. I gave one pair of bullocks here and two pairs at Dasserahalli. The numbers on the A register at Pring and Jolhulli must be explained. Half the former village consists of holaras and madigars who lived during the famine at the Dasserahalli camp, and those on the register are persons who have been ill since the camp was closed. They were entirely demoralised there, and have not recovered their self-respect. A week's light work on good pay would make them able to support themselves. In Jolhully half are low castes and the rest are wadders who must be left till the crops are ripe. * * *

Extract from the Diary of the Deputy Commissioner of the Hassan District, dated the 2nd January 1877.

A woman and her child were sent to the relief camp with a view to their being fed a few days, and then sent to work at Akki Hebbal. This was on the 7th November, but they returned next day, and the woman died on the 31st December of dropsy, &c., &c. I was informed, really, I fancy, of starvation. The boy (an orphan) is miserably thin, and as he has no relations in the village, I ordered him to be sent to the camp at once with a view to his being sent on to the orphanage at Hassan, whence if any of his relations wish for him, they can claim him. He cried hideously at the idea, and wished to live on in his village, selling a brass pot, &c., that he had. However, I found these articles were not forthcoming, so told him he must go.

84. During the month of December, Major Moncrieff and I made a tour through the district of Tumkur and a corner of Chitadrug, visiting each of the 8 taluks of Tumkur and inspecting all the relief works and the Tintanahalli Tank. The Public Works Department had been much strengthened by this time, and the Executive Engineer of the district had under him three Assistant Engineers and several subordinates in charge of parties averaging 500 each in number and employed on metal collection along the roads; most of the civil relief works had been closed, and large bodies of labourers transferred to the professional officers; some of these transfers had been comparative failures, and some had been made with remarkable success, the labourers going over *en masse* with hardly any desertions. It was difficult to ascertain the reason for the success in one case and the failure in another; but on the whole, two principal causes may be alleged: the earliest attempts at transfer were the least successful, the people being suspicious and not understanding the object of the move; and secondly, certain of the subordinate officers had gained the confidence of the labourers by considerate and kind treatment, and were able to move their entire parties without any loss. This was particularly the case with two overseers, Messrs. Kitchen and Barker, who took more than 1,500 men a distance of about 20 miles from a less to a more important road; and for weeks afterwards the relations and friends of those labourers kept following them to the new place till the two parties became unmanageably large.

85. But though this was the case in a few instances, we found several of the road parties discontented and thinned by desertion, and observed many coolies whose condition was far from

satisfactory, and on enquiry it appeared that the system of cutting them for insufficient tasks was going on very extensively. No detail in the administration of relief works gave more trouble and anxiety, or required more constant looking after, than that of "cutting." It is the easiest form that punishment can take, and one to which subordinate officers are peculiarly prone; and yet it is a punishment which requires great care in its exercise. The first essential for making punishment effective is that it should be just; the second is that it should be judicious. In order to secure the first essential we require (1) that the task should be a fair one, (2) that it should be marked out beforehand, so that the labourer should know what he had to do; (3) that what he has done should be measured up by a competent officer, not guessed at by the eye or reported on by an underling, but so tested that the labourer himself may see the deficiency and understand what he has to do in order to secure a full wage. All these requisites were found on different occasions to be wanting. The task was frequently too heavy; stone-breaking, for instance, is an art that requires much practice, yet paupers who had never handled a hammer before were set to do as much as a skilled labourer could get through. The task to be exacted was often not known to the coolies; and still more frequently what they had done was not measured at all, but roughly glanced over and pronounced insufficient, or a native subordinate would bring up a gang at pay time and say, "This gang has not done its full task and should be cut," and cut they were accordingly.

86. The second essential in inflicting the punishment of cutting is that it should be done wisely and judiciously. A punishment that is always inflicted ceases to be punitive; the people accept the low scale of pay as the rule and expect nothing better. If it is found that pay is always cut, the fault is sure to be as much with the officers as with the people. In Tumkur, cutting was the rule and not the exception on many of the works, and in one case that came under notice the labourers were cut the very first day they came on to the Public Works Department from the Civil Relief Works before they had time to get accustomed to the new régime. The true principle is to let the people taste the sweets of the higher pay as well as the bitter of the low pay: to begin with the higher, explaining carefully the conditions of which it is to be earned; to be patient with them at first till they have settled down to their places and to the work; then if they continue to be idle, to cut their pay; but at the same time to cut that of the head coolies and gangsmen who ought to stimulate and urge them to work; after a time, even if the amount does not increase, to raise the pay again in order to encourage them to greater exertions; and to subdivide the gangs as much as possible so as to distinguish the idle from the diligent. This method was inculcated by Major Moncrieff, who also laid down two rules: (1) that no labourer should be cut by the order of any one below the grade of an Assistant Engineer; (2) that the weekly return of numbers employed, wages paid, and work done should also include a statement of the numbers fined for short work and the amount cut from their pay. In the end the enforcement of these rules put a stop to the practice of indiscriminate cutting, and effected a great improvement in the condition of the coolies.

87. By this time, the middle of December, the ragi harvest was in full swing, and the Revenue officers were exerting themselves to the utmost to realise the Government demand for the year, as well as the arrears of past years from the cultivators. This was a matter which required very delicate handling, for it was easy to conceive that a cultivator might have fields the crop of which could pay his assessment, but could not also keep him and his family alive through the year; so that the exaction of the demand now would force him at a subsequent period to become an applicant for Government relief. It appeared, on enquiry being made, that a great number of ryots had had their rights sold up for arrears, a measure of extreme and unwise harshness in a time of famine. Nor was the matter improved when, on closer enquiry, it turned out that these sales had been effected as a mere matter of routine. An amildar had reported

"In these tracts there is much uncultivated land which ought to be cultivated; but it is possible that the cultivated area in proportion to the surviving population is as large as ever, and that, therefore, the diminished area does not imply and will not cause prolonged distress.

"If my anticipations are correct, all special relief officers, except those attached to the tracts I have named, should prepare for hearing that their services will be dispensed with after the end of December.

"The first consequence of this improvement is that whatever is said in Chapter V of the Code as to the use of compulsion in inducing distressed people to go to relief camps or works, must be declared inapplicable to the present state of things. I believe there is no village now in which field employment cannot be had, or food sufficient to maintain life cannot be procured, by collecting herbs and roots, &c. The temper of the people, too, is changed; they are hopeful and not despondent, and do not as a rule willingly leave their villages. No compulsion of any kind should therefore be used. Relief tickets should be offered to any that appear thin and distressed, but no further pressure should be employed.

* * * * *

"Assuming that the famine in Mysore is approaching its conclusion, the main duties which the special relief officers (other than the organisation of relief camps and works) ought to carry out before they lay down office appear to be as follows:—

"(I). To complete, personally or through their special subordinates, the inspection of all villages in the taluks, and to prepare a list of the persons in each taluk whom they consider to be in distress, and who would, but for the approaching harvest, be suitable for relief, but who now decline it.

"(II). To inspect a portion of each taluk, say one hobli, with greater minuteness, and to prepare an English register, house by house, of all residents in each village in that hobli, in order that the same may be compared with the returns of the census of 1871 for those villages. Each officer should select, as far as possible, an average hobli in his taluk, not the worst or the best, containing about 30 or 40 villages, in which to carry out this experiment and should report to me beforehand, demi-officially, what hobli he wishes to select and on what ground he selects it.

Preparations were made in all directions for closing relief measures. On the 22nd December an order was issued stopping the grain dole given to the sick and bed-ridden at their own homes in the villages, and it was provided that a sum of money equal in value to the dole of grain for 3 months should be given to each recipient, so that he or she might not be cast adrift suddenly. The number of relief camps was being steadily reduced. At the end of December there were 40 in number, and the people relieved in them (excluding the sick, who were about 8,000) amounted only to 5,631; of these, about 30 per cent., or 1,600, were the establishment kept up for the purpose of cooking, for guarding and waiting on the paupers and sick. The remainder about 4,000, "may be divided into two equal classes,—the infirm and aged who took refuge in the camps because their relatives refused to support them, and the emaciated young people and children who were sent in by the village Relief Inspectors." The former it was proposed to send home with a little money, equal to two or three months' support, the possession of which would, it was hoped, lead to their being received with kindness; the others were to be kept in the camp till they were fed up and strong and could be sent to work or helped by charitable funds to start again in their old occupations as cultivators, &c. In this way it was expected that the relief camps would rapidly lose their pauper population and become mere infirmaries, and the hospitals would gradually be depleted and could be closed when no longer required.

90. In December the result of a conference with the Deputy Commissioner of Chitaldrug and some of the special relief officers in his district was recorded in the following terms:—

"The general opinion seems to be that in the taluks of Dayangere, Karikuppa, and Doderi, the famine is over, the area cultivated being large and the crops quite up to the average. Major Armstrong is, however, apprehensive that after the harvest is over, when employment is slack, the Bedars of Karikuppa Taluk, who are a thieving set, will give trouble unless employment is provided for them. In Hiriyur, Budhal, and Hosdrug the crops are not so good, nor the cultivated area so large; but it is believed that the crops now on the ground or recently cut are sufficient to provide food for the population. In Pargur, Mr. Ebdon reports that the main crop now being cut is both poor in quantity and scanty in area, and will not support the population till the next crop matures. That crop, however, will come in soon, as it is the Vaisakh rice, of which a great quantity has been sown (about $\frac{1}{4}$ of the cultivated area) under tanks and springs. This rice crop will ripen in April. Under these circumstances, as the harvest is now well on, the time has come to take active steps for the retrenchment of Famine operations."

But in several other districts the opinion had begun to prevail that the crop would turn out considerably below the anticipated produce. Mr. Betham, a special relief officer in Tumkur, examined the cultivation of seven villages, field by field, and found that the area under crop was only 55 per cent. of the ordinary crop, and he estimated the crop he saw at only half an average crop. It was known before that the area cultivated had fallen off considerably, but it was not supposed that the decrease was so great. During the course of tours made in December and in January, personal inspection and communication with the local officers shewed what great and unexpected damage the crops had suffered. A blight had settled on the oil plant (sesame), and the fields sown with it contained nothing but dry stalks. An army of caterpillars invaded the Ballar (*Delichos lablab*) which was then flowering, and devoured the young pods: the drought had killed or driven away the birds which would otherwise have done much to save the crops by feeding on the caterpillars. The colthi had not recovered, as was hoped, from the damage done by the excessive wet: it had run so much to wood and tendrils, that it had no strength left to put out seed; the pods were mostly empty, and in those that contained anything the seed was small and shrivelled. The ragi which, after living through the drought of August, had seemed to revive and grow vigorously in September, had suffered injuries it could not recover; many of the roots and suckers of the plants had died, and those that remained were sufficient to carry food to the stem only as long as moisture was abundant: as soon as the ground began to dry up after the rain ceased, the plants drooped and looked sickly, and though they put out heads, there was little grain in them. The full extent of the loss of ragi was not known till it began to be threshed out in February. The colthi, however, was the greatest disappointment, because of the unusually large area sown with it,—an area so great that, in spite of the poverty of the crop, the price of the grain dropped in January from 5 to 9 or 10 seers per rupee. Had the crop been an average one its price would probably have been 20 seers per rupee, and all the population would have lived upon it.

91. The Government of India wrote on the 17th of October proposing that a test census should be taken to discover what the actual loss of life had been in certain selected tracts, and that it should be taken on the 19th of January. This seemed at the time to be a very suitable date, as it was hoped that the famine would be nearly over by that date, and that the special relief officers would be about to leave their posts; and if they were to be utilised in the census work, it was necessary to select a day before they returned to their own provinces. The result in the end was rather unfortunate, for, important as the census was, it engrossed a great deal of time which ought to have been given to the more essential task of relieving and visiting the distress which was so unexpectedly prolonged. The preliminary census which preceded it occupied the officers who were engaged in it for nearly a month, from about the 15th December, and during this time, though they could attend to cases of distress in the particular hobli or circle of about 30 villages which they were enumerating, they could hardly visit any other part of the taluk, or give their minds to any other subject of general enquiry. The report on the method of taking the test census, and on the results deducible from it, is printed as an appendix to this history. The main points ascertained during the operation were as follows. In the interval between the preliminary and final numbering, the death-rate was 127·8, and the birth-rate 7 per mille per annum. The ratio of loss in the circles enumerated was 28·77 per cent., but after allowing for the tracts least affected by famine, in few of which the test census was held, the loss was reduced to 25 per cent., representing 1,200,000 people. It varied from 47 per cent. in the worst circles to 5 per cent. in those least affected. The three worst districts (the Nandidrug Division) the loss was 695,000, or 35 per cent. of the population. After taking into consideration the probable return of emigrants, and allowing a margin of possible error in the returns, it seems to me likely that the province has

decreased in population by about 1,100,000 in consequence of the famine, and of these it was calculated that the diminished birth-rate accounts for about 50,000.

"While the remainder, or a million and fifty thousand, may be the actual number of deaths; of these, in all probability, half were due to cholera and fever, and half were due directly to famine and the diseases which follow directly upon famine."

The Chief Commissioner, on the other hand, resting his conclusions mainly on the statements of the survivors in the villages under census as to the people who had formerly inhabited the villages but had left them and were known to be dead, estimated the total loss of life at about 700,000, and anticipated that the rest of the absentees would return from their wanderings in due time.

Terrible and lamentable as this mortality is, it carries with it one advantage at any rate for the survivors, that the struggle for life and the competition for food become less keen for them. If in the Nandidrug Division the production of food-grain had been only 35 per cent. below the average, the outturn would have been ample for the support of the shrunken population that remained.

92. As soon as the relief officers were set free from the census, those of them who had experience in Revenue matters were directed to take up the "jamabandi" work,—that is, the investigation into the area cultivated in each holding, and the propriety of demanding land revenue from the cultivators, as laid down in the circular of December 26th quoted in paragraph 78, and in the course of this occupation to prepare statements shewing the total cultivated area in the taluk as compared with ordinary years, and to frame an estimate of the crop just harvested. These figures were all received in February, and were compiled for the affected tracts in the province by the end of that month. The report is printed among the appendices. In making a calculation of this kind, the following are the data which have to be ascertained, or, in default of accurate knowledge, to be assumed or approximated: first, the area cultivated; second, the average produce per acre; third, the proportion between the year's produce and that of an average year; fourth, the amount of food necessary for consumption per head. On all these points there is a good deal of doubt. As to the area actually cultivated, the village accounts ought to afford complete information, but do not. In the settled and surveyed taluks they shew the average "occupied," not cultivated, and every ryot occupies or pays assessment for more than he cultivates, in order to secure grazing for his cattle. In the unsurveyed taluks the area is given, not in acres, but in a traditional measurement called "khandis," and it was necessary to strike an average from the records of several surveys to see what the actual average area of a khandi was. The general result was that in the different districts examined, the area cultivated bore the following proportion to that usually under cultivation:—

Bangalore	71 per cent.
Kolar	74 "
Tumkur	57 "
Hassan	60 "
Chitaldrug	57 "

The ratio borne by the year's crop to that of a fairly good year was variously estimated from one-half to three-sixteenths in the case of dry crops in different taluks; the details of the estimates are given in the report, and the data on which they are based, and these need not be recapitulated here. The early rice was mostly a failure, but the late rice was sown over a very large area, and was expected to produce quite a full crop.

93. What the average produce on an ordinary year amounts to is one of those questions which no one has ever solved with any approach to accuracy, and all that can be attempted is to make

an approximate guess, more or less sound, according to the width of the experience and observation on which it is based. A respectable consensus of opinion points to the assumption that for dry land an estimate of 2 khandis (or 8 maunds, or 640 lbs) per cultivated acre, and for wet land 3 khandis (or 12 maunds, or 960 lbs) will not be far from the real produce in a good year. This was the figure accepted in the report; and if it may be adhered to, the amount of food-grain produced in a good year would be as follows in the five districts of the worst famine tract. The figures given below are for revenue-paying lands alone, the areas and population of Inam villages being omitted; and in Chitaldrug a deduction has been made on account of the cotton-growing area:—

DISTRICTS.	Population.	AREA CULTIVATED.		FOOD-CROP OF AN AVERAGE YEAR.		
		Dry.	Wet.	Dry.	Wet.	Total.
Bangalore	759,816	640,971	67,068	1,281,942	201,024	1,482,966
Kolar	588,484	563,403	77,712	1,126,836	233,136	1,359,972
Tumkur	587,621	684,465	103,565	1,368,930	310,695	1,679,625
Hassan (7 taluks)	444,596	538,516	78,187	1,077,092	234,561	1,311,653
Chitaldrug	522,293	445,190	65,906	890,374	197,718	1,088,092
TOTAL	2,902,810	2,872,575	392,378	5,745,144	1,177,134	6,922,278

This calculation gives an outturn of 2 khandis of dry grain and $\frac{2}{3}$ of a khandi of rice per head of the population. But there are certain deductions to be made from this. A year is very seldom good both for dry and wet crops; to satisfy the wet crops it generally is necessary that there should be too much rain for the dry, and what is sufficient for the dry crops is seldom enough for the rice; or else, as in the years of drought since 1874, there is too little for both. So that probably an average year would not contain two average seasons, and the ordinary production of both crops taken together should be put a little lower, say at 5,800,000, or 2 khandis per head. The seed grain (at 8 seers per acre for dry and 25 seers for wet land) comes to 490,000 khandis; the wastage during a year may be estimated at 5 per cent., or 290,000 khandis, leaving a residuum available for consumption and export of 5,020,000 khandis. The average annual export of ragi is returned at 46,000 tons, or 322,000 khandis, leaving a balance of 4,698,000 khandis. The consumption per head of a labouring adult when well off is according to the best judges about 1 seer or 2 lbs a day, and rather above it than below; but allowing for those who are pinched for means, 2 lbs may be taken as a fair average ration for an adult; and when women, children, and infants are reckoned in, the ordinary consumption per head cannot be reckoned at quite $1\frac{1}{2}$ lbs a day. I take 480 lbs, or $1\frac{1}{2}$ khandis, as the usual rate of consumption per head per annum. By this estimate, a population of 2,902,810 would consume 4,354,000 khandis, leaving a surplus of 344,000 khandis out of the produce of an ordinary year.

94. In times of famine that consumption is greatly diminished. Not only do the people eat less, but they also supplement their diet with articles little used at other times,—roots, berries, green leaves of wild plants resembling spinach, seeds of the different grasses, and (in this year particularly) of the wild ragi. Some facts bearing on the subject have already been quoted in this report, and on the whole there seems reason for holding that consumption is reduced to 1 khandi per head per annum, which allows for an adult about $1\frac{1}{2}$ lbs; and for a child about half that amount of grain a day. Another change, too, had come over the people—the habit of eating rice had greatly increased: the people on the relief works, with scarcely an exception, adopted it as their staple food, and as hardly any other kind of grain had been sold in the markets for more than a year, the country folk must also have become accustomed to it. The revenue pressure also was

much released, and no one who was very badly off was forced to sell his crop in order to pay his evenue. A larger part of the rice crop than usual became thus available for food. The following table shews the population and the estimated crop:—

DISTRICTS.	Estimated Population.	AREA CULTIVATED.		FOOD CROP OF 1878.		
		Dry.	Wet.	Dry.	Wet.	Total.
Bangalore	528,694	507,441	62,527	350,842	107,291	548,133
Kolar	403,592	434,771	88,513	283,230	279,519	562,749
Tumkur	378,691	399,777	89,203	226,390	305,907	532,297
Hassan (7 taluks)	345,786	440,269	72,428	422,237	215,491	637,728
Chitaldrug	391,170	372,736	66,515	306,562	198,058	504,620
TOTAL	1,987,833	2,154,994	369,186	1,589,281	1,196,266	2,785,497

I calculated produce gives $1\frac{2}{3}$ khandis per head, and assuming that only half the rice crop would be used as food, the harvest would provide 2,187,000 khandis, or a little over 1 khandi a head. It seemed, therefore, a safe conclusion to say that the crop harvested, disappointing as it had been in outturn, aided by the expected produce of the late rice then in the ground, produced enough food to support the people on the reduced rations to which they are accustomed in famine times. But that this was so was only due to the good service done by the tanks and to the terrible mortality which the test census had revealed, and which had diminished the population by 915,000 in the parts of the province to which these figures apply.

95. Compare this now with the prospects of the corresponding period in 1877. The area sown then had been but little reduced, but the wet crops had almost entirely perished, and the outturn on the 2,872,000 dry acres was about a fourth of an ordinary crop, or 1,436,000 khandis, and this had to be divided amongst 2,902,000 people. Instead of $1\frac{2}{3}$ khandis there was but $\frac{1}{2}$ a khandi per head, which was not enough for the food of the people. The figures for the whole province, no doubt, were better than for these, the worst portions of it; but in order for the people of these taluks to be fed, it was necessary that they should be able to purchase, and the purchasing power of the lower classes, never very large, had been absorbed in the first year of the famine, and was altogether wanting in 1877.

96. The same question pressed for consideration in 1878. It was not enough to shew that the country had raised sufficient food to feed its whole population; there was, further, the doubt whether that food was, or could be, equally distributed, or whether it had got, or would get, into the hands of capitalists who had bought it up in advance. Here the past history and status of the ryot had stood him in good stead, for, though little now remained to him of his former comfortable affluence, at least he had not acquired the habit of indebtedness; and where the custom of giving large advances on a growing crop did not exist, it was not likely to spring up for the first time in a precarious and doubtful season. As far as could be learnt, a good deal of the growing rice had been hypothecated in this way, but little or none of the dry crops; and our calculations had not assumed that the whole of the rice crop would be available directly as food. The ryots, therefore, and all persons who had any interest in the land, were tolerably safe, and there remained the classes below the ryots,—the field labourers and coolies in the villages, the artisans and those who live by doing odd jobs in the towns. It was on these classes that the brunt of the famine had fallen so heavily, that it hardly seemed possible that there should be any left to suffer. In the villages enumerated in the test census every one had been struck by the paucity of the field labourers who survived; it seemed as if the supply had been reduced till it no longer exceeded the demand. The artisans we trusted to provide for from the help afforded by

the charitable funds, which enabled the relief officers to purchase for them looms or simple stock in trade, and start them with a little capital to support themselves. The classes who seemed likely to require special measures of relief were the old, the bed-ridden sick in the villages, and the coolies who live from hand to mouth by casual employment in towns. The former were provided for by the grain-dole system which had been temporarily stopped in December, but was revived and more vigorously enforced in February, and for the latter a set of small relief works was started near the principal towns and centres of population.

97. The forecast submitted to the Government of India on the 30th March, based on foregoing considerations, shewed that there had been an increase of 6,600 persons on relief in February, and a further rise of 8,100 in the first half of March, the total number on works by then 57,000. "At a time when field labour was almost come to an end, the relief officers relaxing nearly all restrictions and opening several new works, had only been able to increase number on Civil Works by 5,800. This does not give reason for anticipating any very large increase to the numbers in the ensuing months. There are a few places in which new works have been ordered to be opened, and these will swell the total; there are also a certain number of people who have still got food in store, but will exhaust it in a month, and will then apply for employment." It was estimated, therefore, that the number on relief works might rise to 66,000 by the 1st May and to 70,000 by the 1st of June; but that if the rains then fell in a normal manner, there would probably be a great exodus of the able-bodied. "Such of them as continue on the work can be treated on ordinary departmental rules, and not under the Famine Code; there will only remain on the hands of Government, a residuum of weakly people, say about 2,000 or 3,000 in number, who will still have to be provided for till they are fit for ordinary labour or till prices fall." The number in relief camps was then only 3,000, and was not expected to increase; they were almost all hospital patients, their number was slowly diminishing, and new relief camps were likely to be opened. The number who would receive the grain dole in their villages was roughly estimated at about 20,000, or nearly 1 per cent. of the population of the affected taluks. On these data it was calculated that the cost of famine relief from the 1st April up to the end of June, including the pay of the special establishment, might cost about Rs. 10,36,000.

98. The modification in the system of relief works, referred to above, requires to be more fully explained. The object to be attained was this: assuming that the greater part of the distress would be found to exist among the poorer residents in towns, and that so far as distress prevailed in the villages, it would manifest itself by driving the sufferers towards the towns, it seemed necessary to provide for each town a system corresponding (to compare small things with great) to that which has been already described as established in the Bangalore Municipality to collect beggars and wanderers, and have a relief work going on to which they should be compelled to resort. Considering that the measures suitable to the height of a famine may often wisely be modified in its decline, that there was no tendency to rush to the works in crowds, and that there were not many people left in the lower classes so well off as to be unworthy of relief, it was decided to relax the distance test and not to require the labourers to be huddled on the works. As far as possible, a work was chosen which should be 2 or 3 miles from the town, so as to force the labourers to shew their need of relief by taking a fairly long walk in addition to their task: only the lower or D rate of wages was to be given, and the task to be rigidly enforced on all who were classed as able-bodied. Each work of this kind was to be opened in a tentative way; if no one, or a few, came to it, and there was no evident need for relief, it should be closed; if the numbers swelled so as to exceed 300, it should be made over to the Public Works Department if they were able to take charge of it: and it was hoped that, in that case, when the labourers were

much added to the work and to each other and the gang-system, it would be found possible to march them to some larger and more useful work, which the Chief Engineer would select if it were found advisable. In short, the plans were devised in the view of making the work attractive and enticing to it those whom the relief officers knew to be in want: then gradually enforcing restrictions and stricter discipline combined with the distance test and residence in huts or work if the numbers shewed that it was getting too popular.

9. During the months of January and February I travelled through the Kolar District, five taluks out of ten, through part of Bangalore and half of Tumkur, and the Chief Engineer at the same time visited the parts of Hassan and Chitaldrug about which anxiety was felt; and were recorded on each of those districts, shewing what measures were required and what relief works were to be opened. The following extracts from these minutes may be quoted illustrating and explaining the details of procedure. The Kolar minute was the first in date, and sets down the rules which were followed elsewhere as to the classification and payment of labourers, and as to the establishment of day nurseries for infants. There were ten relief circles (grouped closely but not exactly to the ten taluks) in this district, and each was under a special officer; these were four special officers, three Assistant Commissioners, and three Amildars, besides the ordinary officers. In seven of these circles special works for the relief of towns were opened, the other three did not require any such measures, the work already existing there being sufficient.

At present the people (except, as I have observed, in Kolar, Chintamani, and Chik Ballapur) are in good health, and I trust they will be induced to come to work before their strength is exhausted by fasting. If this is the case, there should be no A class labourers (as in the Famine Code, who can do only 75 per cent. of an ordinary task), but two classes—those who are able to do a full task, and those who are old or unaccustomed to labour, or disabled by sickness, or the relics of last year's famine. We need therefore only two rates of pay: (1) piece-work, from 12 to 16 cubic yards per rupee of earth-work, varying according to soil and lead; but in fixing the rate of piece-work, officers will be good enough to consult the Deputy Commissioner, and the Deputy Commissioner will fix at the rate fixed is not beyond the strength of the labourer, and admits of his earning at least up to the A scale of wages; (2) the B rate of pay, which should be fixed thus:—

	Rs.	A.	P.
Men	0	2	0
Women	0	1	6
Working children	0	1	0

"If there are emaciated young people who have to be classed in special gangs (which will probably be the case at Kolar and Chintamani), they should be paid at A rates:—

	Rs.	A.	P.
Men	0	2	6
Women	0	1	8
Children	0	1	2

"Infants will receive Re. 0-0-4, provided the special relief officer is satisfied that they belong to the women bringing them.

"It would, however, be a very good thing if the necessity of carrying infants (not at the breast) 2 or 3 miles to work could be avoided, and I talked over with Mr. Krishnaiengar the subject of establishing day nurseries for infants. He thinks it can be done, and I should be glad to have it tried at Kolar, Mulbagal, Chintamani, and Chik Ballapur. A shed should be erected in a suitable place, where the women going to work would deposit their children in the morning, taking them back when they return in the evening. All women who have small children and bond should go out to work for the day, might be allowed to leave their children here, whether they are employed on the field work or coolie labour of any kind. A Brahmin or lingayat cook, and one or two decent women (Brahmins if possible, if they would really tend the little pariah babes who might be left there, or else any other good caste) should be appointed, and two meals, congee or rice, cooked, providing ½ lb of rice for each child in the two meals. The institution should be under the supervision of the Amildar and a Committee of two or three respectable gentlemen of the town, and they should see that it is not abused. We can at least try this; if it does not take, and if the men won't leave their children, the attempt can be dropped.

thing to the townspeople; they did not raise enough to feed themselves. They consumed 48½ lakhs of khandis, and their deficit was 18,30,000 khandis, worth 293 lakhs. They also paid about 75 lakhs in taxes, and must have done this by selling ornaments and parting with hoarded bullion.

9. For the year 1877-78 careful statistics of the cultivated area have been obtained, and the subject of the food produced has already been fully dwelt on. In the most affected tracts we found that there were 2,035,000 cultivated acres, and we estimated the produce at 27,85,000 khandis. In the rest of the province the ratio of production was more abundant, but the dry crop was nowhere an average one, and the outturn can hardly be put higher than that of 1875-76, or $\frac{2}{3}$ of a khandi. The wet outturn was a full average. This gives us, then, as the production of the year 30,00,000 khandis of dry crop and 22,00,000 of rice, total 52,00,000 khandis, or nearly half an average crop. The population at the beginning of the year was 4,800,000; at the end it was 3,750,000. I would take 4,300,000 as the average, and the consumption (now cut down almost below a minimum) may be put at 43,00,000 khandis. The account of the year stated in the same form as before will be as follows:—

	Khandis.	Khandis.	Tons.	Tons.
Outturn of 1877-78.		52,00,000		743,000
Consumption	43,00,000		614,000	
Wastage	2,50,000		36,000	
Seed-grain	4,00,000		57,000	
Total outgoing		49,50,000		707,000
Surplus		2,50,000		35,700

This surplus, taking the price at 7 seers per rupee, or Rs. 24 per khandi, was worth 60 lakhs. Supposing the agricultural population to have sold one-tenth of the quantity required for consumption to the townspeople, or 4,30,000 khandis, they received 103 lakhs for it, so that in this year they made enough to pay their taxes and to keep a little grain in reserve to replenish their depleted stores.

10. The following statement combines in one view what has been said above regarding the profits of cultivation in an ordinary year and the state of things which existed during the three years of scarcity and famine:—

		Average year (Five of a century: 109=1,00,00,000)	1875-76.	1876-77.	1877-78.	Total of three famine years.
Outturn	Khandis	1.08	65	36	52	153
Consumption	"	75	58	54	43	155
Seed-grain	"	4½	4	4	4	12
Wastage	"	5	3	1.8	2.5	7.3
Total deduction	"	84½	65	59.8	49.5	174.3
Surplus to the	"	23½	...	...	2.5	...
Deficit { Province }	"	...	...	...	...	...
Surplus or deficit to the agricultural population	"	31	6	-18.3	6.8	-6
Value of surplus or deficit	Lakhs	+248	+60	-293	+163	-70
Taxes paid by agricultural class	"	100	100	75	65	240
Resulting surplus or deficit	"	+148	-40	-368	+98	-310

Thus the whole province would in these three years, had they been ordinary seasons, have laid by the value of 70½ lakhs of khandis, or a million tons of food-grain (which being mostly

rice would fetch ordinarily Rs. 8 per khandi), or 564 lakhs of rupees; instead of this, it produced 21.3 lakhs of khandis (or a little over 300,000 tons) less than the minimum quantity required for consumption, seed-grain, &c. This quantity the province had to obtain from outside, and the statistics of importation offer a remarkable support to the foregoing calculations, which have been framed on altogether independent data. The quantity of railway-borne grain imported into Bangalore between November 1876 and July 1878 amounted to 257,000 tons, and the quantity carried up by carts from the western coast must have nearly made up the difference between this figure and 300,000 tons. For this grain the province had to pay at the rate of from 6 to 10 seers per rupee, say 8 seers at an average, or Rs. 20 per khandi, or Rs. 140 per ton; total 420 lakhs of rupees, or 4½ millions sterling. Where it would have otherwise earned a profit of 5½ millions, it earned a loss of 4½ millions. The cost of the famine to the province, calculated thus, in the actual purchase of necessary food and in the loss of ordinary profits, was 9½ millions sterling. Against this has to be set the famine relief expenditure, by which 70 lakhs of rupees were thrown into the country either as food or as payment for labour for which no other market existed. This apparently reduces the losses of the people to 9 millions sterling. But the reduction is apparent only, since the amount will in the end have to come out of the pockets of the people of the province.

11. The agricultural population may usually expect, after paying all taxes and meeting the cost of cultivation and of the necessities of life, to net 148 lakhs, which can be hoarded or spent in luxuries; in three years this would amount to 444 lakhs, or 4½ millions sterling. Instead of this, after reducing all expenditure and cutting down their food rations till they died in crowds of the diseases which follow on innutrition, they found themselves losers to the extent of 310 lakhs, besides being 40 lakhs in arrear with their revenue. Thus of the total loss of 9½ millions, 8½ millions were the share of the agricultural class.

12. Nor was this the whole of their loss. The mortality among their stock must also be taken into consideration. The returns of this mortality have been alluded to from time to time in the course of this report, but the figures have not yet been given. The Administration Report of the province shews the amount of stock in 1874-75 to have been as follows:—

Cows and bullocks	2,900,000
Sheep and goats	2,200,000

The annual mortality among animals of all kinds is registered as about 150,000; of these, half, or 75,000, are cows or bullocks, which is probably much below the truth, as it gives to each animal an average duration of life of 40 years; 55,000 are deaths of sheep or goats, which gives the same duration of life to them, and is obviously much too small a number; the rest are buffaloes, donkeys, pigs, &c., of which we need not take account. In 1876-77 the mortality was three times its usual amount, or 450,000 in the year, and from April to September 1877 it was 280,000, or eight times the usual rate. Assuming the ratio of mortality among the different kinds of animals to have remained constant, 365,000 cows and bullocks died in 1½ years, from April 1876 to September 1877, against an ordinary number of 112,000, or 253,000, say 250,000 in excess. Now, many of these were no doubt nearly worthless heifers and calves, and not many were the best plough cattle, but still we know that a great many plough cattle were included in the number, and that much land went out of cultivation in consequence. The average price per head should probably be put somewhere between Rs. 5 and Rs. 8, and the total loss to the agriculturists as represented in money should be estimated at between 12½ and 20 lakhs, probably about 15 or 16 lakhs of rupees.

13. Of the loss of human life I have already written sufficiently. Through the combined effects of increased deaths, diminished births, and emigration, the population of the province

was reduced in January 1878 by $1\frac{1}{2}$ millions of people. Neither was the excessive mortality then at an end, nor will the birth-rate for many months recover its wonted figure, so that I have little hope that the return of surviving emigrants will do much to re-people the deserted villages. For a few years the revenue of the province will suffer to a slight extent in the diminished house-tax and the shrunken area of cultivation; but I do not anticipate much loss of revenue from this source. Only the worst fields will be left untilled, and great efforts will be made by the survivors to occupy the lands thrown up. In all probability the outturn of food-grain will be considerably greater per head of population for the next thirty years than it has been of late, and thus the survivors will reap some benefit from the sufferings of the great famine.

But these anticipations are dim and shadowy. For the present the great fact remains that the famine has cost the province $9\frac{3}{4}$ millions sterling in produce, a quarter of a million in cattle, and more than a million of human lives. In return for this, it has got some dearly-bought experience, a larger ratio of cultivated land per head of population, and $7\frac{1}{2}$ lakhs worth of useful work done on the State Railway, roads, and tanks.

14. The problem cannot fail to occur to every one how much of this mortality was inevitable and how much could have been avoided if the most approved system of relief had been adopted, and the most efficient administrative measures introduced from the beginning of the famine. It is a question that I have repeatedly put to myself, but without clearly seeing my way to obtain any basis for a definite reply. The mortuary returns register half the deaths as due to fever and cholera; and what the connection between famine and fever or cholera is no man can decide. We know that they almost always follow in the wake of famine, and that many people who are attacked by them and succumb have been weakened by previous innutrition, but, on the other hand, that many who perish are well off and strong and have never suffered from hunger. These then, may be considered the deaths indirectly due to famine, and putting them aside, we are confronted with about half a million deaths of which famine was the direct cause. Of these, about a hundred thousand perished in the feeding kitchens, and a better system of relief might possibly have saved all these lives. About four hundred thousand died in their villages, on the roads, and in the Malnad and the coffee plantations, and of these a considerable proportion might probably have been saved if the relief works had been more accessible and organised on better principles. But the tendency to migrate to the Malnad, created by the habits of the past years, could not have been altogether overcome, and it was during this migration, through exhaustion, hunger, disappointment, exposure, and sickness, that most of the direct famine mortality occurred. Some portion at least of those deaths was inevitable, and must recur whenever such a visitation as this occurs again, as long as the hereditary tendencies of the people and their acquired habits remain unchanged.

15. Looking at it solely from the point of view that life must be saved at whatever cost, the Bengal Famine of 1874 offers the best instance on record of the successful administration of relief, and it may be interesting to examine what measures would have been adopted if the analogy of Bengal had been closely followed, and what results they would probably have produced. I will take the instance of the district in Bengal which suffered the most,—Darbhanga. It has a population of 2,196,300, say 2,200,000 souls; its average annual outturn of food-grain according to Mr. MacDonnell's report is 882,000 tons, and the outturn of 1873-74 was 267,000 tons, or 30 per cent. The ordinary annual food consumption of the district is 550,000 tons. Assuming that this might in famine years be cut down to 1 lb a day, the minimum quantity required for consumption would be 860,000 tons, so that there was a deficit of nearly 100,000 tons of food to be supplied from old stocks and from importation. The conditions which existed in Mysore are exceedingly similar. The province contained five millions of people, consuming at the minimum

4 millions sterling, and the cost of establishments on the Bengal Circle system—a superior officer

* The following statement shows the details of this calculation. The figures for December, January, and February are to some extent approximations only:—

	Gratuitous.	Civil relief.	Public Works Department works.	Total.
December 1876	15,000	15,000	20,000	50,000
January 1877	20,000	20,870	20,000	60,870
February	25,000	37,880	28,780	91,660
March	43,600	41,730	80,950	166,280
April	69,570	29,730	31,500	130,800
May	103,400	30,010	32,500	165,910
June	115,100	28,060	26,800	169,960
July	145,000	26,300	20,750	192,050
August	199,300	26,000	22,600	247,900
September	179,490	29,970	25,800	235,260
October	81,870	30,200	44,000	156,070
TOTAL	996,330	315,700	803,030	1,615,710
Average for 11 months	90,575	28,700	27,637	146,882

number would have been 693,000 on relief works, 330,000 on gratuitous relief, and 580,000 relieved by loans of money and grain. But if the restrictions of task-work or piece-work for the labourers had been withdrawn, and if gratuitous relief had been largely given in the villages in money and grain, instead of confining it to cooked food distributed at the kitchens, I have little doubt that these numbers would have been reached. And if this had been achieved, my impression is that emigration would have been for the most part stopped, except in the case of those who emigrated to find pasturage for their cattle; no money relief would have retained these latter in their villages. In that case I conceive it probable that out of the 500,000 deaths, which in my estimation were directly due to famine, not more than (say) 100,000 would have occurred; no one would have died in the villages, and this class of mortality would have been confined to those who wandered with their cattle into the forests and perished there want. How many of the other half million who died of cholera and fever would have succumbed to those epidemics, it seems impossible to say with any certainty. The relief could not have obviated them altogether; cholera would have broken out among the crowds collected on relief works, or fever in the villages where the people were living on a pinched and bare subsistence; but probably they would not have been so fatal. As a mere rough guess, I venture to think that if the relief measures had been carried out on the Bengal system, and 5 millions sterling had been spent, at least half a million of lives would have been saved.

19. Whether life is worth saving at this cost; where the line should be drawn; how far it is right to go in the direction of lavishness; and where economy should prevail over humanity,—these are some of the gravest questions that are now presented for solution to the Government of India, and it would not be becoming for me at the present stage to express an opinion. That Mysore ought to have spent more will, I think, be admitted by every one who has read this report. That the Bengal expenditure was on too lavish a scale to be repeated is understood to be the deliberate conclusion of the Government. Some middle-course must, and no doubt will, be found between these two extremes. But for the present the point that I wish to impress as clearly as possible is that it is as impossible for any expenditure, however lavish, to prevent all mortality in a really great famine, as it is for any generalship, however skilful, to win a battle without bloodshed.

20. I had at one time intended to conclude this chapter by summing up in a concise form the conclusions arrived at regarding the best methods of administering relief measures when famine is established in the country, as well as the possibility of taking any steps beforehand to prevent the liability of the country to suffer from famine whenever the ordinary but precarious system of rainfall is disturbed. As, however, these questions have been specially entrusted for solution to the Famine Commission, it has seemed to me that, considering my position as Secretary to that Commission, it would be more proper to abstain from recording any opinion which may have to be modified by the larger views that will be taken by that body on the wider information that will be laid before them.

APPENDIX I.

MYSORE FAMINE CODE, 1877.

PREFACE.

The backbone of the famine policy is the employment of all suitable applicants for relief on large works of permanent utility superintended by professional officers of the Public Works Department. It is the duty of the civil officer to decide who are suitable applicants, *i. e.*, who are sufficiently able-bodied for labour. In the present state of this province it is not intended, until a crop is harvested, that any applicant should be rejected on the ground of being too well-to-do, provided he submits to the three tests:—

- (1). The distance test,—which shews that he is willing to labour at a distance from his home, not returning there at night but being huddled on the work.
- (2). The wage test,—*i. e.*, that he receives a wage calculated to provide a bare subsistence for himself, but not enough to support any non-working member of the family.
- (3). The task-work test,—*i. e.*, that he performs a daily task proportioned to his strength.

It is important to remember that, while it is desirable to secure the best return in work for the expenditure incurred, the main object of opening and carrying out a relief work is not for the sake of the work, but *for the sake of the labourers employed on the work.*

On every large public work there will, if possible, be placed a civil officer to co-operate with and assist the Public Works officer, and a medical officer to take charge of the sick and those requiring special treatment. There will also be three classes of labourers.

Class I.—The moderately able-bodied, who can on an average perform 75 per cent. of the task usually accomplished by an ordinary cooly. Some members of this class will be fully able-bodied; some, though strong themselves, may have a sickly wife or child; some may be reduced by privation below their usual strength. But the class taken as a whole, counting the stronger with the weaker members, should be able to perform the 75 per cent. condition, and should receive the higher or A scale of wages.

Class II.—Those who are weakly but are still able to work, and can on an average perform 50 per cent. of their ordinary task. This class will consist mainly of those who are old, infirm, partially disabled by some natural defect, or who are temporarily enfeebled by famine; but whom regular work and regular pay may be expected to restore. These should receive the lower or B scale of wages.

Class III.—Those who are too much emaciated to do any but a very light task, but who under special care may be expected to improve, and whose health and self-respect will be best consulted by employing them in easy open-air work. These are called the class under special treatment. They will receive the A scale of wage, in the hope of restoring their strength and fitting them to be drafted among the able-bodied, in addition to any extra nourishment the medical or the relief officer may prescribe. Old and decrepit persons who cannot be expected to improve in strength are not to be included in this class.

The civil officer will classify the applicants as they arrive according to these three classes, and will from time to time, as they improve or retrograde in strength, suggest their transfer from one class to another. The medical officer will see to the special treatment of all those who require extra food and nourishment, and for whom the ordinary wage is not sufficient. The Public Works Department officer will receive the gangs and individuals made over to him, set

give him credit during the week. But facilities must be given for any labourer's departure from the work at any time for his home, provided there is reasonable presumption that he can support himself when he gets there. He must be paid up and let go even in the middle of a week. All payments must be made in cash; no cooked or raw food is to be given, except to the people who are under special treatment. Payments will be made on nominal registers or muster rolls, which should be checked as expeditiously as possible in order to avoid any delay in making the week's payments. They must not be made through low-paid underlings, but by regular cashiers borne upon the strength of the establishment, from whom good security should be required. Officers in charge will be expected to check payments, and inspecting officers, civil or Public Works Department, must, on visiting a work, endeavour to satisfy themselves that the full Government wage reaches the cooly, less duly authorised cuttings. When required by the civil officer, arrangement should be made for paying new arrivals an interim payment after they have been one or two days on the work.

VIII. Shelter should be erected in which the infants and children too small to labour, belonging to people in the working gangs, may be collected. About twenty children may be placed together under the care of a woman, who is herself a nursing mother, or otherwise entitled to consideration through age or infirmity. The shelter should be at such a distance that the children of mothers belonging to the gangs should not interfere with the work, but should be within easy access of their mothers. Any of these children who are weakly will be treated and fed as special cases.

IX. The Public Works Department officer will weekly send a slip in the following form to the Deputy Commissioner of the District, who will circulate it to such of the relief officers under him as he considers proper:—

Name of Work.	Number employed on the of	Additional number to whom employment can be given on or after the of

X. When a sanction is approaching expiry, or when a relief work is approaching completion, the Public Works Department officer should make timely report to his immediate superior to enable him to pass such orders as may be necessary, and shall also inform the Deputy Commissioner.

General responsibility of the Public Works Department officer. XI. In cases where a civil officer cannot be spared to be placed on the relief work, the duties which ordinarily belong to him will devolve on the Public Works Department officer, and especially those defined in rules IV, V, VI, VII, VIII, and IX, section II. Every officer in charge of a relief work will be held responsible for the condition of his people, and for the prompt and judicious carrying out of all orders laid down.

Outbreak of epidemic. XII. The outbreak of any epidemic disease, and especially of cholera, should be immediately reported to the civil officer, or if there is none present, to the Deputy Commissioner of the District, and also direct to the Chief Engineer.

Form of weekly report. XIII. Every officer in charge of a relief work will make a weekly report in the form appended. The condition and health of the labourers should be specially noticed, and the cause of an increase or decrease in numbers should be explained.

SECTION II.—DUTIES OF THE CIVIL RELIEF OFFICER.

[N. B.—The term "Civil Relief Officer" is applied to a Deputy or Assistant Commissioner or a Special Relief Officer, not to an Amildar.]

I. The Deputy Commissioner, on receiving information from the Executive Engineer or other Public Works Department officer of the number of relief labourers who can be entertained at a given place on a given date, will decide from what taluk or taluks the numbers are to be sent, will instruct the relief officers of the taluks accordingly, and will, if possible, appoint a civil officer to co-operate with the Public Works Department officer on the new relief work.

II. The civil relief officer in charge of a taluk, on hearing how many people he is expected to send to a relief work, will first of all select the number from the relief camp or camps in his taluk. He will be careful not to draft on to relief work those who are too emaciated to do any work at all, or to benefit in health by the move. In the first instance, when the gangs drafted are large, and the people have long been accustomed to gratuitous relief, there will be unwillingness to move and imidity. This must be overcome by tact and exertion. The relief officer should himself march the earliest gangs to the relief work, so as to prevent any desertion by the way, or he may send them in the charge of a trustworthy official, such as the amildar. When the system is well established, and the people have confidence in the work, and crowd to it instead of shrinking from it, it will be sufficient to place the party under the charge of a gangsmen or peon or constable, according to his discretion, and to send with him a slip of paper shewing so many persons of the 1st class, so many of the 2nd, so many of the 3rd, despatched on such a day, to reach the relief work on such a day. The relief officer will in either case distinguish the individuals by giving to those whom he ranks in class 1 a paper ticket marked A, to those of class 2 a ticket marked B, and to class 3 a C ticket. These tickets are to be delivered up to the Public Works Department officer on arrival.

III. Batta will be given to the labourers according to the distance to be travelled. If it is not more than one day's march, the best plan is to give them a meal in the morning before starting, and a meal in the evening on arrival. If the distance is more than one day, they should either be halted for the night at a relief camp, having an order on it for food, or else at some police station, or some village, the patel of which is known to be trustworthy, where the police officer or patel would, on production of the relief officer's order, provide the party with food. The allowance should not exceed 16 oz. of grain, raw or cooked, for each day. Money should not be given to the labourers themselves till they arrive.

IV. The civil officer on the relief work should receive these labourers, and make them over to the Public Works Department officer. When the first start has been made, applicants for labour on the work should apply direct to the civil officer, who should establish a fixed place, at which to receive all applicants every morning, in order to classify them and send them on to that or any other work.

V. In all cases the "distance test" should be enforced, tentatively and cautiously at first, more strictly afterwards. People should never be sent to work close to their homes, but a little distance off. The Deputy Commissioner should enforce this test by the direction he gives as to what taluks should supply what work. As a rule, the labourers from a relief camp in one taluk should not be sent to a relief work in that taluk, but elsewhere; but the rule should be introduced gradually, the people being employed at first a little distance off, then when they are organised and accustomed to work in gangs, and have got to know each other and the gangsmen, and to have confidence in the system, they can be marched to greater distances. Similarly, when applicants come to the civil officer on a relief work, if the work is one stretching over some miles, he will send them to that part of it which is furthest from their homes.

VI. The civil officer may refuse to send to the work people who are obviously unfit for relief, who wear gold ornaments, rich clothes, &c. But in the present state of the provinces he is not authorised to refuse employment to any who apply, merely because they are fat and strong and in good condition. It is believed that the enforcement of the three conditions—

- (1) the distance test;
- (2) the wage test;
- (3) the labour test;

is sufficient to prevent the danger of the work becoming too popular.

APPENDIX I.

XIII. In front of and near the door of each relief camp an enclosure shall be railed off in which all fresh applicants for relief shall be received, whether they present themselves voluntarily or are sent in by the Circle Inspectors or other relief officers. In this place some superior relief officer shall attend at a fixed hour every day, either the special relief officer of the taluk, or the village relief officer or the amildar, or in the absence of all of these, the peshkar, to receive the applicants and either forward them to a relief work or admit them into the relief camp.

XIV. There shall be a medical officer attached to each relief camp. He will be responsible for seeing that all the requirements of a hospital are provided, and that the sheds are dry and ventilated. He will send in to the Superintendent a daily return showing the number of sick in hospital, the daily admissions, discharges, and deaths. He will constantly go round and inspect the residents in the camp, and carry out in regard to these all the instructions contained in the chapter on special treatment.

XV. On certain roads along which emigrants travel to and from the coffee districts it is considered necessary still to keep up places at which they can be fed. At these places the cond residence and work will not be insisted on. Two meals will be cooked a day, in the evening; those who arrive in the evening will receive a meal, and shelter in a shed for the night, and will be sent on next day after receiving a second meal in the morning. The Superintendent is responsible for seeing that they eat the meal in his presence and do not carry it away, and that this indulgence is granted only to *bond fide* travellers who are in want. The taluk relief officer will pay special attention to the dining-places, will endeavour to dissuade feeble and emaciated persons from emigrating, and offer them employment on a relief work, and if the number becomes at all considerable, he will report the facts to the Deputy Commissioner of the District. The Superintendent will add to his daily Abstract Register a note shewing number of people going to the coffee districts and number of people returning from the coffee districts.

XVI. An inspection book will be kept up at each relief camp, in which Inspecting Officers will record remarks and orders.

Superintendent's Statement I.—Attendance Roll of Establishment.

No.	Name of official.	Office.	ATTENDANCE.																															
			1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.	12th.	13th.	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd.	24th.	25th.	26th.	27th.	28th.	29th.	30th.	31st.	

Accountant's Statement I. Stock Register. Relief Camp.

Date.		Regi.	Rice.	Dal.	Salt.	Tamarind.	Chillies.	Coriander.	Turneric.	Garlic.	Pepper.	Cumin-seed.	Mustard.	Ghee.	Onions.	Vegetables.	Wood.	Signature of Superintendent.
	Balance in hand																	
	Issued																	Enter here to whom issued.
	Balance in Store																	
	Received from Contract. or																	Enter here from whom received.
	Total in Store																	

The Accountant will each day enter

The Accountant will each day in the evening enter the quantity in lbs of each article issued and received, and the balance in store at the end of the day. The issues and receipts will be attested by the signature of the Superintendent.

MYSORE FAMINE CODE, 1877.

Accountant's Statement II.—Detailed daily return of Paupers fed in Relief Camp.

Date.	Name of gang-man.	Nature and employment of gang.	Adults.		Children.	Total.	Total number of lbs of food.	
			M.	F.				

One page to be given to each day.
This statement gives the details of gangs, and at the bottom the total should be struck.

Accountant's Statement III.—Daily Abstract Return of Paupers fed in

Date.	Adults.		Children.	Total.	Total number of lbs of food.	
	M.	F.				

One line for each day. The figures will correspond with the daily totals of Statement II.

Accountant's Statement IV.—Pay Register of Establishment.

No.	Name.	Office.	Rate of pay.	Number of days employed in month.	Amount.	Total.

This will be made out on the 1st of every month. It will contain only the names of those who receive cash wages.

Accountant's Statement V.—Cash Book of Receipts and Contingent Expenditure.

Date.	Particulars.	Amount received.	Amount disbursed.	Total.	From whom received and by whose order expended.

All unusual expenditures will be entered here, as well as receipts from the sale of any manufactured article, &c.

Overseer's Nominal Roll.

CHAPTER IV

II. The following are the principal classes into which the cases under special treatment may be divided:—

(b). Thin babies may in addition to their usual nourishment be supplied with milk once or twice a day.

(1) be fed instead of being paid. They will in this case become out-patients of the hospital.

(2) get a morning meal of rice and milk, or conjee, in addition to the lower wage (scale B).

The practical difficulty in dealing with young children is that their parents sometimes neglect them or deprive them of the food given them; hence the rule is necessary that all food given to children should be eaten in the presence of the relief officer.

The women placed in charge of the young children belonging to the special treatment class must be very carefully chosen, and the relief officer must see that they wash the children in warm or cold water as may be most suitable, and attend closely to their feeding, comfort, and cleanliness.

(d). Young and middle-aged adults reduced or emaciated by want may get the higher wage (scale A), and be put to nominal work for a week or so till they gain strength. As a rule, further treatment is unnecessary; if it is necessary, then the patient is probably a fit subject for the hospital.

(g). Any further treatment required is provided for by the discretionary grant allowed the officer in-charge of the work. All wages paid to the special treatment class should be paid daily, or three times a week.

191. The amount of special treatment and its results should be reported upon in the form shown in the margin* by the officer who is responsible for the special treatment to his immediate superior, who will submit the report with his opinion to the Famine Commissioner or

the Chief Engineer, as the case may be. As a rule, the Government rates of pay with light work will meet all ordinary cases of distress. But it is impossible to lay down rules for every case, and much of the success of the treatment will depend upon constant and careful selection and upon the humane exertion of the officer in charge. On the one hand, no effort is to be wanting to relieve distress and check mortality; on the other, unnecessary indulgence should be avoided, and a due economy observed.

IV. When a hospital assistant cannot be sent to take charge of a relief work or relief camp, the duties above described must necessarily devolve upon the officer in charge of the work or camp.

QUARTER V.

VILLAGE INSPECTION.

Object of village inspection.

A similar system of house-to-house inspection should be adopted in all large towns. A copy of the order introducing the system in Bangalore is appended, and may serve as a guide to the proper procedure in towns.

11. In the first instance it will be the duty of the village officers to ascertain and register the distressed poor of their respective villages, their work will be checked and supervised by specially appointed inspectors, and the inspectors in their turn will be controlled by special relief officers under the Deputy Commissioner. Where necessary, village relief officers may be appointed either instead of or to assist the special relief officer. The village relief officer should be a native gentleman of a superior stamp and of active habits, holding a permanent appointment under Government, a temporary substitute being employed in his place. Assistant Commissioners may, in addition to their own duties, be made special relief officers of the whole or part of their charge.

III: The Deputy Commissioner of each district will at once divide those taluks of his district which are

large relief officer of the tank.

All civil relief officers in charge of a taluk (whether Deputy Commissioner, Assistant Commissioners, or special relief officers) will enter in their weekly diaries the result of their own inspections and supervision.

IV. Every village officer (patel and shanbhog) should be again warned that he will be held strictly responsible that his village is free from persons in severe distress. The patel, assisted by the shanbhog of each village, must keep up a register as under of those whom the Circle Inspector reflects as requiring relief in the village.

A.—Register of persons unable to leave the village of _____ and in need of relief.

In this Register A, no one must be entered who is capable of doing any kind of labour on a relief work or in a relief camp, only the bed-ridden, the cripples, the very infirm, blind, and such cases should be on this register, which

I have also done all in my power to control the fraud that lurks in generalities by collecting a number of individual facts and exemplar cases. Several of my relief officers have gone over selected villages and estimated the value of the crop field by field—a method of calculation much more trustworthy than a generalisation, which is often only the vague outcome of a series of indistinct impressions. Both they and I have trained ourselves by measuring the cubical contents of ragi stacks, testing the quality of the ears, getting patels and ryots to estimate the contents of the stack, and then threshing it out and measuring those contents; and in this way it is possible to calculate roughly the average outturn. Then, by taking the area of the field in which the stack was grown and the cultivator's estimate of the ordinary outturn of the field in other years, one can get something of an estimate of the value of this year's crop as compared with an average harvest. An estimate built up out of a number of individual instances treated in this way is rough and may be inaccurate, but it is more likely to be sound than if it was based on an amildar's sententious assertion that the crop varies "from 2 to 8 annas."

7. In this way I have come to the conclusion that the dry crop has been worst in the triangle of land lying between the Nandydrug and Devaraydrug ranges of hills, with its base to the north, comprising the Madgere, Kortagere, Goribednur, Gudibanda, Doyanahalli, and Dod Ballapur taluks; there I class it as about 8 annas. To the east of this tract it was better, a 4-anna crop in Gumaukanpallur, Sidlighatta, Chik Ballapur, and Hoskotta; and a 6-anna crop in the taluks further east. Similarly, on the west of the triangle, I reckon the crop as a 4-anna one in Sira, Tumkur, Nela Mangala, and Ankal; a 6-anna one in Magadi, Kunigal, Kadaba, and Chiknaikanhalli. In Naga Mangala, Attikupa, Honkavalli, and Budihal it is reported by the relief officers, all of whom are experienced and peculiarly capable of forming a good judgment, to be an 8-anna crop; but I have not visited these parts myself since December. Further west and north my information is still more deficient. Pangath is reported to have suffered much, the dry crop having been bad and the wells mostly fallen in. Hiniyur, Hosdrug, Banawar, and Mandia have some bad portions and some good. The reports I have received from Channarayana, Haranahalli, Narsipur, and Arkalgud were so untrustworthy that I deputed a special officer to visit them and investigate the condition of things. He reports well of Channarayana and Arkalgud, poorly of Narsipur and Haranahalli, which I fear is bad. The taluks beyond these cause no anxiety, and may be looked on as free from famine.

8. As to the irrigated area, the Kartik crop, as I have said, was a poor one, but its area was small, and almost all the land that could be watered has been cultivated with later or Vaisakh rice. As the tanks were quite full, and the land had been fallow for at least a year, the crop may be expected to be unusually fine; and putting the two together, the general outturn of rice may safely be estimated at a full average.

9. The next question is, how to turn these ratios into integers; how to find out the actual amount of food produce which these figures represent. To do this it is necessary to know the actual area cultivated and the average produce per acre. Every one who is familiar with such calculations knows how large an element of hypothesis they contain; and the difficulty is greatly increased by unfamiliarity with the figures one is handling. I have frequently, in the course of this enquiry, been so discouraged that I have resolved to have nothing more to do with figures so obviously and so stupidly wrong as those presented to me. I have, however, persevered, receiving great help from some officers, who have taken pains to assist in the calculations; and now after many corrections the figures I collected for some taluks are, I believe, of sufficient value to deserve that I should present them as a rough approximation to the truth.

10. First, as to the areas. I assumed at starting that I should have no difficulty at all in obtaining these statistics, since the village figures are given every year by the village accounts with much detail and from the basis of the annual jamabandi or revenue settlement; but even here I have met with unexpected obstructions. The village papers are not drawn up in jodi and inam (revenue-free or quit-rent) villages, and hence it is necessary to deduct the population of those villages from that of the taluk. The village papers also shew what is necessary rather than what is cultivated. A ryot often pays revenue for a field, and it is entered on his patta for grazing purposes only, not for cultivation; and the abstracts made out do not distinguish between these uses. The area shown as cultivated is therefore always a little larger than the area really under the plough; probably an allowance of 10 per cent. should be made on this account. In the Chitaldrug District, however, which is all surveyed, the occupied area contains so inordinately large an amount of waste as to throw out all calculations as to the produce raised upon it.

11. But the main difficulty arises from the area-figures in unsettled taluks. The Settlement Department surveys the lands, and the records are kept in acres thereafter, but before the settlement the old native measures are used, which are based on the seed supposed to be required. A khandi of land is the land in which a khandi of seed ought to be sown, and this differs for dry and wet crops; it is a nominal measure, and a field once put down

as a one-khandi field 70 years ago still shews as a one-khandi field, although it may have encroached immensely on the waste or on its neighbours. Thus the older fields and the fields of rich men and Brahmans are always much larger than their nominal areas. Theoretically, a khandi of dry land should contain nearly 13 acres, and a khandi of wet land nearly 2 acres; but the following statistics, which I have collected from the Settlement Reports of some of the settled taluks, shew what the nominal and actual areas of each class of land were in the year of survey:—

		Acres.	Khandis.	1 Khandi equals
Gudibanda	Dry	20,382	1,329	22.5
	Wet	8,945	2,304	3.9
Tumkur	Dry	107,823	4,652	23.2
	Wet	14,215	5,287	2.8
Madgere	Dry	74,956	2,863	28.3
	Wet	22,390	7,457	3.0
Bangalore—(Begur and Wartur)	Dry	12,353	661	20.5
	Wet	2,798	1,039	2.7
Bangalore—(Keshgeri)	Dry	32,501	1,477	22
	Wet	2,330	762	3.0
Belur	Dry	43,217	1,472	29.3
	Wet	21,666	7,154	3.1

One dry khandi averages 24.3 acres.

One wet „ „ 3.05 „

12. The general average area of a dry khandi in these taluks was 24.3 acres, and I have taken this as my factor in calculating the areas of unsettled taluks; but as the individual averages vary from 20.5 to 29.3, the application of the mean to any one taluk may involve a good deal of error. Similarly, the wet khandi varies from 2.7 to 3.9 acres, and the average which I have used, 3, admits of a large margin of error; for instance, if it were used in the Gudibanda taluk, it would give the wet area as 6,912 acres, whereas the survey found that it was 8,945 acres.

13. The estimate of population in each taluk is based upon the census of 1871, as modified by the test-census of 1878; and with the jodi and inam villages deducted where they are known. But in some cases they have not yet been reported, and the population is therefore a little too large for the cultivated area which has to support it.

14. The next point is to frame an estimate of the ordinary average produce of the land. First as to dry crops, that is ragi and its attendant satellites, and kulkhi. In the eastern districts to which my taluk figures refer, these are the main crops; but there are also coarser grains grown, bargu, same, and harka, which produce largely but are less valued than ragi and kulkhi. Ragi is so infinitely the most important crop in the cultivators' eyes that it governs everything else, and if a sound estimate of it is framed, with an allowance for the subsidiary grains sown with it, that is as much as can be hoped for.

15. The returns I have received from the taluks put the ordinary average produce at figures varying from 14 khandis to 5 khandis per acre. As the average productive quality of the soil of different taluks does not vary at all like this, I cannot put much reliance on these estimates. The general way of calculating produce among the cultivators is by so many-fold the seed sown; and the ordinary answer I have received to my question is that the return of an average field of ragi is forty-fold. This, too, is borne out by the figures in Buchanan's Mysore. The lowest reply I have received is 30; the highest 80. Now forty-fold or 40 khandis per nominal khandi of 13 acres give 3 khandis per acre; but taking the actual average khandi of 24 acres, it is less than 2 per acre. I should mention here that I am speaking of the common or Krishnaraj khandi of 160 seers:—

1 Khandi = 20 Kurus.

1 Kura = 8 Seers.

The returns kept in the office of the Commissioner of Nandydrug give an average outturn over three years for the three districts of the division of 52.4 lbs. per acre. Colonel W. C. Anderson, Settlement Commissioner, states that he considers 600 lbs. per acre a very moderate estimate. On the whole, therefore, allowing for the

only about 600,000 khandis of food on the ground. The wonder is not that the famine was so severe, but that any survived.

26. At any rate we are free from any such prospect at present, and it may be admitted that these figures give a less gloomy impression of the prospects of the year than some officers have been inclined to entertain. They bear out and fortify my impression that there is food enough in the country if only it can get itself distributed; that the ryots are mostly safe, and the people likely to need relief are only the poorer labouring classes, for whom it is necessary to provide labour. This is being done by Government, and there seems reason to hope that a liberal system of relief works will be sufficient to meet all or most of the distress in the country till the next rainy season arrives.

23rd February 18

APPENDIX III.

REPORT ON THE TEST-CENSUS IN MYSORE.

SECTION I.

METHOD OF TAKING THE CENSUS.

The test-census intended to throw light on the mortality that had occurred in the Province of Mysore consequent on the famine was taken on the night of the 19th January 1878, when the moon was full.

2. The principle adopted, in order to ensure accuracy, was that the work should be done entirely by the agency of superior officers, and almost entirely by the agency of European officers. In order to effect this, it was necessary that the circles taken by each officer should be small.

3. The eight districts of Mysore are divided into taluks, and over many of the taluks there was at the time of the census a special relief officer. Each taluk is divided into hoblis or small circles, containing, as a rule, from 30 to 40 villages. It was therefore decided that each special relief officer should take the census in one hobli in his taluk. Where there was no special relief officer, an Assistant Commissioner was appointed, whenever one could be spared for the purpose. But as it was difficult to spare many of these officers from their ordinary work, and as it was less important to take the test-census in the west western taluks which felt no drought and suffered little from famine, only certain exemplar taluks in those parts were selected. The result was that the census was taken in test-circles in the following taluks:—

In the Bangalore District in 9 (all) taluks.		
" Kolar	" in 8 out of 10	"
" Tumkur	" in 8 (all)	"
" Mysore	" in 5 out of 11	"
" Hassan	" in 7 " 9	"
" Kolar	" in 3 " 5	"
" Shivamogga	" in 3 " 8	"
" Chitaldrug	" in 5 (all)	"

Altogether, it was taken in 51 out of 68 taluks, and in 1,454 villages of those 51 taluks. In three of the 51 it was taken by two officers in different parts of the taluk. The census officers were 32 special relief officers, 16 Assistant Commissioners, 4 amildars, 1 munsif, and 1 Assistant Conservator of Forests. Of these, 3 special relief officers, 16 Assistant Commissioners, and the 4 amildars were natives of the country.

4. The test-census of the 19th January was preceded by a preliminary census, in the course of which each one of these 51 officers took down with his own hand the names of the residents in each house. The following instructions were issued by me on the 4th December with regard to the method of taking the preliminary census:—

"Detailed instructions will issue subsequently regarding the forms to be used and the manner in which the final census is to be taken. But that final census must be preceded by a preliminary census based on a careful enquiry made from house to house.

"The names of all persons resident in the villages of the selected hobli should be recorded, whether they are actually present on the day of inspection or not; and information should be collected (1) as to the families or members of families who have gone away to coffee plantations, to public works, or elsewhere, and are not known to have died; (2) as to those who are known to have died in the village of starvation or disease."

"The hobli to be selected should be an average one,—neither the most nor the least affected in the taluk. If it contains much more than 30 villages, then only a portion of it containing 30 contiguous villages should be chosen for the test-census.

"The census officer should go to each village in the hobli and inspect it house by house. If the numbers affixed to each house at the census of 1871 still exist, they should be adhered to; if not, the houses should be re-numbered. He should divide the village into two parts; the portion inhabited by the ryots and better caste people, and the portion inhabited by the low caste people. Against each house

he should enter, in the proper columns, the names of each man, woman, boy or girl whom he finds in the village, or who is habitually resident there, though casually absent at the time, and their relationship to the head of the house. In the next column (8) he should enter the profession or employment of the family, whether ryot, shepherd, cowherd, weaver, tanner, or whatever it may be. In the ninth column should be entered the names (or if the names are unknown, the numbers) of the members of the family who have gone away to the Malnad, to coffee, or to public works, or any other employment, and who are not known to have died, and it should be stated whether the presumption is that they are alive or not, *e. g.*, if the relation left recently and has remitted money home, or has been heard of by the family, it may be presumed he is alive; if he went away in February or March and has not been heard of since, the presumption is the other way. Where a house is entirely deserted, the numbers of the people who used to live there and who have left it should be entered in column 9 with as much accuracy as is possible. In the last column should be entered against each house the numbers of men, women, or children of the house who are known to have died of starvation or cholera or other disease since the beginning of the famine.

"The information supplied to the census officer regarding those who have gone away or have died will probably not be accurate, and there will be much tendency to exaggeration; but efforts must be made to cross-examine the informants and to collect as accurate returns as possible."

"As soon as the census officer has completed his preliminary census in each village, he should have it translated into Kanarese and handed to the amildar, who will depute his peshkar or head munshi or other trustworthy official to the village to test the list over again, and to add or subtract any names he may find to be omitted or incorrectly entered."

5. Every census officer was directed to submit to me for inspection the sheets of the preliminary census of the first two villages taken in hand by him. These were carefully looked through; any errors that were found in the procedure were corrected, and the sheets returned in time to form a guide for the remainder of his work. I personally tested the work of five census officers while it was going on, and was satisfied of its accuracy. Most Deputy Commissioners also tested the work of some of the officers in their districts. Each preliminary census was also subjected to an independent testing by the native official of the amildar's court, who was sent to try and detect any errors.

6. The actual test-census was based on the returns of the preliminary census. The instructions given as to the method of taking the test-census were as follows:—

"You are requested to appoint enumerators to each of the villages of which the census is to be taken. As a rule, there should be an enumerator to 60 inhabited houses. Where a village contains more than 60 houses, there should be two enumerators; where more than 120, three enumerators, and so on. You should utilise the village shambhogs (*i. e.*, accountants) for this work and their relations, and, where necessary, you should depute other shambhogs to this duty. No extra remuneration will be given for the work. A list should be drawn up in your office, in English, showing the name of each enumerator, the village, and the number of houses allotted to him. This will remain as a record in case any inaccuracies are subsequently discovered, so that the person to whose neglect they are attributable may be known."

"The census officer should be encamped by the evening of the 16th January at the chief village of his test hobli, and the enumerators should present themselves to him by 8 A. M. of the 17th, to receive from him the Kanarese translations of the preliminary census of the houses in their allotted area, and blank forms for their own use. They should then proceed to the villages allotted to them, and satisfy themselves that the enclosures and houses have been separately numbered and agree with the numbers in the preliminary census; that the name of the head of the house has been correctly filled in; and that the other columns down to column 7 are accurate in all details. This should be completed by noon on the 18th January.

"The patel and villagers should be warned that every one is to be present in his house on the night of the 19th January. "The actual enumeration will commence on or about 8 P. M. on the 19th January, and each enumerator will then take with him the returns of the preliminary census and the blank forms which he has to fill up, and will enter in these the names of each person present in the house at the time, making enquiries as to any one whose name is recorded in the preliminary census, and who is not present on the night of the 19th.

"On the following day, each enumerator will deliver in to the census officer at the chief village of the hobli the forms handed over to him, and they will be at once examined by that officer in the presence of the enumerator, and an explanation called for as to any discrepancies between the preliminary and final census. Where the discrepancy is considerable, the census officer will go to the village with the enumerator and investigate its cause, and make what corrections are necessary."

7. The census was taken in accordance with these instructions, and nothing occurred to interfere with its completeness. The night was fine, and there was no distrust on the part of the people as to the objects of the enumeration. Each census officer visited one or two of his villages while the work was going on, and some were up the whole night, riding over their circle, and inspecting the enumerators at work. They reported with hardly a single exception that the census was taken faithfully and honestly, the enumerator visiting each house in turn, making the necessary enquiries, and recording the actual facts.

8. It is believed that the census that was then taken was as accurate as anything of the kind can be, and probably more accurate than any census ever taken in India before, as the area under each officer was manageably small, and the officers who personally took the preliminary, and who examined the final, census were all of the higher grades, and were both capable and trustworthy.

SECTION II.

COMPARISON OF THE PRELIMINARY AND FINAL CENSUS.

The number of people counted in the preliminary census in the 1,454 villages enumerated was 291,176; the number counted in the final census was 294,126; the difference being an increase of 2,950, or 1.01 per cent.

2. All officers were directed to examine into the differences between the two censuses, and to find out, with the help of the enumerators, the causes of the differences, classifying them under the heads prescribed. This was done in most cases, but a few officers did not carry out the order, in one or two instances through misunderstanding, but generally because they were struck down by the prevalent fever. In a population of 250,484, the causes of difference were ascertained and recorded at the time and on the spot; for a population of 43,642, or $\frac{1}{6}$ of the whole, they were not ascertained, and it was impossible to do this afterwards when the enumerators had dispersed. An attempt was made to work out the figures by the rule of proportion, on the assumption that there would be as many arrivals, departures, absences, deaths, &c., among the 43,642 as among the 250,484; but the assumption was found to be inaccurate. The figures given in the rest of this section refer, therefore, to the inhabitants of about $\frac{4}{5}$ of the villages enumerated, or to a population of 250,484 souls. The details for each census hobli are shown in the Appendix, Statement No. I.

3. The following are the heads under which the different causes of the discrepancy are to be classed:—

Increase.	
Non-residents accidentally present	6,159
New arrivals	5,164
Births	96
Errors in the preliminary census	2,551
Persons absent at the preliminary census and since returned	3,039
Total increase	17,009
Decrease.	
Residents accidentally absent	7,215
Departures	3,274
Deaths	1,755
Errors in the preliminary census	1,039
Gone to relief works, coffee, &c.	1,478
Total decrease	14,761
Balance of increase	2,248

4. The difference of 1 per cent. between a census taken on a single night of all persons who happened to be present on that night, and an enumeration taken slowly over a period of a month, and including all permanent residents who were temporarily absent, is not large.

5. Grouping the different causes of discrepancy, we find some curious facts. First—

Non-residents accidentally present	6,159
Residents accidentally absent	7,215
Decrease	1,056

These differences occur from visits of friends, travellers, departures of women with their children to their homes, and so forth. The resultant decrease probably arises from the fact that in the preliminary census those who were on a short absence, and were expected to return soon, were marked as present; no doubt some of them had not returned.

6. Second—

New arrivals	5,164
Departures	3,274
	1,890

These figures testify to the migratory and disturbed condition of the people. The departures are people who, during the preliminary census, were found in the villages and were believed to be settled there, but who suddenly went off to settle elsewhere. The new arrivals were similar families who had come to settle in the vacant places. The quantity of deserted houses, and of land thrown out of cultivation, increased the temptation to such wandering; but it is, in itself, one of the results of the demoralisation produced by the famine.

7. Third—

Errors in the preliminary census—	
Additions	2,551
Deductions	1,039
Increase	1,512

No one can hope to take a perfectly accurate census the first time of trying. Some member of the family, usually a child, is sure to be forgotten. The oftener the operation is repeated, the more correct the enumeration becomes.

8. Fourth—

Deaths	1,755
Births	96
Decrease	1,659

These are very remarkable figures, and throw more light on the objects with which the census was taken than anything else. The preliminary census lasted from about the 15th December to 15th January, and its central date was the 1st January, so that the average period between the preliminary and final census may be taken as 20 days. In that time 1,755 persons died and 96 were born, or at the rate of 32,028 and 1,752, respectively, per annum. This gives a death-rate of 127.8 and a birth-rate of 7 per mille. These figures may, I believe, be taken as absolutely correct. The persons who were dead on the 19th January had actually been seen alive, and their names written down between the 15th December and the 15th January by officers of high rank and character. Such a rate of mortality, if continued for 8½ years, would have exterminated the whole population. At this period, there was hardly any famine in the country; the harvest had just been gathered; for the time, at least, every one connected with the land had enough to eat, and those who lived in the country and had no land, subsisted by gathering the seed of the wild ragi, which is very nutritious, and the crop of which was extraordinarily abundant. None of the places in which the worst sufferers from the famine were collected, no relief camps, or hospitals were included in the census. The cause of the excessive mortality was the dreadful epidemic of fever which raged at the time, and which, though in many cases it acted on frames weakened by long-continued privation, in many cases also attacked with fatal results persons who were well to do, clerks of the Government Courts, people who had never known what it was to want a meal.

9. The following figures shew what the death-rate was in each district, the average of the whole province for the 20 days being 7 per mille:—

District.	Death-rate per mille in 20 days.	Total loss of population by test-census.
Tumkur	8.5	37
Chitaldrug	9.5	36
Bangalore	6.9	32
Kolar	5.1	31
Hassan	13.4	26
Kadur	5.0	20
Mysore	4.6	18
Shimoga	5.2	8

I have arranged the districts in this table in the order in which I consider that they really stand according to the degree of the severity of the suffering from famine, an order which agrees with that in which each is shown by the test-census to have suffered loss. It is obvious that the death-rate of the 20 days does not follow this order; for though Tumkur and Chitaldrug, which have suffered most, shew a high rate, Hassan, which was by no means one of the worst districts, shews the highest of all.

10. It should, however, be remembered that in these calculations due weight is not given to the populations of the most prosperous taluks; for while a census was taken in a portion of every taluk severely affected by famine,

none was taken in 15 taluks in which the famine was least acute. For instance, the Shimoga figure of 5·2 per mille applies only to 3 eastern taluks; in its 5 western taluks, which lie in the "Malnad," or near the Western Ghâts, no census was taken, and it is probable that the same mortality was not going on there.

11. As to the birth-rate, it proves what has often been suspected, but never, I believe, demonstrated before in India—the effect of famine in stopping the reproduction of the species.

12. Fifth—

Persons absent at the preliminary census and since returned	3,036
Persons present at the preliminary census, since gone to coffee districts, relief works, &c.	1,478
Total increase	1,658

This next to the death-rate and birth-rate is the figure which has the most important bearing on the results of this enquiry, as illustrating the question of the extent to which emigration went on, and how far it may be presumed that the difference between the post- and ante-famine census can be attributed to the absence of emigrants who are alive and will return to their villages. The subject, however, will be more conveniently discussed in the next chapter.

13. On the whole, it seems a fair conclusion to say that the test-census of the 19th January, checked as it was by the preliminary census and by the subsequent enquiries into discrepancies, gives unusually accurate information as to the numbers who were present in the enumerated villages and towns on the night in question.

SECTION III.

COMPARISON OF THE TEST-CENSUS WITH THE GENERAL CENSUS OF 1871.

The general census of Mysore was taken on the night of the 14th November 1871. It was the first regular census ever taken, and it was not preceded by a preliminary census, nor was there much effort made to train the enumerators or to test their work. Still I have seen no reason to distrust its general accuracy. Several apparent errors have been discovered, such as the omission of whole villages, inclusion of two villages in one, and so forth, but most of these have been cleared up, and it seems probable that the numbers enumerated then may fairly be compared with those enumerated in 1878.

2. Although the days on which the two censuses were taken were not the same, both belong to a single homogeneous period as far as regards the habits of the people and the likelihood of their being found in their homes. There is no festival near either date to attract them away. The emigration period sets in in October, and most of those who go to labour on the coffee plantations go before the middle of November, and return after the end of January. Had the other conditions been similar, the number of people absent from home might have been expected to be about the same in the middle of November and in the middle of January.

3. The total population found in the 1,454 villages enumerated was 234,126. The total population counted in the same villages in 1871 was 412,934. This indicates a loss of 118,808, or 28·77 per cent. If this rate of loss were applied to the whole province, it would point to a decrease in the population of 1,454,412 souls, or nearly

a million and a half. If, again, it were assumed that the natural increase of the population in ordinary years is $\frac{1}{2}$ per cent,* then in the six years, since

November 1871, the population of the 1,454 villages would have grown to 425,322, and the loss is 30·8 per cent., which, if applied to the whole province, would indicate a loss of 1,602,779 souls.

4. This conclusion, however, requires modification. It has been pointed out already that the test-census was taken in all the worst taluks, not in all the best. Many of those suffered in no degree from famine. They were invaded by starving immigrants who brought with them severe epidemics of cholera and fever, and these carried off many of the resident population. On the other hand, considerable numbers of the emigrants remained in this part of the country. Moreover, previous to the famine, the increase in these less populated tracts was known to be rapid. On the whole, I have thought it safe to assume that, in the eight taluks here referred to (five in Shimoga, two in Kadur, and one in Hassan), there has been an increase of 1 per cent. per annum for five years,—that is, up to November 1876, when the famine set in with severity. This figure, though mainly hypothetical, is borne out by

the facts drawn in paragraph 17 from the Coorg census. In the nine other taluks which no census was taken, the percentages of those neighbouring taluks which were most similar to them have been used. This applies to two taluks in Kolar, one in Hassan, and six in Mysore.

5. The figures thus obtained stand as follows:—

District.	Average loss by test-census.	Population of 1871.	Present population calculated on the ratios of the test-census.	Decrease.
1. Tumkur	37·2	632,239	397,033	235,206
2. Chitaldrug	36·57	531,360	337,030	194,330
3. Bangalore	32·09	828,354	562,514	265,840
4. Kolar	31·62	618,954	423,864	195,090
5. Hassan (excluding one Malnad taluk)	26·07	600,144	443,664	156,480
6. Kadur (" two Malnad taluks)	19·93	266,643	216,165	50,478
7. Mysore	17·73	943,187	775,969	167,218
8. Shimoga (excluding five Malnad taluks)	8·19	214,235	196,694	17,541
9. Eight Malnad taluks	...	420,296	441,729	Increase, 21,433
TOTAL	24·94	5,055,412	3,794,662	1,260,750

The general result of this table is to indicate a loss of 24·94 per cent., or 1,260,750 souls. The districts are placed (as in section 2, paragraph 9) in the order in which I consider they ought to stand according to the degree of the acuteness with which the famine raged; and this order corresponds exactly with the order of the percentage of loss.

6. The statement printed as Appendix No. II to the report shows the details of this calculation for each taluk; but it will be useful here to give the percentage figure of each taluk, arranged in order according to the greatness of the loss:—

District.	Taluk.	Percentage of loss.	District.	Taluk.	Percentage of loss.
1. Hassan	Haranhalli	47·1	27. Hassan	Naga Mangala	33·3
2. Chitaldrug	Hiriyur	46·4	28. Kolar	Kolar	31·7
3. Ditto	Devangere	45·7	29. Chitaldrug	Paugarh	30·8
4. Bangalore	Dod Ballapur	45·4	30. Ditto	Budihal	30·2
5. Tumkur	Kunigal	42·8	31. Kolar	Malur	30·1
6. Mysore	Mandia	42·6	32. Bangalore	Anekal	27·6
7. Chitaldrug	Chitaldrug	40·9	33. Ditto	Kankanhalli	25·2
8. Ditto	Hosdrug	40·1	34. Ditto	Magadi	25
9. Tumkur	Tumkur	39·9	35. Kadur	Chikmagalur	24
10. Ditto	Kortagere	39·7	36. Ditto	Banawar	22·9
11. Chitaldrug	Kankuppa	39·3	37. Bangalore	Devanhalli	22·9
12. Bangalore	Hoskotta	38·5	38. Hassan	Attikapa	22·5
13. Tumkur	Kadaba	37·6	39. Ditto	Belur	22·2
14. Kolar	Betnangala	37·1	40. Tumkur	Honawalli	20·4
15. Tumkur	Chiknaikanhalli	37·0	41. Kolar	Mulbagal	16·9
16. Hassan	Hassan	36·9	42. Shimoga	Chenagere	15·3
17. Tumkur	Madgiri	36·2	43. Chitaldrug	Doderi	14·4
18. Ditto	Sira	36·0	44. Hassan	Narsipur	14·3
19. Kolar	Chik Ballapur	35·9	45. Shimoga	Honnalli	10·4
20. Ditto	Srinivasapur	35·4	46. Kolar	Goribednor	8·2
21. Bangalore	Nela Mangala	34·9	47. Mysore	Hegadevanakote	7·6
22. Mysore	Periapatan	34·2	48. Kadur	Terikere	6
23. Bangalore	Closepet	33·9	49. Mysore	Ashtagram	5·1
24. Hassan	Channarayana	33·9	50. Ditto	Mysore	4·6
25. Kolar	Sidlighatta	33·6	51. Shimoga	Shimoga	plus
26. Bangalore	Bangalore	33·5			

This order agrees very nearly with the order in which I should put the taluks according to the severity of the famine, and so far this tends to indicate that the loss incurred is mainly a loss from famine. But Haranhalli (No. 1), Devangere and Kankuppa (Nos. 3 and 11), Periapatan (No. 22), and Closepet (No. 23) are higher in the list than I should have expected to find them, and a considerable part of the decrease here may be due to emigration and to relief works. On the other hand, Devanhalli (No. 37), Honawalli (40), Mulbagal (41), and Doderi (43), are lower in the scale than is justified by the real severity of famine that prevailed.

7. This leads on to the question, what portion of the 1,260,750, who were absent from their villages on the 19th January, must be set down as dead from famine or its concomitant diseases, and what portion may be expected to return alive?

8. In taking the preliminary census, the officers were instructed to make enquiries about the absent, and to enter in one column the names of those who were known by the survivors in the villages to have died during the famine; in the other, the names of those who were known to have gone away to coffee plantations and elsewhere, and were believed to be still alive, or at least not known to have died. This was done with much care; and out of the 118,808 persons missing in the test-hoblis, 94,012 were thus accounted for; 61,335 (or 15·1 per cent.) being known to have died, and 32,677 (or 7·9 per cent.) being believed to be still alive. This ratio, if applied to the population of the whole province, would give as the number of those who had emigrated 379,155 persons.

9. I have calculated elsewhere, on quite independent data, drawn chiefly from the returns made by the Coffee Planters' Associations, that the ordinary number of Mysore coolies who go every year to coffee plantations, returning when the season is over, is about 150,000; and it is thoroughly in accordance with what is known of the events of 1877 to suppose that in that year more than double the number went to search for employment.

10. A reference to the district details confirms the impression produced by these figures. The following table shews the percentage of persons recorded as absent, but probably alive, for each district:—

Bangalore	5·3
Kolar	8·5
Tumkur	10·9
Mysore	4·8
Hassan	13·0
Kadur	7·0
Shimoga	5·6
Chitaldrug	7·6

Tumkur and Hassan are known to be the two districts which supply most of the coffee labour, and they are the two which shew the highest percentages here. Sir R. Temple calculated in February 1877, from information supplied to him, that about 30,000 coolies left the Tumkur District every year for the coffee tracts; and 10·9 on the population gives about 65,000, or rather more than double the usual number.

11. It seems, therefore, reasonable to consider that about 8 per cent. of the population were absent on the 19th January in consequence of having emigrated, as compared with about 4 per cent., the number usually absent at this time; but of these, how many are likely to come back? In the 20 days before the 19th January, 3,036 came back, or nearly a tenth of those recorded as absent, which is an encouraging symptom. But, on the other hand, it was reported from all quarters of the coffee districts that at that time there was a dearth of able-bodied labour, although an unusual number of sickly and emaciated people were living in those parts and trying to get employment in coffee-picking.

12. On the whole, the conclusion I am disposed to form is this, that whereas in ordinary years about 150,000 people would be found absent at the taking of a winter-census in Mysore, on this occasion over 300,000 were absent, but that a great proportion of these were sickly, and that many of them had died and would die. What we ought to add to the census figures, if we want to know the effect of the famine on human life, is not the whole number of absentees, but the excess of the absentees in 1878 over the absentees in 1871, that is about 200,000. But of these I do not think the most sanguine can reckon that more than half will live to return home. If, then, we add this number, or say 100,000, to the number counted in the test-census (as by paragraph 5), we have 3,894,662 as the population of Mysore, *plus* the usual number of emigrants who were absent in the census of 1871, as well as that of 1878; the difference is therefore 1,160,750, or 22·96 per cent.

13. Statistics of age are never trustworthy, and therefore, though it is a point I especially desired to throw light upon, I have not obtained any satisfactory proof of what the relative mortality has been among adults and among children. The following figures shew what information the two censuses have to offer on this subject:—

Comparative percentages.

	1871.	1878.
Males	50·16	49·60
Females	49·84	50·40
Adults	64·02	65·20
Minors	35·98	34·80

The males exceeded the females in 1871 by 0·32 per cent.; they are now fewer by 0·4 per cent. The great proportion of women, as compared with men, on the relief works and in the relief camps, drew the attention of everybody, but both that fact and these figures may be due to a larger number of the emigrants being males. The minors have fallen off in numbers a little. They are less by 44,802 than they should be if they bore the same proportion to adults as in 1871. The annual birth-rate at 40 per mille would be 200,000; the time when the famine began to act on the parents was about January 1877, so that the birth-rate would hardly be checked before September. Calculating that between September and January it fell off gradually from 40 to 7 per mille, the average rate for those four months would be about 20 per mille, and instead of 66,000 only, 33,000 would be born. When to this cause is added the small chance that infants at the breast had of being nourished by a famine-stricken mother, and also the inability of children to resist privations which adults could bear, it is evident that the mortality among children as compared with that among adults, and the proportional diminution of their numbers, are not properly shewn in these figures.

14. The census officers were invited, in order to elucidate the question of the birth-rate still further, to numerate separately infants under one year; but this suggestion reached many of them too late to be acted on. The number counted was 3,490 out of a population of 236,046, or a percentage of 1·5. In the North-Western Provinces census of 1872, the percentage of infants under 1 to the whole population was 4·6; so that at that rate here should be 174,554 infants in the country, whereas there were (at 1·5 per cent.) 56,920, or a deficiency of 118,634 children under one year alone—a deficiency due either to diminished births, or to deaths, or to both causes. But the statistics on this head are too doubtful to bear the weight of any conclusion of this sort.

15. The number of houses was recorded in both censuses, but a comparison would serve no useful result. There is nothing more difficult than to decide what should be reckoned a separate house, and the enumeration of 1871 was confessedly defective in this respect. No one can travel through Mysore without being struck by the large quantity of deserted and ruinous houses he sees in almost every village; but the test-census has failed to give any trustworthy statistics of their positive or relative number. In some cases the numbers are much decreased, but this cannot be put down to desertion through famine: in some cases, there is an increase of houses along with a decrease of population; but no conclusion can be drawn from this, except that the system of enumeration was different in 1871 and in 1878. That there had been an increase in the number of houses since 1871, I have no doubt; for in almost every village in which I tested the survey map, there were new hamlets or isolated houses not shown in the map, which had been built since the field survey.

16. The number of villages which were inhabited in 1871, but have been wholly deserted in the course of the famine, is shewn in the following table:—

District.	Number of hoblis in which no villages have been deserted.	Number of hoblis in which villages have been deserted.	Total number of villages enumerated.	Number deserted in the famine.
Bangalore	6		269	3
Kolar	4	4	233	11
Tumkur	2	6	248	8
Mysore	3	2	138	10
Hassan	6	1	211	1
Kadur	2	1	90	1
Shimoga	2	1	97	3
Chitaldrug	4	4	168	7
TOTAL	29	22	1,154	44

17. At the same time that the test-census was taken in Mysore, a census was taken in a small selected circle of Coorg under the Assistant Commissioner. The circle comprised 11 villages, 4 of which contained 11 coffee states. The village population has increased from 3,590 to 3,885, or 8·2 per cent.,—a little more than the increase

I have assumed for the Malnad taluks in Mysore. The coffee estates contain now 1,134 people. But while in the villages the males exceed the females by 8·4 per cent. (being 2,107 against 1,778 females), among the coffee coolies there is a preponderance of females, the numbers being 543 males and 591 females, or 47·9 and 52·1 respectively. So far as these figures go, they throw doubt on the general assumption that the emigrants were mostly males. The number of deaths recorded by the enumerators as reported to have occurred through famine and disease among the villages was 77, or 2 per cent.; among the coolies on the coffee estates it was 313, or 27·6 per cent.,—a very terrible proportion, but not larger than the rate of mortality which is believed from common report to have existed among the famine-stricken emigrants.

SECTION IV.

CAUSES OF MORTALITY.

The mortuary statistics of the province have never made even an approach to accuracy. In the five years preceding 1877 the average death-rate was recorded as about 10 per mille; the number of deaths registered was a little over 51,000 in 1873, 1874, and 1875, and rose to 54,265 in 1876. We know that the true death-rate must have been at least 30 per mille, and therefore about two-thirds of the deaths were never recorded.

2. But in dealing with inaccurate statistics of this kind, there is often some show of reason for supposing that the ratio of error is constant, and that although the figures of any one year are absolutely incorrect, yet the figures of two years are relatively correct; the most healthy year will show the least mortality, and *vice versa*. In this way the figures for 1876 vindicate themselves by shewing a higher rate than those for 1875; the famine had begun to be felt, though very slightly.

3. So, too, in 1877 the registered deaths increased enormously, rising to 224,813 in the year, or 44·4 per mille. If it may be assumed that the same ratio of error existed in 1872-76 and in 1877, the number should be multiplied three-fold, and should stand at 674,439, or 133 per mille; and in this case about 520,000 would be the extra deaths, over and above the normal rate of 150,000, due directly or indirectly to the famine or other abnormal causes. Unfortunately there is good ground for thinking that this is less than half of the extraordinary mortality that really occurred.

4. Taken by months, the registered deaths occurred as follows:—

Months.	Cholera.	Small-pox.	Fevers.	Bowel complaints.	Other diseases.	Total.
January	3,096	350	2,469	592	1,565	8,052
February	11,302	449	2,101	711	1,919	16,488
March	10,714	685	2,535	965	2,567	22,466
April	9,054	807	2,465	1,116	2,686	16,128
May	8,912	742	3,301	2,151	4,615	19,751
June	4,347	759	4,366	2,763	6,008	18,243
July	1,836	569	6,559	5,097	8,738	23,099
August	1,331	424	7,039	5,990	11,182	26,965
September	1,115	288	5,373	5,138	11,055	22,969
October	561	497	5,697	4,338	8,698	20,301
November	205	229	7,097	2,613	6,980	16,125
December	144	202	7,827	2,163	3,863	14,196
TOTAL OF 1877	53,681	5,971	56,948	34,237	63,976	224,813
January 1878	11	184	6,694	1,232	2,613	10,794
February	11	131	4,436	693	1,617	6,878
March	6	145	4,080	614	1,305	6,150
April	12	123	3,599	551	1,260	5,551

Now we know, within a small margin of error, that the death-rate in January was really 127·8 per mille, or on a population of 3½ millions, 47,925. It is here returned as 10,734, or about 22 per cent. of the truth.

If for a moment we suppose that error to be constant,—that is to say, that the registered deaths in each month were 22 per cent. of the real number of deaths,—we should have approximately the following as the true rate of mortality in each month:—

January	36,234
February	74,196
March	105,732
April	72,576
May	88,379
June	82,093
July	103,945
August	116,842
September	103,360
October	91,354
November	72,562
December	63,882

1,011,155

or a little over a million of registered deaths. If to this be added the mortality among the emigrants in Coorg and the Wynád, it accounts pretty nearly for the million and a quarter lost.

5. Of the deaths recorded, 26 per cent. was put down as due to cholera, 25 per cent. to fever, 15 per cent. to bowel complaints. Using the same ratios for our enlarged total, we should have—

Deaths from cholera	262,886
„ „ fever	252,775

What connection exists between cholera and famine is an obscure point on which it would be out of place and idle to venture an opinion. History shows that it does almost always follow in the trace of famine, and yet there can be no doubt that some at least of its victims are people who were not at all affected by famine. The same is true of fever, which, as has been remarked above, attacked and slew many well-to-do persons. So that without drawing any definite arithmetical conclusion, it seems clear that about half the mortality was assigned (though the accuracy of this is more than doubtful) to two causes, neither of which are directly connected with famine, but which are to some extent indirectly connected with it, & some extent absolutely unconnected.

SECTION V.

CONCLUSION.

It remains to consider what is the practical outcome of the test-census, and what conclusion the Government ought to draw from the figures that have been thus set forth. The test-census brought out a loss of 1,260,750 persons as compared with the total of 1871, without allowing for any increase in the population since then. But Mysore is a thinly populated and was a well-to-do country, with much uncultivated land, with an admirable tenure, and with a light assessment. Every condition which should lead to a rapid multiplication of the species existed there, and it would be unreasonable to assume that the population had stood still since 1871. The moderate rate of increase, 0·5 per cent. per annum, which was proved to exist in the North-Western Provinces under much less favourable conditions, can, it would seem, be safely reckoned on here as likely to exist under normal circumstances. On this assumption, the population ought to have risen by November 1877 to 3,207,074, but for the famine; and if it is now 3,794,662, the loss has been 1,412,412. But it is calculated that 230,000 in excess of the usual number have emigrated, and that about 100,000 are likely to come back alive. If so, the loss is brought down to about 1,300,000 souls.

2. The accuracy of these figures rests upon the following data: (1) that the census of 1871 was correct; (2) that the test-census of 1878 was correct; (3) that the circles in which it was taken were fair average representations of the larger areas or taluks to which their data have been applied. Now, as to (1) and (2), it may be safely said that the later census was the more accurate of the two, and as the tendency of an inaccurate census is to be too low, rather than too high, the decrease shewn in the later census is probably really below the truth. So far a consideration of the uncertainties involved in (1) and (2) would lead to the conclusion that the loss is probably greater, not less, than 1,300,000.

3. The third consideration is open to a good deal of doubt. The test-hoblis were chosen in every case on the best information that could be got at the time, and were meant to be average specimens of the taluk; but it was found afterwards that mistakes had been made. In Haranhalli the worst hobli of all was chosen; and thus that taluk stands at the head of the list, which is not its proper order of demerit. Kunigal was the best taluk in Tumkur, but it shows a higher mortality than any other, because one of its worst hoblis was chosen. On the other hand, the best portion of Goribednur was enumerated, a part abounding in wells and streams of water, and thus the taluk is shewn with an extremely low percentage of loss. The same may be said of Doderi, and to some extent of Devanahalli, so that on the whole it may be reasonably held that the errors on opposite sides balance one another.

4. Still there is a great deal of variation in the ratios recorded in section 3, paragraph 6, larger than might have been expected in places all severely visited by a common scourge. Putting aside those parts which were only within the penumbra of the eclipse, which (with some exceptions, like those of Goribednur and Devanahalli and Doderi already noticed) may be said to begin from No. 33 in the list of taluks, the remainder, which were all most acutely affected, range from 47 to 27 per cent. If the conditions had all been exactly similar, and if the famine had been equally severe everywhere, and if the loss had been everywhere due to the famine alone, then the resultant ratio of loss should have been the same throughout. This, of course, is an impossible supposition; the conditions varied, and so did the pressure of famine. But still I doubt if they varied as much as the ratios of loss, and I think no one can resist the belief that there is an element of error in these figures; that the tracts in question did not differ so much in the extent of their suffering from famine as is represented by a difference of 47 and 27 per cent. What the amount of the error may have been I know no way of calculating, and to some extent, as has been suggested, the extremes would neutralise each other. But looking to the steady and uniform indication of heavy loss (for even the lowest ratio of these bad taluks is 27 per cent.), I do not think there can be any very great departure from the truth.

5. There are two other points to be considered. Relief works and relief camps attract people away from their homes; but there were at this time only 42,000 on works and 6,000 in camps in the whole province, and the only large work was the State Railway. These may to some slight extent have depleted the neighbouring test-hoblis, but the numbers are so small that their effect evidently cannot have been large. The other point is this, that the population of the large town of Bangalore was subject to different conditions from those affecting the adjacent villages. The test-hobli in that taluk shews a loss of 33.5 per cent., but it is not clear that that ratio can also be applied to the city, although there is known to have been a considerable loss of life there also.

6. The problem is one which cannot, it seems, be calculated exactly; but making allowance for all these considerations, I think that 5 per cent. may safely be taken as the limit of error. In that case the present population as estimated from the test-census may be about 4,100,000 instead of 3,894,662, and the loss would be about 1,100,000. Of this loss, according to the previous estimate, 33,000 (or say 50,000) may be due to diminished births, and the rest, or a million and fifty thousand, may be the actual number of deaths. Of these, in all probability half were due to cholera and fever, and half were due directly to famine and to the diseases which follow upon famine.

C. A. ELLIOTT.

CENSUS STATEMENTS.

lation or two millions at 7 per cent., the rate found in the districts which suffered less from famine, would amount to 140,000, giving an aggregate of 650,000 for the mortality of the whole province during the famine, based on the accurate data of the test-census. It is most probable that deaths, especially in the case of children, have been omitted in the test-census, particularly amongst the poorest classes, who suffered most. Allowing 50,000 for these omissions, the total mortality would be 700,000.

11. The population prior to famine, not allowing for any increase since 1871, but counting the absentees in the coffee districts at the time of that census at 150,000, may be taken at 5,200,000. The present population, exclusive of emigrants as already estimated, is 4,000,000. Out of the difference of 1,200,000, 700,000 I assume to be the mortality in the famine year. The remaining 500,000 would be represented by the ordinary and extra-

* Estimated by Mr. Elliott at 350,000.

ordinary emigrants to the coffee districts,* the men employed on relief works and in relief camps,† and the very large number (say 100,000) who may be supposed to have left their villages for support from relations or other liveli-

† About 50,000.

hood in towns, or who are general stragglers. It must be borne in mind that the mortality ascertained at the test-census includes the presumed mortality up to that date amongst these emigrants and wanderers.

12. Both amongst such emigrants and in the general population, though the mortality has diminished since February last, there must be for some time to come a higher than usual rate of mortality. But, for the present, I do not think we are justified in assuming a higher figure than 700,000 for the mortality from all causes during the famine year, so far as any estimate can be formed from the partial census taken.

13. I do not know that it would be practically valuable to express an opinion as to the proportion which deaths from famine and diseases which follow upon famine bear to those resulting from other diseases and causes. It must be to a great extent mere guess-work. Probably the former were to the latter as 5 to 2.

14. The births and deaths recorded between the preliminary and final census were undoubtedly accurate, and though extending over a very short interval, the former shew sufficiently the evil effect of famine in diminishing births, and the latter that the mortality attributable to diseases and other deteriorating effects of famine continued to be very large even at that time.

15. The test-census further shews that the loss amongst minors, or those under 12 years of age, was greater in proportion to that amongst adults. It was specially large amongst very young infants, those under one year. The higher rate of deaths amongst males as compared with females is not so clearly established.

16. The destruction of the original village census returns of 1871 unfortunately precludes a comparison of the numbers of the different classes of the population as then and now existing; but some idea, though I fear it may be very imperfect, may perhaps be formed by reckoning the number of deaths in each class as ascertained at the recent test-census.

17. It may be desirable to examine some or all of the hoblis again in February next, or perhaps even to take a general census to ascertain to what extent emigrants have returned and re-settled in their villages. At the best I fear any calculations to shew the precise mortality in 1877 must be to a great extent unsatisfactory and unreliable, but there is unhappily no room to doubt that it was terribly great.

J. D. GORDON,

Chief Commissioner of Mysore and Coorg.

BANGALORE.

14th August 1878.

From the Government of India, to Her Majesty's Secretary of State for India, (No. 55, dated Simla, 6th September 1878).

WE have the honour to forward copies of a report by Mr. C. A. Elliott, late Famine Commissioner, together with a Minute by the Chief Commissioner, on the result of the partial census taken during January last in the famine-stricken province of Mysore.

2. Mr. Elliott's report shews that in 51 of the sub-divisions (taluks) of Mysore, a census was taken, with much care, throughout all the villages of a local area called a *hobli*. The average population of a *hobli* before the famine was about 8,000 persons. In 17 sub-divisions (taluks) where the famine was less felt, no test-census was taken. In the *hoblis* where the census was taken it was found that the total population of 1878 amounted to 294,126 persons, as compared with 412,934 who were reckoned at the census of 1871, thus shewing a loss of population equal to 28.77 per cent. in the areas where the census was taken. The loss in these *hoblis* ranged from

47 per cent. to 5 per cent. of the population. In applying to the rest of the province the results deduced from census taken in areas aggregating about 8 per cent. of the whole country, it was necessary to consider—

- (1) how far the local areas chosen were fair specimens of the taluks and districts which they represented;
- (2) how far other known facts confirmed the belief that so terrible a mortality had been general;
- (3) how far the loss was apparent, and due to emigration to the coffee districts or elsewhere.

3. On the first point, Mr. Elliott records that the *hoblis* selected for the test-census were chosen on the best information available, and were meant to be average specimens of the sub-divisions (taluks) which they represented; that some of the test *hoblis* turned out to be much worse and some better than the average of the taluks; but that on the whole the errors on opposite sides probably balance each other. Mr. Gordon considers that the inferences to be drawn from the partial census are open to correction, because the test-census was largely taken in the areas that most severely suffered, and because the partial census did not embrace any of the large towns where the loss of population was not so great.

4. On the second point,—namely, how far other facts confirm the belief as to the rate of mortality,—Mr. Elliott states the following considerations. A preliminary census was taken of the test *hoblis* during the month from the 15th December to the 15th January, and the actual test-census was taken on the night of the 19th January. Between the time of the preliminary census and the date of the actual census, 1,755 deaths and only 96 births

* NOTE.—This hypothesis would be subject to some correction if the bulk of the preliminary census was done during the first-half of the month. Seeing that some of the sheets had to be sent to Mr. Elliott and returned by him, and that much of the preliminary census work was tested by superior officers, it is possible that the bulk of the work was done during the last fortnight of December. If this were so, then the deduced death-rate in the test would be proportionately reduced.

had occurred. On the hypothesis* that the average period between the preliminary census and the test-census was 2 days, these numbers give an annual death-rate of 127 per mille, and an annual birth-rate of 7 per mille. And these rates are yielded for a period when "there was hardly any famine in the country." In a small area of 11 villages i

Coorg, where a census was taken in January 1878, it was found that among 1,134 immigrant coolies from Mysore who were working on the coffee estates, 313 persons, or 27.6 per cent. of the whole, had died during the famine period. The registration of deaths in Mysore is as yet very imperfect. In the five years preceding the famine the death-rate, according to the registration returns, was 10 per mille per annum. The true death-rate must probably have been thrice the rate so deduced. During the famine year (1877) the registered deaths increase enormously, and yielded an annual death-rate of 44.4 per mille. If the same ratio of error existed as in former years, this rate would be converted into a true rate of 133 per mille, representing a mortality of 674,439, or 520,000 deaths above the normal number of about 150,000 per annum. Mr. Elliott adds that, if the January death-rate, according to the deaths that occurred between the preliminary census and the actual census, were actually, 127.8 per mille, then the registered deaths of January 1878 were only 22 per cent. of the actual mortality and if the same ratio of correction be applied to the registration returns of 1877, the total deaths of the year would come to 1,011,155.

5. Mr. Gordon observes that the information elicited during the preliminary census (when the name of every person who had died or had emigrated was written down) shewed that 15.1 per cent. of the people had died, the 7.9 per cent. had emigrated and were believed to be alive, and that the remainder, 5.77 per cent., were not accounted for. The death-rate during the famine, as ascertained by careful enquiry during the elaborate preliminary census, was in the five worst districts 17 per cent. on the total population. If this rate be applied to the millions of the most severely afflicted tracts of the province, the total deaths during the famine would be 510,000 and if the mortality in the remainder of the population be taken at 7 per cent., the ascertained loss in certain less distressed *hoblis*, then the total loss during the famine would be 650,000 persons.

6. In regard to the third consideration,—namely, how far the loss of population may be due to emigration,—Mr. Elliott estimates that in ordinary times 150,000 labourers emigrate annually, between November and February to the coffee districts of Coorg and the Wynad. He believes that the emigration in 1877 may have reached 350,000 persons, or 200,000 more than usual. But he fears that out of the extra 200,000, one-half, or 100,000, must have died, and will never return. Mr. Gordon estimates the ordinary and extraordinary emigration to the coffee district at about 500,000 people. He considers that out of the decrease of the rural population as deduced from the test census, 100,000 may be accounted for among the relief labourers, wanderers, and stragglers in the large towns. It appears that the area under coffee, and the consequent number of coolies employed, has increased considerably since 1871, so that there is ground for supposing that the ordinary emigration in 1877 would have been larger than it was in 1871.

7. After applying all the corrections he can, and after assuming the normal increase of the population previous to the famine year to have been $\frac{1}{2}$ per cent. per annum, Mr. Elliott comes to the conclusion that the loss of population in Mysore during the famine must have been 1,100,000 out of a total population of 5,207,074; and that out of this loss, about 50,000 may have been due to the diminution of births caused by want and suffering among the adult population. Mr. Gordon considers that "we are not justified in assuming a higher figure than 700,000 for the mortality from all causes during the famine year, so far as any estimate can be formed from the partial census taken."

8. Mr. Elliott, though he was only six months in Mysore, gained in that time a remarkable insight into Mysore affairs; he was constantly moving among the people and the local officers; he directed the test-census, as indeed he did all relief operations after September 1877, with ability and industry; and we consider him a most competent observer and judge in a matter of the kind now under consideration. Mr. Gordon has been employed in Mysore for nine years; he knows the country and people well; after filling successfully the second post in the administration, he is now the head of the Local Government; and we are accustomed to attach much weight to his opinions and judgment. When two officers like Mr. Gordon and Mr. Elliott thus differ as to the deductions to be drawn from data which are confessedly imperfect and subject to much correction, we hesitate to say what should be our conclusions.

9. In the absence of trustworthy vital statistics, we are in a great measure driven to hypotheses in discussing such questions as these. If we accept as normal the yearly death-rate that is named in paragraph 4, or 3 per cent., and if we suppose that the normal yearly birth-rate is somewhat in excess of this, say $3\frac{1}{2}$ per cent., it would follow that a simultaneous increase of the former rate and decrease of the latter, in the proportion say of about 1 to 2, would lead to a yearly loss from deaths of 6 per cent., with a set-off from births, say of $1\frac{1}{2}$ per cent., giving a net loss of $4\frac{1}{2}$ per cent. per annum; and this continued for two years would lead to a reduction of the total population of 9 per cent., or on 5 millions to no less than 450,000 persons. Altering the ratio of death and birth-rates as 1 to 3, the loss for two years would be 16 per cent., or 800,000 persons. Thus a mortality not very excessive in itself, combined with a failure of births, such as we know to be one of the concomitants of famine, is not incompatible with a very large diminution of the population in a comparatively short time. In the actual case the period of acute distress was probably not more than one year, reckoning to the date of the census, and these calculations must only be taken as illustrative of our argument. It would be premature for us in the present condition of our knowledge to say that the great reduction of the population, which has almost certainly occurred, may be more probably due to this combination of causes than to positive mortality; but the alternative is one that deserves attention, and we find in it grounds for suspending our judgment on facts which are still very imperfectly appreciated.

10. The subject will continue to receive our consideration, and we shall probably act on Mr. Gordon's suggestion that a general census of the whole of Mysore and Coorg should be taken again on some date before the province is finally made over to the Government of the Maharaja. It may be expedient to undertake this shortly, and to extend such a census to the provinces of Madras and Bombay which have suffered from the late famine. Until such a census is taken, the true reduction of the population during the famine will not be known with any certainty. But wherever the truth lies, whether the loss of life from famine has been 1,050,000 as estimated by Mr. Elliott, or 700,000 as estimated by Mr. Gordon, or whether the reduction of numbers has been to any considerable extent caused by a failure of births, leaving the deaths at some smaller number than either of these estimates, there is no possibility for doubt that the mortality from famine in Mysore has been most deplorably great. We hope to submit shortly a report upon the Mysore famine, which will assist in judging how far this most distressing result may have been due to causes that could have been remedied at the time, or that can be adequately met hereafter, when calamities, such as overtook Mysore in 1876-77, again befall any part of the Indian Empire.

APPENDIX IV.

FAREWELL MINUTE BY THE FAMINE COMMISSIONER OF MYSORE.

BEFORE I leave the Province of Mysore, I desire, with the permission of the Chief Commissioner, to record my appreciation of the services which have been rendered to Government by its officers, or which have been voluntarily tendered by non-official gentlemen, during the famine which is now, I trust, near its close.

It will be my duty hereafter to write the History of the Mysore Famine, and to discuss the steps taken to meet it in the earlier days, before I became an actor in the scene. For the present I confine myself to the period which has elapsed since I received charge of the Famine Department, when the principles of action having been laid down by the Viceroy, nothing remained but to carry them out with zeal and loyalty.

And it is to the loyalty and good will of the officers of the Mysore Commission that I wish in the first place to bear emphatic testimony. Coming to the province under circumstances which would have made it not unnatural to expect a little irritation and opposition, neither I nor my colleague, Major Moncrieff, have in a single instance experienced from them anything but hearty and friendly co-operation.

Though nothing could be further from my wishes than to set aside the Commissioners of Divisions, I found it in practice so essential to communicate direct and without delay with the district officers that, as a rule, the connection of the Commissioners with famine operations has been slight. I have, however, in all cases received assistance and useful information from them, but their duties as Sessions Judges have been too heavy for them to take much active share in the work.

Among Deputy Commissioners, I have no hesitation in giving the first place to Captain Ludlow. His district, Tumkur, is the one that has suffered most from famine, and nothing could exceed the self-devotion with which, though himself constantly in bad health, once attacked by cholera, overworked, and for some time under-handed, he laboured to relieve the suffering. If active sympathy with distress, combined with great physical activity in visiting villages and in supervising measures of relief, could have secured success, Captain Ludlow would have done more than to deserve it.

The Bangalore District was the one which caused the greatest anxiety in September last, on account of the vast numbers collected in the camps and receiving gratuitous relief. Captain Gordon Cumming shewed great energy and decision in carrying out the Viceroy's orders, converting the "kitchens" into enclosed camps, and rigorously enforcing the prescribed tests; and he has at all times afforded me great assistance by the readiness and thoroughness with which he has carried out my instructions.

The Chitaldrug District was the one that first felt the famine, and parts of it have suffered most severely; as a whole, it comes next after Tumkur and Bangalore. The great size of the district, the want of sufficient assistance in the earlier months, and his own great sympathy with the sufferings he witnessed, have told seriously on Major Armstrong's health, and after a long struggle to do more than any one man could do, he has at last broken down, and has been obliged to take furlough on medical certificate to England, where I sincerely trust he may soon recruit and repair his constitution.

Mr. B. Krishnaiengar's twelve years' experience and intimate knowledge of his (the Kolar) district enabled him to achieve a large measure of success in utilising famine labour and enriching his district by works of permanent utility. On the whole I consider that the Kolar District has emerged from these troubles with less material loss and in a more prosperous condition than any other district that was equally affected by famine.

Both Major C. Pearse, in Mysore, and Major Blair, in Kadur, had only one taluk severely affected, and both carried out the requisite measures of relief with energy and success. I wish particularly to acknowledge Major Pearse's kindly and sympathetic interest in all matters of relief organisation, and the assistance I have derived from his knowledge of the people.

Major Hill and Captain Maltby have been successively in charge of the Hassan District, and both have taken great interest in the relief operations.

Mr. W. J. Cunningham, B. C. S., has been only for a short time in charge of the Shimoga District, of which only a small portion was affected by scarcity; his enquiries into the condition of that portion were thorough and satisfactory.

Major R. A. Cole, Superintendent of Inam Settlements, took charge of the relief camps in the Bangalore Town and Cantonment, at the time when their numbers were highest, and some of the heaviest work in the province fell to him in the course of reorganising the system of gratuitous feeding and drafting the people, as they became fit for work, on to the State Railway. In performing this monotonous and wearisome task, he shewed a temper, patience, and industry that deserve my sincere praise and thanks.

Among the Assistant Commissioners, I select the following as more particularly deserving of mention :—

Captain J. S. F. Mackenzie, who has done much useful work in the east part of the Bangalore taluk.	tion of grain to the old and feeble poor with much discrimination.
Mr. Mahomed Ali, Khan Bahadur, in Kolar.	Mr. Narsim Aiengar, who has been a useful Relief Officer in Attikuppa.
Mr. C. Madaiya, a young Assistant who has distinguished himself as a Special Relief Officer in the Malur Taluk of Kolar by his good sense and activity.	Mr. T. Srinivas Aiengar, who did good service in Haranballi till his health failed him.
Mr. B. Srinivas Aiengar, who is in charge of the relief measures in the Town of Tumkur, and has shewn intelligence and interest in them.	Mr. S. Venkat Vardaiengar, Kolar.
Mr. Abdul Khadar, Khan Bahadur, Town Magistrate of Mysore, who has managed the distribu-	Mr. S. B. Krishnaswamaiengar, Bangalore.
	Mr. P. N. Purnaiya, Kolar.
	Mr. D. Namkal Rao, Tumkur.
	Mr. Naruappa, Chitaldurg.

I come next to the officers not belonging to the Commission whose services were utilised as special relief officers. Nine of these, all belonging to the Revenue Survey, were employed in this way before I took charge, and some of them were appointed as far back as January 1877, and have borne the burden and heat of the day. Among these I single out for special praise Mr. Meiklejohn and Captain Macintire. It would be difficult for me to use exaggerated terms in describing the zeal and devotion with which these officers worked. Captain Macintire's heart was so entirely given to the work, that though he received at Christmas a letter from his doctor warning him that it was at the risk of his life that he remained in harness, he carried it in his pocket and did not even shew it me till in April he found himself obliged to give in and take leave. They both had an immense tract of country to supervise, which taxed their physical powers to the utmost; they were entirely alone, and often for weeks together the tension of duty was not relieved by conversation with a friend; and all this time they were busy among scenes of cholera, small-pox, and starvation, such as might have tried the strongest nerves. Since I have held my present office, the stress has been lighter and the area under their management has been lessened; and this has increased the efficiency with which they have carried out relief measures in the taluks in their charge.

Captain Cowie and Messrs. James and Betham have also done excellent service as active and intelligent relief officers. I have received material assistance from their suggestions and their information as to the condition of the people. Captain Clerk, too, of the Madras Revenue Survey, shewed much ability and administrative power in the Hassan and Mysore Districts, but he was obliged to return to his department in November, and I lost the advantage of his services. Mr. Barker was prostrated by a severe attack of cholera in September 1877, and obliged to leave the country on furlough. I believe his work was excellent, but I had no personal experience of it.

The second body of special relief officers consists of those who were placed at the disposal of this Government by the Bombay and Oudh Governments and the Bengal Military Department after the 1st September 1877. Their numbers have altogether been 27; they consisted of 3 Bombay Civilians, 10 Officers of the Bombay Army, 7 of the Bengal Army, 1 of the Oudh Police, and besides 7 who were temporarily employed.

Among these, I give the first place to Mr. E. C. Ozanne, Bombay Civil Service, who has held for three months the difficult and responsible post of Civil Officer on the State Railway. His services in this capacity have been invaluable to the Government. His sound and practical judgment, the fruits of previous experience in the Bengal and Bombay Famines, was devoted to the task of probing to the bottom the causes which tended to make the work difficult for the relief cooly, and in devising methods of overcoming them, as well as of curing the tendencies to pauperisation and the unwillingness to do any work at all which had grown up among the labourers. As long as he and the Executive Engineer, Mr. Penny, are working in conjunction, I am confident that every precaution that can be devised is being taken to see that the famine coolies are properly classified, fairly tasked, duly paid, and treated with consideration and justice.

Messrs. E. J. Ebdon and J. Davidson of the Bombay Civil Service have been in charge of severely afflicted taluks, and have carried out their duties in a way to deserve my warm commendation. Mr. Ebdon's position was one of peculiar responsibility, in that his taluk, Paugarh, was the most distant and difficult of access from Bangalore, and he was thus necessarily much left to himself.

Major Maynard not only carried on his work as Special Relief Officer of Naga Mangala with signal success, but afforded me valuable assistance by his reports on the crops, condition, and prospects of the adjoining taluks in the Hassan District, and evinced remarkable capacity as a revenue officer, a line in which he hitherto had had little experience.

The following officers have all been in charge of taluks, and have performed their duties so as to deserve my hearty thanks:—

Lieut.-Col. G. W. Holdsworth, Bengal Infantry.	Lieut. R. S. Simpson, 21st Bo. N. I.
Capt. F. D. Mander, 13th Bo. N. I.	„ S. C. F. Peile, 2nd Q. O. B. N. L. I.
„ W. Chard	„ C. W. Fitzgerald, 3rd B. N. I.
Lieut. E. A. Mostyn } 2-7th Royal Fusiliers.	„ C. H. DesVœux, 4th B. N. I.
„ C. O. Nicholletts, 5th Bo. N. L. I.	„ H. C. Lamb, 4th Bengal Cavalry.
„ W. J. Orr, 25th Bo. N. I.	

Many of these officers suffered from severe illness, and yet such was their devotion to the work that the moment they felt able they returned to their duties without taking the time to recruit which in some instances I pressed them to take. Captain Chard in particular carried his zeal to such excess that when at last he was forced to resign his post, his life was in serious danger.

Captain Healey, 66th Foot, and Lieutenant P. E. Anderson, 25th B. N. I., were in charge of important relief operations in the Cantonment and Town of Bangalore, which they executed with marked discretion and success. Captain Healey especially had the merit of so winning the regard of the native gentlemen who formed his staff that, in gratitude for his courtesy and cordiality, they presented him on his departure with an address of thanks. Their chief duty was to supervise the distribution of grain to the helpless poor and the restoration to their former position of those who had lost their capital and their implements of trade.

The actual work was carried out under their direction by a large body of native gentlemen who offered their services voluntarily for the purpose. The Town and Cantonment were divided into beats, and each of these volunteers took the post of beat inspector. It was no slight task to acquire a complete knowledge of the circumstances and wants of each impoverished family in a beat, and most of the inspectors, being clerks in the Government offices, could only spare their morning and evening hours to the work. They gave this time ungrudgingly, and performed the duty so well, that I can safely say that no part of the relief measures in the province was carried out more efficiently and successfully than the distribution of grain and charitable funds in Bangalore. It is mainly owing to the excellent services performed by these gentlemen that in this great town, with food at four times its usual price, there is hardly a beggar to be seen, and every branch of industry has been revived, so that employment is given to all who were formerly thrown out of work. It is with great pleasure that I chronicle their names and record the thanks I owe them :—

CANTONMENT.

Aleur.

Mr. Raju Modaliar.	Mr. Nanjunda Modaliar.
„ Sadasiva Modaliar.	„ Govindraj Modaliar.
„ Subrava Modaliar.	

Arab Lines.

Captain Curley.

Shule.

Mr. Virasami Modaliar.

General Bazar.

Mr. Vaidyalingam Modaliar.
 „ Arunachalam Pille.
 „ Mahasami Pille.
 „ Narayansami Pille.
 „ Nilakanta Modaliar.
 „ Gurupada Modaliar.

Mr. Abdul Karim Saib.
 „ Ramasami Pille.
 „ Sadasiva Modaliar.
 „ Raghunaidu Naidu.
 „ Tiruvarangam Modaliar.

Blackpali.

Mr. Mohammed Khasim Ghum.

Mr. Hyder Khan.

Town.

Mr. B. Marri Gangya.
 „ C. B. Seshagiri Rao.
 „ M. Papaiya Naidu.
 „ P. Nanjundaiya.
 „ C. Jaggya Naidu.
 „ M. Sethu Rao.
 „ Khazi Abed Sherif.
 „ P. Nagya Naidu.
 „ Muneya Mestri.
 „ C. Virasami Naidu.
 „ B. Ramaswamiengar.

Mr. A. Gopalacharlu.
 „ B. Rangya Chetty.
 „ Narana Chetty.
 „ Ram Chetty.
 „ P. Ramya.
 „ Venkatraya Chetty.
 „ C. Muttusami Naidu.
 „ M. Ramasami Chetty.
 „ Solomon (Catechist).
 „ V. P. Madhava Rao.

In the Medical Department the main burden fell before my arrival on Surgeon-Major J. Henderson, whose skill, industry, and kindness to the sick deserve high commendation. Afterwards Surgeon M. Robinson was put in charge of the great Central Hospital in the Pettah, where he carried on his duties to my entire satisfaction. Since his departure his place has been worthily filled by Surgeon E. Ferrand. The Lady Superior of the Roman Catholic Convent allowed some of her nuns to attend the sick in this hospital; their kindness and care have been of the greatest service.

I name below the subordinate members of the Department who have particularly distinguished themselves:—

Assistant Surgeon Lalla Mohan Sen, in charge of the Tumkur Relief Camp.

Mr. W. Lincoln, M.R.C.S., Sanitary Inspector of Relief Works, Bangalore District.

Apothecary J. Sausman, in medical charge of the Bangalore Orphanages.

Hospital Assistant Jira Sawmy, Mysore.

Ditto P. Stephen, do.

Ditto Nabi Buksh, Bengal.

Hospital Assistant Din Mahomed, Bengal.

Ditto Abdul Karim, do.

Ditto Ajodhia Prasad, do.

Many of the amildars have been relieved of their ordinary duties and especially attached to the Famine Department. Among those who have worked with zeal and industry I particularise the following:—

Gundappa, Tumkur.

Kuppasawmi Naidu, Hiriya.

Bhim Rao, Kadaba.

Syud Mustafa, Sira.

Venkatrang Aiengar, Naga Mangala.

Venkatrang Aiengar, Devanahalli.

Venkat Ramanaiya, Sidlighatta.

Sham Aiengar, Davangere.

Ramanuj Aiengar, Goribednor.

Several of the munsiffs have in the most creditable way volunteered their services for relief work in the towns where their Courts are situated and in the neighbouring villages, and have afforded me material assistance. I mention specially Mr. C. Srinivas Aiengar of Chintamani, who not only has had charge of that impoverished

town, but has also supervised two relief works, opened for the employment of the poor in his neighbourhood, and has been indefatigable in his exertions to relieve distress. The others to whom I offer thanks for similar assistance are—

Anaji Rao, Yelahanka.

Mr. Knight, Turvekere (now Special Relief Officer of Sira).

Mr. Krishnaswami Aiengar, Kortageri.

„ T. R. Malhari Rao, Pargach.

A good many subordinate officials have been appointed as taluk relief officers, and some of these have done remarkably well. I select for particular mention the names of—

Venkat Rao (Police Inspector), Relief Officer of Nela Mangala taluk.

Raghavendra Rao (Revenue Sheristadar), who has had charge of relief and jamabandi work in the Chitaldrug taluk.

Mr. C. Wood (Chief Constable), formerly at Devanahalli and now Special Relief Officer in the Gudibanda taluk.

The other subordinate officers who in different capacities have done well enough to deserve mention in this place are the following:—

Mr. Narain Rao, Head Clerk in Mr. Wingate's office. An unusual amount of heavy work has fallen on him, and has been done extremely well.

Mr. Bride, for many months in direct charge of the Pettah relief camp under the Central Relief Committee, and then under Major Cole; since placed over the Railway special gang and the relief operations at the Pettah camp generally.

Mr. Lovery, who managed the Sillidar Lines and then the Pettah camp under Mr. Bride, and is now in charge of the Boys' Orphanage.

Mr. Thompson, who had charge of the great relief camp at Tumkur.

Dada Rao, Relief Inspector of the Honavalli taluk, and in charge of the Tiptur camp.

Jamadar Cheda Sing, 16th Bengal Cavalry, in charge of the special gang on the Railway works near Kengeri.

I trust that it will not be thought out of place if I here record my thanks to those officers of the Public Works Department who, although not under my orders, have co-operated most heartily and successfully in carrying on relief works for the employment of the famine-stricken people.

Captain Bowen, R.E., Superintending Engineer, has given cordial and most valuable assistance in organising the system of famine relief works.

Mr. Penny, Executive Engineer, aided by Lieutenant Connor, Mr. Dodsworth, and Mr. Hoernle, has had a hard task in starting and carrying out the State Railway, on which the largest number of the famine-stricken labourers have been employed.

Mr. Target, Executive Engineer, had under him Mallapa Chetty's and other tank works.

Mr. Rigg, Executive Engineer, } in charge of Irrigation Works in Hassan.

Mr. Warder, Assistant Engineer, }

Lieutenant Kensington, R.E., Executive Engineer, in charge of Irrigation Works in Kolar.

Major Fraser, R.E., Executive Engineer, in charge of Devanahalli Road relief works.

Lieutenant Purchas, R.E., Executive Engineer, { now on Tumkur Road relief works, and formerly in charge respectively of the Mysore water-works and the Attihalli tank in Hassan.

Mr. Johns, Assistant Engineer, in charge of the Bangalore water-works, and now at Mysore.

Mr. Clift, Executive Engineer, Devanur Channel.

Mr. Bayly, Executive Engineer, relief works in the Doderi and Pargach taluks.

Mr. Winkler, Relief Works in the north of the Chitaldrug District.

Messrs. Kenrick and Chabrel, who in spite of many difficulties and much ill-health carried on the Timanahalli tank.

APPENDIX IV.

In conclusion, the services of the Additional Secretary, Mr. Wingate, are so well known to the Chief Commissioner and the Government of India, that it would be idle for me to repeat them here. It is enough to say that, if any success has attended the operations of the Famine Department since September last, a large portion is due to the unwearying industry, the great experience, and the practical sagacity which he brought to my assistance, and which I take this public opportunity of acknowledging.

C. A. ELLIOTT,
Famine Commissioner.

D. 1107—188G., dated Bangalore, 30th April 1878.

Order by the Chief Commissioner of Mysore.

2. Mr. Gordon is gratified to learn how cordial and ready has been the response which the Officers of the Mysore Commission and the Survey Officers employed on famine work have given to the call made on them by Mr. Saunders, the late Chief Commissioner, to aid the Famine Commissioner in his arduous duties, and desires heartily to thank the officers whose services Mr. Elliott has specially brought to notice.

APPENDIX V.

NOTE BY MAJOR C. C. SCOTT-MONCRIEFF, R.E., C.S.I.,

ON

"THE DUTIES OF THE PUBLIC WORKS DEPARTMENT DURING TIMES OF FAMINE."

(Contributed to the "Roorkee Professional Papers.")

THE VICEROY last year ruled that the Public Works Department should henceforth be the chief agency for famine relief in India, and that the best and most economic form of all relief was the construction of large and well devised works under professional agency.

We have good cause to thank His Excellency for assigning to us so honourable a rôle. He has elsewhere likened a famine to a campaign, and those who have gone through both will appreciate the likeness. Wars are happily rare now in India—not so famines. Many of us came out to India thinking our highest achievement was to be found in the construction of a great bridge, or the opening of a canal or of a railway. Now we have a higher career open to us; to serve in the foremost rank in the very forlorn hope, in saving thousands from death. Nor is it so very easy. The Engineer that successfully controls famine labour must think little of himself, even of his work. For him are no holidays, no sport, no society. Patience, temper, firmness, and kindness must always be exercised. He must endure constant exposure to the sun, weary monotony of work, many bad and many sad sights. He must eat his meals and write up his accounts when and where he can. He must not be above attending to many new duties. He must look closely after the camp water-supply. He must see that the bazaar is well supplied. He must himself superintend the feeding of small babes and sickly mothers. He must attend closely to conservancy. He must see that his hospital is clean and well supplied with necessaries, and that the medical subordinate is doing his duty, that loathsome ulcers are being dressed, that itch ointment is being applied, that guinea-worm cases are being attended to, that the weakly are getting suitable diet, that the dead are being buried deep, and when, as is likely enough, cholera visits the works, the Engineer must know how best to meet it, and must keep a cool head. And the reward for all this labour? He will be the means of saving many lives. That is surely enough?

I do not suppose for a moment that all Engineers will appreciate famine relief work. There are some, I fancy, who could never warm into interest sufficient to care to take all this toil to save the life of our dark-skinned brother more unsightly than ever when stricken with famine, dirty and haggard, and offensive.

There are other Engineers pure and simple who look on all this as a most aggravating interruption to their regular work. I do not find fault with them. Only the honour of famine relief cannot be theirs. They can have no heart for this campaign, nor ought they to reap its laurels.

As no good soldier would wish for war only that he himself might reap honour, so would no good Engineer wish for a famine. But the good soldier prepares himself beforehand. So should the Engineer, and in the following note I propose to record a few points which may be useful, not evolved from my inner consciousness, but from experience of the last year. I would treat of—

- I. The duty of the Local Government and its Chief Engineer in preparing projects for famine relief.
- II. The style of work best suited for the purpose.
- III. The comparative merits of a few large works, and many small ones.
- IV. The action of the Public Works Department when the approach of a famine is dreaded.
- V. The scope of its duties in a famine.
- VI. The management of a famine relief division.
- VII. The close of a famine.

I.—It behoves the Chief Engineer of every province to have in his office a set of projects all cut and suited for famine relief work. By consulting officers of local experience, such projects will not be hard to find.

Most Collectors and Deputy Commissioners have got some pet scheme they would like carried out if they could only get the money, some road to be made, some swamp to be drained. Public Works officers are always on the look-out for such works, and it will be a long time before the list is exhausted. There are many regularly taken up by Government, surveyed, designed, estimated, but laid aside for financial reasons. And there are slack times when the Chief Engineer has one or two officers on his hands more than he actually requires. What better can they be doing than in working up projects for the famine relief drawer? The history of the last famine has been most instructive on this head. A few years ago Bombay had an Irrigation Chief Engineer enthusiastically interested in his work, who had project after project drawn up for irrigating the Deccan by canals and tanks. One after another was refused as not being financially profitable, and when Colonel Fife went home he may have looked sadly at all the labour bestowed on these schemes, and to all appearance wasted. The famine set in. There was a cry for relief works, and Bombay has come out of its troubles with Colonel Fife's tanks and canals approaching completion. Very likely they will never pay 5 per cent. on the cost of their construction; but when a people have to be kept alive anyhow by the State, it is something to get in return a set of works affording the best safeguard against another famine.

II.—The best style of relief work is that on which can be employed, to the best advantage, for a considerable period of time, large numbers of unskilled workers—men, women, and children. And that employment is unquestionably earth-work, which possesses the further advantage of requiring no outlay in costly materials, such as bricks, stone, iron, lime, &c. It is of great importance to have this labour as concentrated as possible, for it must be clearly understood that the object of a relief work is primarily the welfare of the workman. The feebler the workman, the more is the necessity for looking after him, and this at once prevents the employment of contractors, and makes that work unsuitable which cannot be daily inspected by an intelligent and trustworthy officer.

Viewed in this light, road-making is good relief work in proportion as the country is hilly without being rocky, and the construction of a railroad is far superior to that of an ordinary road. In the great plains of Northern India, neither a road nor a railroad can be considered as the best style of relief work. For just think of what they involve. A mile of road 50 feet wide, raised three feet high across a level plain, will be finished by perhaps 1,000 coolies in a month, and if relief works are kept open for six months, these 1,000 coolies will have made six miles of road. Now, supposing there to be no other work in progress within six miles on either side, this road will have to provide employment for 72 square miles, and if the population is 300 per square mile, it will occupy less than 5 per cent. of them—a small proportion in a famine-stricken country.

Moreover, one sub-divisional officer ought to be able to look after 4,000 coolies, and if 4,000 are concentrated on this road, the six miles will be finished in six weeks, and officer and labourers must all be moved elsewhere, which is inconvenient. A canal, a canal escape, or a deep drain are all more suitable works. Drains have one advantage, that from their nature they must be made in lowlands. These are often swamped in other years, but in famine years, when the country is parched, it is just the time to dig them out. Any irrigation officer in Northern India will testify to the value of canal escapes, and regret that there are so few. Digging new escapes is an excellent form of labour, for it is almost certain to infer heavy earth-work within the space of a few miles.

Where the country is more broken, it is easier to employ thousands of labourers within a limited space. Nothing can be better than the *bund* of an irrigation tank. Some of the great Deccan *bunds* of the Bombay Presidency made last year were large enough to employ 20,000 coolies for six months and more: and that all within the space of three miles.

A railway through broken country is nearly equally good employment, and one now being made in Mysore gave continuous occupation to about 13,000 coolies for the period of nine months, although only about 20 miles was accomplished.

Road repairs are, for the reasons stated above, a bad form of relief labour. It is impossible to employ very many in one place. A number of small parties infers a number of subordinates in charge.

The subordinates cannot always be selected carefully. Temporary hands must be employed, and the certain result is that the work is not properly supervised. Either exclusive attention is paid to the cooly regardless of the work, or to the work regardless of the cooly. Happy the Executive Engineer whose temporary overseer does not neglect both. Road-metalling, moreover, is not quite so easily tested as plain earth-work, and there is more skill in performing it; but in a great famine we cannot be choosers, and this must often be taken in hand for want of something more suitable.

The collection of road metal or railway ballast is better than road repairs, and affords good occupation, especially to women and children, while if the metal be of a kind that will not deteriorate with time, a substantial return is obtained for the outlay.

The opening out of endless new roads between places where they are not wanted should be steadily discouraged.

Probably there is not a district that has been visited with famine in the last few years that cannot shew miles of these futile works. If they are ever finished, the district funds cannot keep them in repair. If, as is more likely, they are left unfinished, the good land they occupy is thrown out of cultivation.

The reader may say, "All this kind of work is for the unskilled. Is the skilled artisan to be allowed to starve?"

The Famine Commission now sitting will doubtless fully consider this point. Hitherto, Government have only proposed to save life, not to protect from poverty. It is hard to see how State aid could be given to help some artisans in their own craft, such as jewellers, goldsmiths, ivory-workers, &c. The ordinary weaver might be easier employed at a state loom, but that would be outside of the Public Works Department.

We could find work, each in his own line, for the mason, the carpenter, the bricklayer, and the blacksmith, but it would entail great expenditure and close supervision. If State aid be given in building bridges, barracks, &c., for every thousand rupees spent on actual famine relief, at least three thousand will be spent on materials.

* It has been said that one sub-divisional officer can look after 4,000 coolies digging. It would be difficult for him to superintend buildings employing half this number: earth-work must therefore be the mainstay of famine relief, and exceptions to this will be so few that they need not be considered at all in this paper.

III.—What has just been said shews some of the evils connected with small detached works. The difficulty of effective supervision is one great drawback, and another very distinct one is that when works are brought to every man's door many will avail themselves of them who are not deserving of State relief. The ryot of a small holding will not, unless hard pressed, start with wife and family to a work twenty miles off. If he does, it shews that he is really in want. But if the work be just outside the village, what is to prevent the thriving peasant from sending his wife and children to it while he takes his ease at home, or only comes now and then to amuse himself on the work. He is not the man it is necessary to help.

But supposing he has cattle still alive, who is to tend them if he and all his family are on the Government works twenty miles off? True he may sell them, but they will fetch a very small price, and for the country's recovery after the famine is over it is most important to preserve the cattle alive.

When his cattle are dead or sold, it is hard to see why the poor fellow should not go off to the works, and I have often heard it said if he refuses to go twenty miles, it shews he cannot be starving. Unfortunately, the experience of this last year teaches a different story. It is beyond doubt that many have perished and allowed their children to perish because they would cling to their miserable empty hovels. It is easy to say, "Then let them starve." But he who has actually seen starvation will not say it readily.

Much depends on the season of the year. There are some months when even in ordinary years no agricultural labour is required on dry lands. There is nothing sown, no ploughing, no weeding, no threshing. At such a time it ought to be easiest of all to get the starving cooly away from his village. But even with famine in the land, there may be at times odd jobs to be hoped for if he stays at home. The monsoon rains may be due. Clouds may be gathering, and the ryot may naturally think that he ought to be near home to till his patch of land when the rain falls. This is hardly to be discouraged, and yet the poor fellow will go on hoping and starving till he is past all relief.

It may be laid down then that, if possible, relief works should be on a large scale, and that the labour should be massed and detached from the villages. But there should be no hard-and-fast line drawn. It is even possible that the country may benefit more by the construction of many small works (such as tanks in a hilly country) than of a few large ones.

IV.—I am afraid it cannot be denied that when famines have come on us in India, too often they have found us unprepared. The venerable account of Moses' crowning plague has a significance of its own still. "And when Pharaoh rose up in the night, he and all his servants, and all the Egyptians; and there was a great cry in Egypt; for there was not a house where there was not one dead." This is not much to be wondered at; a strong Government properly discourages overdrawn and sensational reports from its servants, and does not always discriminate whether the cry of "wolf" is reliable or not. Nor are there very many Government officials who can truly discern the signs of the times, or draw the line between high prices and actual famine.

When the monsoon has been delayed to any unusual extent, Executive Engineers should be encouraged to push on works sanctioned and provided for in the budget. This does not entail on Government much additional outlay. Repairs intended to be done during nine months may, perhaps, be finished in three. Until the price of provisions rises very much, rates need not be altered, and except that the intervention of contractors should be discouraged, the management of the works may go on as usual.

Should the demand for labour be great and the drought still continue, some of the projects prepared for famine relief may be started. By this time provisions will probably be dear and rates should be raised, not directly in proportion, but sufficiently so both to support the labourer and his family, and to induce him to go on working. For this reason, it must be arranged that when one work is finished another should begin, so as to prevent the labourer from returning to his home and to idleness. While he is in full health, a full day's work may be exacted from him. Once let him run down to starvation, and Government will not get half a day's work from him.

When the famine has fairly declared itself, and the country has to draw its food supplies from without, then prices will rise and the workman's own labour will not bring in enough for all his family. Then relief works must begin in earnest, but efforts should be made as long as possible to find work for the able-bodied cooly in the ordinary way, and to keep him out of the ranks of the paupers.

V.—I need not write much on the scope of our duties in a famine, for the Famine Commission are likely to lay it down clearly enough. A theory prevailed last year in some places, that while it was quite right that the Public Works Budget should be increased indefinitely, and that employment should be found for all the able-bodied, still it was no part of its business to take on the half-starved and weak, the town-bred weaver and the indolent beggar. It was thought a duty to prevent its system being demoralised by dealing with such a vulgar herd as famine paupers: putting its rates all topsy-turvy, and occupying its officers' time with arrangements for feeding babies. Just in this strain I have heard a martinet deplore the slackness of drill in his regiment after a campaign. From what has been already said, it will be seen I have no sympathy with this view. Its supporters urge that it is the duty of the district officers to find work, or at least food, for all except the able-bodied. I should feel little pride in our Department, if I thought it incapable of more than this. During a famine a district officer has plenty of his own work to do. Cases of postponement or remission of revenue, criminal trials increased tenfold during scarcity, village house-to-house inspections, road patrolling, relief camps and hospitals, enquiries into the food, stock, and water-supply of the district—all this and far more than this over and above his daily duty is quite enough for him; and in the next famine I hope to see the Executive Engineer say to the district officer, "Let us share the burden—let me help you wherever I can—you find the workman, and he he ever so weak, I will find him suitable work." If we do not get much work out of the starveling, surely we shall get as much as the unprofessional district officer. I do not wish to undervalue works under Civil agency. They have proved most valuable means of giving relief, but I maintain that they should only be resorted to when the machinery of the Public Works Department has been exhausted, and when it is employing as many as its officers can supervise. Even then the Engineer should do his utmost in advising civil officers as to the professional details of their relief works.

VI.—The management of a Famine Relief Division is a wide subject, about which a good deal may be written. It must vary with the style of the work, the condition of the workmen, the intensity of the famine. The points now to be considered are:—

- (a). The respective merits of payment by piece-work and task-work.
- (b). The sorting and ganging of the labourers.
- (c). Their tasks.
- (d). The arrangements for their supervision.
- (e). The question of Sunday work and payment.
- (f). The payments.
- (g). The camp and hospital.

(a). By *piece-work* payment is to be understood payment for a certain amount of work done irrespective of the time in which it is done, be it half a day or two days. By *task-work* payment is meant the payment day by day for a certain quantity of work to be done during the day. The piece-work labourer by working twice as hard can earn twice as much every day. The task-work labourer by working twice as hard will be finished by mid-day, but he will not be allowed to go on doing a second task.

Primâ facie much is to be said in favour of the piece-work system. Its supporters argue that there is no inducement to work like self-interest, that Government will get a better return for its outlay, and that enough will have been done for the bulk of the working classes in a famine season if rates are merely eased to meet famine prices. If for earth-work, which formerly cost Re.1-8 per 1,000 cubic feet, we now offer Rs.2-8, they argue that the labourer will make an extra push, work extra hours, and will maintain himself and family in their usual independence and without any of the degradation attending pauperism. The advantages of this are self-evident; and when a famine is setting in, I would strongly urge that the piece-work system should be adhered to as long as possible. But it can be applied with advantage only among the genuine working classes, and these will form after all a small minority of the numbers to be relieved.

The piece-work labourer should be allowed to work with his own family, or to choose his own earth-carriers. He will certainly not choose the weak and sickly who most need help. What are we to do in the vicinity of towns for the weavers and tailors, artisans of all kinds with soft hands and weak backs, as well as for the loafers, vagabonds, and beggars, who, however disreputable, are not to be allowed to die. We shall have to provide for a large number of women who have never carried a cooly's basket, and all will hold off, some from honourable pride, others from laziness, until their strength is reduced by under-feeding. Work must be found for all these, and all must be paid enough to support life. They will not readily understand piece-work, and task-work is better suited for them.

One other consideration is, that in famine relief the object is not to finish the work off quickly, but to give useful employment for as long as possible to the greatest number. It often happens that it is very difficult to find good relief work in a district. If the little that there is, is made over to active piece-work labourers, they will finish it off, perhaps, long before the famine is over.

The conclusion I have arrived at is this, that if the work is to be carried on, famine or no famine, and if it is likely to last the famine out, and if piece-work is the system of the place, the Executive Engineer should be instructed to keep on the system as long as he can, and to give every encouragement to the work-people to join the piece-work gangs. But at the same time he must have the task-work system too, and the longer the famine lasts the larger will be the proportion of task-work labourers.

In Mysore large works were not started until the famine was at its worst. It was found after that that the labourers did not readily take to piece-work. Efforts were made to introduce it, but it was not popular, and formed so small a part of the relief system as hardly to be worth noticing.

In no case should the system of petty contractors be allowed. They will, of course, employ only the strong.

(b). The sorting and ganging of the labourers is a matter of no trouble with piece-work, but it is with task-work, and the following remarks apply only to the latter.

It has been asserted to be impossible to have two parties working alongside each other, drawing the same pay and doing different tasks. This I can confidently deny. The able-bodied cooly can be kept at work with a task fully proportioned to his strength, and being paid strictly according to his work, alongside of the half-starved weaver getting the same pay for doing half as much, and only being fined a very small amount for short work. I have seen this going on for months with perfect success, but, I admit, it requires a good deal of arrangement. One of the Engineer's chief difficulties will be to apportion the task to the cooly, so as to get as much out of each as he is fit for, without being too hard on any. His terms must be such as to attract all comers who are really in want.

If relief measures have been taken early, and there are many able-bodied workers, a full task should be exacted from them; and as long as it is evident that they can do full work, they should be paid rigidly in accordance with it, and fined down to any amount for not doing their work. But they will often have weakly ones depending on them; and as it is desirable to keep families as much as possible in one gang, it has been found convenient to gang together the moderately able-bodied along with his wife and children, and with the town-bred man who, though physically strong, is unused to cooly's work; and to exact from the party thus formed 75 per cent. of a full labourer's task. Those doing their full task should be paid on the higher or A scale of wages (to be alluded to further on), and failing to do it, they should be cut down to the B or lower rate.

Besides these who may be called the A class, there are sure to be many who could never do 75 per cent. of a workman's task,—old men and women chiefly, or those who have always been wanting in physique. Perhaps 50 per cent. of a full task may be obtained from these, but very likely not so much. They should be put on light work where it is possible, and be paid on the B scale of wage. It is difficult to fine them for short work without starving them, but where they are incorrigibly idle some little fine may be inflicted.

There is yet a third class that may be called the special gang, composed of those naturally able-bodied, but who have suffered from famine and the diseases that follow it—gaunt and emaciated lads and girls, men and women in the prime of life with the strength of children, suffering, some from dropsy, most from diarrhoea, and yet better out among the workmen than among the dying in the hospitals. It is clear that no effective labour is to be got out of them, but the true Famine officer will feel that there is no part of his work more important than looking after these. He must be kindly, and yet firm with them; let them rest a good deal, but not let them wander away from the work. It will be useless to task them, but yet even they will do something. They should be paid the full wages of able-bodied labourers while they are in the special gang,—that is, enough to buy food not only to support existence, but to get strong on. And most satisfactory it is to witness their gradual return to strength. If, as is sometimes the case, they are found to be hoarding their coppers, and not spending all on food, the Sub-Divisional

Officer should give them cooked food instead of wages. Indeed, at all times he should have authority to feed them up, if it seems the quickest way to restore them, and to give them milk, meat, or vegetables. But this must not be abused.

Mothers with but little nourishment to give to their young babes should be put in the special gang.

(c).—The tasks.

In earth-work of course these must depend on the hardness of soil; in metal breaking or collection, on the hardness of the stone and its abundance in the neighbourhood.

In earth-work it is best to take as a unit the day's work of the digger irrespective of the lead, a sufficient number of baskets being allowed to each. If the man digs out his full excavation pit, he should get his full wage, and if the women and children have not removed the spoil, they should be fined, not he. If, on the other hand, he has failed to dig his full task, while they have carried away all that he has dug, it is hard that they should suffer from his laziness, so they should get full wage, and he be fined. It will be necessary to regulate carefully the proportion of men to women. Wherever it is possible, the members of a family should be employed together. When, as is not infrequent in famine, there is a great majority of women and children, efforts should be made to find suitable work for them without interfering with the arrangements for digging and carrying. Women occasionally volunteer to dig, and do it well, but this is exceptional. At other times they may be employed in collecting road metal and ballast, and in breaking it.

It will not often be possible to measure each man's work every day, or even every three days, but where it can be done, it should be done; where it cannot, the work done by a certain gang must be measured as a whole.

The Sub-Divisional Officer should take particular pains to put this tasking on a good footing. The labourer ought to be made clearly to understand how much is expected from him, and it will not always be easy to do so when dealing with classes unused to earth-work. There are few things that interfere more with successful relief work than careless tasking and reckless fining. The famine cooly should not be set all at once on to a rigid task, and fined for its non-performance, but induced, almost *coaxed*, to go on working, the Sub-Divisional Officer never forgetting what I have already said, that the relief of the cooly is the first object, not the execution of the work.

And Government will not be the loser by this coaxing. The famine cooly has not much energy or heart for his work, and if he finds that he will not be allowed to starve, but will obtain a bare subsistence by doing very little, he will often rest content, instead of aspiring to the higher rate of pay, when he would be required to do a tolerable day's work. But Government will be the gainer if he does earn this higher rate.

It may be looked on as shewing either indolence or a distinct want of administrative power when we see extensive fining going on in a sub-division,—that is, when a large party classed as A coolies are day after day receiving only B wages because they are doing short tasks.

When coolies first come on the works they do not readily understand that there are two classes of pay, and it is always best to begin them with the higher, and not fine at first for short work, which should nevertheless be measured up. To many officers this laying out of a great number of tasks is almost a new work, and if left to subordinates it is apt to be done in very perfunctory style. It is none the less very important.

(d).—The following is recommended as a convenient system of supervision in a famine relief division, although of course it will vary according to local circumstances:—

Let the whole party be split up into gangs of 50, trying as far as possible to keep together coolies of one village or of one family; and where this is impracticable, placing them according to their working power: A gangs, B gangs, Special gangs. Over each 50 must be a gangsmen, or head cooly, mate, makaddum (or whatever be the local name). In the gang there may be 20 men digging to 30 women and children carrying, or 10 digging to 40 carrying, according to circumstances. The gangsmen must know all their names, and be always with them, keeping them up to their work, and if they do not accomplish their tasks it is not a bad plan to punish him. He need not be able to read or write. To every four gangs there should be one mustering writer, who keeps their muster-roll and notes their presence twice a day. He should help also in the payments, and the Executive Engineer should closely inspect his accounts. The mustering writer is not responsible for the work.

To every six mustering writers, *i. e.*, over 1,200 coolies, there should be a sub-overseer, to help in laying out and measuring up work, collecting the muster-rolls, keeping the accounts, attending to the distribution and custody of the tools, and doing all the general duties of a sub-overseer. Where cashiers are not employed he must pay the coolies too, and in that case will require a munshi or writer to help him. Over every 48 gangs (2,400 coolies), or two sub-overseers, there should be if possible a European overseer, and on him as on the Engineer must be impressed the difference between a famine relief division and an ordinary one.

Two overseers with a total of 4,800 coolies are quite enough for a sub-division under an Assistant Engineer, and generally three such sub-divisions are as much as an Executive Engineer can look after.

Such a complete establishment as this is not often to be had, however, and in one time of high pressure in the Bombay famine of 1877 an Assistant Engineer without a single European under him was looking after 18,000 coolies.

It will be seen that the unit of work is the gang of 50. The other combinations are all multiples of this. A good deal depends on the gangsmen. If he is inclined to give trouble, he can. The coolies are too ready to believe that in some happy place 20 miles off food is to be had for the asking, and if the gangsmen fosters this view, he and his gang may start off some morning. He will be none the worse, but the poor dupes who followed him are apt to be found dead or dying by the road-side. If the coolies are encamped, it is as well to place the huts of each gang and its headman together.

(e).—The Sunday question. I wish to approach this from no Sabbatarian point of view, but merely from that of expediency. I maintain, then, that the work is so hard and constant that unless the supervising officers are allowed their day's rest in the week, many of them will break down. Regarding the cooly, I do not talk so confidently, but I fully believe that he will work all the better for a rest every seventh day, and whether he knows anything of Sunday or not he will appreciate the charms of idleness.

Since the object is to keep him alive in famine, however, he must be allowed pay enough on the other six days to cover the seventh. This may either be given (and I think it the best plan) by a small increment to his daily pay, or it may be all given on Saturday evening. The objection to the latter course is that it is difficult to prevent a man coming first to the work on Saturday morning only to get the double pay, and then decamping that night.

When a relief work is first started, it may be a good plan to employ the coolies right through the week. Otherwise, they are apt to scatter on the idle day, and if they have only begun work on the Wednesday or Thursday, they will not have earned pay to support them through the Sunday.

But for the sake of the officers in charge, the practice should be discontinued as soon as possible. Attention may have to be paid to the special gangs on Sundays. Likely enough they may have spent all their wages day by day and laid none by for a Sunday meal. This cannot happen if they receive food instead of pay, but generally they prefer the latter.

(f).—The payments. These must be sufficient to support life, not too liberal to attract a class who require no State help to weather a famine. They must rise as rates rise. Their reduction as rates fall is more difficult.

In the recent famine in Southern India the rates were partly fixed, partly fluctuating, as follows, and in every case were intended to cover the cost of subsistence on Sundays, when the works were closed and no wages given:—

	Man.	Woman.	Working child.	Infant.
In Bombay.	1 anna + value of 1 lb grain.	$\frac{1}{2}$ anna + value of 1 lb grain.	6 pies + value of $\frac{1}{2}$ lb grain.	3 pies.
In Madras.	$1\frac{1}{2}$ annas + value of 1 lb grain.	1 anna + value of 1 lb grain.	9 pies + value of $\frac{1}{2}$ lb grain.	$\frac{1}{2}$ lb cooked grain.
In Mysore.	9 pies + value of $1\frac{1}{2}$ lbs grain.	9 pies + value of 1 lb grain.	6 pies + value of $\frac{2}{3}$ lb grain.	3 pies + $\frac{1}{2}$ lb cooked grain.

The above were the rates for full work, what has been already called the A scale, and this is the rate at which the special gang should be paid. The B or lower rate of wages may be 6 pies lower for men and women. Working children should be on the A scale.

In civil relief works,—that is, in those superintended by the district officers, and not by the Department Public Works,—no one should be paid above the B scale. On these works it is not possible to have the same supervision and precise tasking, and if the wages are as good on those as in the Department Public Works, the coolies will flock to them in preference, and earn their livelihood easier.

It is not my intention here to discuss which of these three scales is the best. They hinge somewhat on the still vexed question of whether or not 1 lb of grain a day is enough to support an adult. But whether 1 lb or $1\frac{1}{2}$ lbs

be taken as the basis, some allowance must always be made for the condiments (vegetables, chillies, turmeric, &c.) which are quite necessary for the healthy native.

When relief works are started, as they should be, early in a famine, and before famine prices have begun to prevail, it will not be judicious to calculate the wages strictly from the price of provisions, should the result be a sum considerably less than the ordinary wage of the country. For instance, supposing that ordinarily a labourer can earn $2\frac{1}{2}$ annas a day, and that relief works are started on the basis of 1 anna and the price of 1 lb of grain at a time when grain is selling at 20 lbs per rupee, the wage will be 1 anna 10 pies, enough, it may be, to support the hungry man, but probably not enough to attract the labourer used to earning $2\frac{1}{2}$ annas. He will not see why his pay should be lower than usual just when provisions are dearer. He will most likely hang idly about his village till forced by sharp hunger to accept the offered wage, but at a time when his body is enfeebled by want, and when he can give far less return to Government for 1 anna 10 pies than he could have before for $2\frac{1}{2}$ annas. Depend on it it is good policy to keep the able-bodied from dropping into the ranks of enfeebled paupers; it is the worst of all economy to drive a volunteer from relief works just because he is able-bodied.

I have said it is not very easy to reduce wages as provisions cheapen, and here again the explanation is that the unreasoning cooly is too ready to take a scare, and run away from the works when he is in pretty good case, only to return when he is half starved. It will be found better not to change the wage with every fluctuation of the grain market, and to fix a minimum below which it is not to go, however cheap grain may become, as long as it is necessary to keep relief works open at all. Towards the close of the Mysore famine, the relief works were divided into two classes, those which, having been begun, it was desirable to finish off, and those which were only kept open from day to day for the sake of the labourer. In the former were a railway and various irrigation works; the latter consisted chiefly of collecting and preparing road metal, work which could cease whenever the famine ceased. As it was desirable to encourage the labourers to flock to the former, the minimum rates were fixed as follows:—

	As.	P.
For men	2	6
" women	1	8
" children	1	2

On the road metal collection minimum prices were fixed—

	As.
For men	2
" women	1½
" children above seven	1

From my experience it is better to feed small children than to give their parents allowance for them. But the latter is the easier system of the two, and the real test is whether or not the infants are thriving. The officer in charge of the works must inspect them frequently. Where an allowance is made to the parent, there is very apt to be fraud practised: women borrowing children to produce at the pay table. And it may be necessary to rule that the wage shall only be granted when the parents live in camp or on the works. Women will not take the trouble to carry their friends' infants to be fed. I have found infants to thrive well on two daily meals, each consisting of 2 oz. of rice boiled in water, with about 1 lb of salt among forty, in addition to what the parents gave them. Should they be thin and drooping, the officer in charge should do his utmost to procure them milk, and if cows are not to be had, he should fall back on Swiss preserved milk. Of course unweaned babes cannot be fed; their mothers may receive an extra 3 pies a day for them.

When coolies arrive fresh at a work, they should be paid daily, and indeed, as this can be managed, it should be done, but the burden may be too great for the officer in charge. As long as there is no cutting for short work, and all are paid their full amounts, it does not take long to pay large numbers. But it is not easy to measure up work in the evening, to determine how much each individual or each gang is to be cut, and then to go on with the payments in time to wind up by dark. Either it is best to cut one day for short work done the previous day, or to pay, not in the evening, but the first thing in the morning; then the overseer has plenty of time to measure up the work in the evening. Morning payments have another great advantage in securing regular and early attendance. The danger is that a cooly may be prevented by sickness or other good reason for not attending, and he is apt to lose his pay for the preceding day. Without system it may take an immense time to pay 1,000 coolies. With system one cashier may pay from 1,000 to 1,200 in an hour. When the pay time comes, gangsmen should separate off those who are to get different wages—all the two-anna men, all the one-anna nine-pie men, all the working children, and so on—and he should give each a token denoting what pay he is to get. The cashier should be

seated at his table with abundance of copper coin before him, all ready arranged, and by his side should be a writer with the muster-rolls. A barrier should be in front of the table, and a second one beyond it, allowing room enough merely for the coolies to pass in single file. They are brought up by their gangsmen, and give their tokens to the writer. He drops them in a box, marks off their names, and calls out their pay, which the cashier gives them. Of course it is convenient always to pay in sums represented by a common coin; for instance, where single pies are not common, seven pies is a troublesome wage to give.

(g).—The camp and hospital.

Where the relief work is close to a large town, very likely no camp may be required. If there is one, the coolies will not care to live in it, and will prefer the streets and bazars, with their nooks and corners, empty shades, and deserted houses. But elsewhere camps must be erected. The huts that compose them will vary largely, according to the locality, the climate, the materials available. In dry warm weather there is no better camp than a good mango tope. If rain is to be expected, efforts should be made to have dry huts for the coolies, for reduced by starvation and nearly naked, they feel the wet, and sickness quickly sets in. In Northern India, if work is to be carried on through the cold weather, it will be necessary to put the camp in a somewhat sheltered place, and to build huts, as far as possible, to keep out the bitter cold. In Southern India no such precautions are usually needed: a tolerably water-tight covering will be enough. In any case an open grove of trees should be taken advantage of.

The site of a camp must be selected with judgment. It must be near the work, and near the water-supply. It must be so placed that the drainage from about it will not wash down into the source of water-supply. The proximity of ravines and dry nullahs is to be avoided, as they increase the difficulties of conservancy. Fuel and provisions must be easily procurable, and, if possible, thatching grass, palm leaves, or other materials for making huts.

The supply of water must be especially seen to, and should it fail, the camp should be moved at once. If the water is drawn from a well, care must be taken that the ground round it is kept scrupulously clean, and that the coolies do not wash themselves or their pots in it. Field latrines consisting of long trenches, at least 9 inches deep, should be daily dug and daily filled in, one for each sex, at a distance of about 500 feet to leeward of the camp, and the officer in charge must insist on their being used. This is not easily managed, for natives are very indifferent about conservancy; but it must be remembered that the inmates of a famine relief camp are peculiarly susceptible to disease, and although the cooly may thrive in ordinary times in his filthy village, as though to prove that bad smells are both wholesome and pleasant, the same indifference cannot be practised with immunity in the relief work camp. Cholera is a frequent companion of famine, and if it bursts out, the coolies are likely to flee scared in all directions, carrying infection with them and dying on the road-sides. It is therefore quite necessary to keep a conservancy establishment for a camp, and there should be some one person in charge of it, who should be punished if the Engineer Officer finds a single bad smell about it.

Dr. Hewlett, Sanitary Commissioner of Bombay, to whom I am indebted for many hints about relief camps and famine management, recommends camps for not more than 500 coolies in huts holding 20 each. These are placed in five parallel lines 100 feet apart. A space of 50 feet is allowed between each hut in the same line. The huts in the second line stand opposite the open spaces in the first. Surface drainage should be attended to by digging trenches between or round the huts, and the earth may be used to give them a raised floor.

In Mysore the coolies preferred a smaller hut where they could live with their families apart from the others. The pattern adopted (derived from the Asthi Tank Camp, Sholapur District) had a ground area 9' x 6', and was 4½ feet high at the ridge. The frame-work was composed of two pairs of light bamboos, stuck into the ground and tied together where they crossed, and a fifth bamboo was used as a ridge pole. The sides were bamboo mats, palm leaves, grass, or branches of trees, according to circumstances. The back of the hut was built up with a mud wall, and a mat was generally used as a door for the front. One hut was allowed for about three or four coolies, including children. Tolerably good tents may be formed if nothing else is procurable of ordinary native blankets. If pliant bamboos are to be had, round-topped huts may be made like the top of a wagon. Every camp should have some huts run up to serve as shops for banias, to whom every facility should be given for bringing in provisions.

The hospital hut should be altogether a more substantial structure. Fourteen feet is width sufficient for two rows of patients. The sides should be low walls about 4 feet high with a good pent roof. The length of one ward should not exceed 50 feet. If beds are not procurable for the patients, it is well to have raised plinths for them to sleep on, and the rest of the hut should be strewn with clean sand frequently changed. A little whitewash on the walls will not cost much, and will vastly improve appearances. Hospital provision should be made for at least ten per

centr of the camp. Of course there must be separate huts for each sex, and in the case of a large camp likely to stand for some time, it is well to have a spare hut for contagious diseases, cholera, small-pox, &c., and a small one for a dead-house. The hospital must be placed on the most healthy site near the camp. The medical subordinate must have a hut close at hand, and he will require another for his medicines and stores. He will be responsible for a connected with the sick, but he will do his work all the better if he sees that the Engineer in charge is interested in it, and is in the habit of frequently visiting the hospital and looking after the patients.

A burying ground must be selected at least a quarter of a mile seaward of the camp, with sufficient soil to bury 6 feet deep, and two or three graves ought to be always ready dug. Cholera patients should be buried speedily after death in the clothes they were wearing. Dr. Hewlett advises that a camp should be abandoned more than three cases of cholera occur in it.

VII.—Lastly, we have to consider the course to be adopted at the close of a famine, a season nearly as welcome to the fagged relief officer as to the impoverished ryot. It must be remembered that a famine cannot be closed by order of Government, and that abundant rain and broad acres of fresh ploughed land and young corn do not necessarily give immediate relief. Where the distress has been of short duration, these symptoms of returning prosperity will give relief, for grain stocks will probably be still in the country, and they will be produced and prices will fall whenever there are pretty certain indications of a good harvest ahead. But when the famine has lasted long, it is probable that the grain stocks have been exhausted, and that until the young crop has not only started fair, but has been matured, food will be nearly equally scarce and equally dear, while the people are month by month getting poorer, and less able to buy at famine rates.

It may be laid down, then, that famine relief works must go on until prices have very much fallen. The numbers that flock to the works will diminish to some extent, but perhaps not very much.

The cultivator will employ some labour on weeding his fields, but he will be too poor to employ nearly as much as usual.

The rain will have brought forth various wild fruits, from which the poor will derive a scanty sustenance and they will often prefer living thus to toiling at the Government work. But many will still remain on the works and the object of the Engineer must now be to bring them back to the normal rules of the Department without inflicting hardship on them.

The first thing to do is carefully to separate the able-bodied from the weakly, and to work them apart treating the former in the ordinary way on piece- or task-work, only allowing them a higher rate on account of the prevailing famine prices. They may not readily take to this *régime*, for they are too apt to become demoralised after being watched and looked after for months, but it must be insisted on.

Having disposed of these able-bodied ones, the weakly should be classified according to their strength, and the special gangs in particular should be massed at certain places where the work is suitable, where a good hospital can be organised, and where they may be specially looked after. The value of their work will of course be small and if the district officers have facilities for taking over these specials altogether, the Engineer may dispose of them. But generally, I think, it will be found a fairer share of the relief work to leave them in the hands of the Engineer. As the coolies regain their strength they should be steadily drafted into the able-bodied gangs.

There need not now be the same dread as formerly of driving them off the works, for the coolies will have got better used to our ways, and will not be so easily frightened; while if they do go away, things are not so desperate as before, and they are not likely to die of starvation. Nor need there be the same anxiety as before about applying the distance test. Works will be finished by degrees, and at this stage it is not desirable to open new ones. So the coolies should be told if they want more work they must go some distance to it, and if they are used to their officer and trust him, as they should, it will be easier than before to induce those to move whom it is desirable to keep on.

Week after week special gangs should become fewer. Some will return to their villages, some will recover, many will die. When the State aid can be withdrawn from them altogether, will, as has been said, depend very much on the prices in the market; but as these cheapen, private charity will begin afresh, and many of the specials will resume their old begging habits. If the gangs gradually disappear altogether, this will be the most satisfactory conclusion to the famine relief works, and the hard-worked famine relief officer will be well deserving of a rest.

C. C. S. M.