

MADRAS RECORD OFFICE.

Government of Madras.

Justice DEPARTMENT.

G.O. No.	335	Press ~~Mis.~~
Dated	1-3-19	1867

Not to be folded or roughly handled

*Proceedings of the Madras Government, Judicial Department,
2nd March 1867.*

No. 20. Read the following letter from the Sanitary Commissioner for Madras (on special duty), to the Chief Secretary to Government, Fort Saint George; dated Madras, 12th December 1866, No. 328.

I was directed by the Government, on the 15th August last, to proceed, as soon as my other duties would permit, to Kurnool, with a view to placing myself in communication with the Collector and the Major General Commanding the Ceded Districts, and reporting upon suggestions made by Dr. Keess on a recent outbreak of Cholera in Kurnool.

2. Dr. Keess, writing on the 9th of July 1866, describes outbreaks of Cholera which occurred in Kurnool in 1863, 1864, 1865 and 1866, and advocates the abandonment of Kurnool as a Military and Civil Station. Dr. Keess would remove the Civil Station to some spot near Yernachellum on the Nullamalay Hills, and recommends that the Regiment should be moved to the left or north bank of the Toongabuddra river.

3. To justify so extreme a measure as the entire removal of the Military and Civil Station, it should, I submit, be clearly established that Kurnool, as compared with other stations, has been for a certain number of years unusually unhealthy, and that its conditions are such as to prevent sanitary improvement.

Dr. Keess does not furnish any statistical data, but he brings prominently to notice that, in 1863, one European Officer, Mr. Morris, of the Civil Service, died of Cholera, and that, in 1865, three European gentlemen, Mr. Embly, of the Revenue Survey, and Messrs. Taylor and Gregory, died of the same disease. In 1866, a year of unusual drought and of atmospheric disturbance, 5 Europeans died of Cholera.

4. We must for reliable statistics turn to the Military records of Regiments stationed at Kurnool since its occupation by the British Government in 1839. No returns are available as regards the public health of Kurnool prior to this period, but according to the traditions of the town, Cholera would seem to have been imported into Kurnool by the Army of occupation.

In the Topographical Reports published by the Medical Board in 1844, five years after the occupation of Kurnool, it is recorded that the "climate was considered healthy; that the Fort was well drained by means of covered sluices communicating with the Toongabuddra; and that the inhabitants of the walled enclosure were remarkably healthy."

It is mentioned that "Cholera introduced by Regiments marching through Kurnool had been very fatal in 1843 in the pettah, but that for 10 or 12 years previously neither Cholera nor any other epidemic had prevailed to any extent." From 1840 to 1842, the death-rate in the Regiment stationed at Kurnool was only 9.71 per mille from all causes.

5. Examining the statistics for more recent periods, and comparing Kurnool with other Military Stations of the Madras Presidency, we find that, from 1847 to 1856-57, Kurnool stands second in salubrity of all stations of the Madras Native Infantry; this result is arrived at by the test of sickness to strength.

If we look at the actual mortality from all causes, during the same period, Kurnool stands 13th out of a list of 32 stations—its death-rate being 10.5 per mille. The

lowest mortality in these Returns being Quilon, 6·8, and the highest Henzadah, 29·2. The deaths from Cholera alone amounted to 2·5 per mille in Kurnool, being a lower rate from this disease than at eleven other Military Stations.

The above is a brief abstract of tables most carefully prepared at Kurnool by Dr. Montgomery, my Secretary, and which are added as Appendices to this Report.

6. The Regiment now stationed at Kurnool, 28th Madras Native Infantry, has suffered severely from Fever this year, but, as a set off against this, it may be mentioned that, last year, Kurnool was the healthiest Military Station for Native Troops in the Madras Presidency, not a single death having occurred among the Sepoys from any cause. These two opposite facts show how unsafe it is to draw conclusions regarding sanitary conditions from short periods of observation.

7. From what I have above stated, I cannot recommend the removal of the Military Station from Kurnool on the ground that the sanitary condition of the Troops has been such as to show that the place is unsuited for continued occupation. The mortality from Cholera among Europeans at Kurnool, noticed by Dr. Kecss, and which during the present year has excited so much regret, is undoubtedly large in proportion to the small number of these residents; but, in testing the occurrence of these cases, distinction must be made between Cholera contracted at Kurnool itself, and that which may reasonably be supposed to have been brought into the station.

8. In the present year, 1866, there were five deaths among Europeans, and four cases in which the patients recovered. Of these five deaths, one was Captain Marsh, an isolated case of Cholera; but Captain Marsh had just returned from a portion of the District where Cholera was raging. Of the four remaining cases, Major Flint arrived at Kurnool from Pennikonda in the Bellary District, where Cholera was epidemic, and he had, before reaching Kurnool, been seized with symptoms of the disease. Dr. Ranson, who died of Cholera, had been unusually exposed to dangerous influences, for, in addition to treating Cholera patients, he had imprudently been examining in detail all the filthiest Latrines of the town, with a view to the improvement of the sanitary condition of the town. Another case which ended fatally was that of Mr. Lowry, of the Telegraph Department, who had just returned from a tour of duty in an unhealthy part of the country, and who may not improbably be supposed to have contracted the disease away from Kurnool. I do not attach much importance to these details, except as explaining the extraordinary discrepancy which might otherwise appear between the health of the Native Soldiers and the European population. The attacks among the Europeans were not confined to any particular portion of the station, but were pretty equally divided among all the residents. It must also be remembered that all parts of the District of Kurnool were, either then (May and June), or later in the year, severely visited by Cholera.

9. While I believe that no sufficient case has been made out on the score of decided unhealthiness for abandoning Kurnool, it is of importance that I should mention that the Officer Commanding the Ceded Districts, with whom I have personally communicated, is of opinion that there are serious advantages in

retaining Kurnool as a Military Station, for reasons which probably led to its original selection. At Kurnool, the Regiment is immediately on the Hyderabad Frontier, and serves to protect the Native town of Kurnool from attack; moreover, the presence of an armed Force may, in disturbed times, be useful in coercing a large Mahomedan population, who have been only about 27 years under British Government.

10. The relative advantage and disadvantage of removing the Civil Station may be briefly stated as follows:—It would be advantageous to select some place in the Kurnool District more central than Kurnool itself, and thereby diminish the distances to which the accused and witnesses in criminal cases have to proceed to the Session Court, and facilitate the access of the suitors and witnesses who have business to transact with the Civil and Revenue Departments. At the same time, if it were determined to remove the Civil Station, a more salubrious site might possibly be selected than Kurnool. On the other hand, the change would be attended with considerable hardship if all the European Civil Officials and the greater part of the East Indian and Native Officials are required to build themselves houses at the new station. It may also be worthy of consideration that the removal of both the Military and Civil Stations from Kurnool would inflict a serious injury on the town of Kurnool, which is greatly dependent on the presence of the Troops and of the Civil Authorities.

11. In order, however, to enable the Government to form an opinion of the sites eligible, should it be resolved to abandon Kurnool as a Military and Civil Station, or only to remove the Civil Station with a view of selecting a more central position, I have visited Calwa, Nundial, and Sirweel, which appeared to me most likely to fulfil the required conditions for a Civil Station. A glance at the accompanying Sketch Map will show the relative positions of these places. At all, high ground, with a probable constant supply of good water, can be found. The order of preference is, in my opinion, Sirweel first, Nundial second, and Calwa third.

12. I have placed Calwa last, from the fact that the ground near which the water supply is certain is rocky, and not well suited for laying out a new station, Civil or Military. The higher ground away from the rocky formation will require scientific examination before the exact quality of the water supply can be determined. Near Nundial the requirements of good high ground and of a water supply are fulfilled; but Nundial has, during this year, suffered quite as severely a Kurnool from cholera, and the same fever which is prevalent at Kurnool this year prevails to an equal extent at Nundial, and has been, I believe, more fatal in its character. There remains then Sirweel, which enjoys throughout the Kurnool District a high reputation for the excellence of its climate. There is high ground of good red soil, of ample extent for both a Civil and Military Station, about a mile to the north-west of the large village of Sirweel. Topes are abundant in the neighbourhood; water is easily procurable and of good quality; and the canal of the Madras Irrigation Company passes within $1\frac{1}{2}$ miles of the proposed site. The fine range of Hills known as the Nullamalays is within seven miles; and the high road between Cuddapah and Kurnool passes through the selected site. Sirweel is singularly free from Cholera, and, during the present year, when Fever has been so prevalent throughout the Kurnool District, Sirweel itself has had but few cases, and

these of by no means a severe type. Under these circumstances, I prefer Sirweel to any other central site in the Kurnool District.

13. It remains for the Government to determine whether the facts as recorded in the first part of this Report regarding the sanitary conditions of Kurnool are such as to render its abandonment necessary. Apart from the cases of deaths among Europeans which have occurred during the last two years, I think the statistics show that Kurnool is by no means an unhealthy place; and of the deaths from Cholera among Europeans this year, I think only a portion can be fairly attributed to the town of Kurnool.

14. But if the Government should resolve to retain Kurnool as a Military Station, or as both a Civil and Military Station, I would urgently press the necessity of expending money on the improvement of the town. In my Inspection Report, which will follow this letter, I shall describe in detail the condition of the town at present, and what are its most urgent sanitary requirements.

15. Much of the necessary improvements will be met by local taxation under the Towns' Improvement Act, and the taxes thus raised should suffice, when once the town is properly drained and cleaned, for maintaining it in a healthy condition. But in Kurnool, as in other large towns of the Presidency, it must be remembered that it is hardly fair to call upon the present generation to remedy the defects of nearly a century of neglect, and that it will be neither politic nor equitable to impose so great a burden of taxation as would be necessary for this purpose on a single generation of tax-payers. In the case of Kurnool, a high tax for municipal improvements would fall heavily on a population which is not in a prosperous condition, and excite great discontent, and permanent opposition to sanitary improvements. On the other hand, the inhabitants are most anxious that the Military and Civil Stations should remain at Kurnool, and will, for this purpose, willingly pay a moderate rate of taxation.

Kurnool requires that large, broad streets should be pierced through its extraordinarily crowded area. Its drainage requires to be correctly laid and properly constructed, and its water supply more effectually protected and distributed. It possesses from its position many important advantages. The levels of its streets are most favorable for drainage. It has a fine supply of water, and the town could, at a moderate outlay of money, be made a model Native town. To determine how this important work should be carried out, I have obtained a copy of the Revenue Survey Map which includes the town of Kurnool and also the Military portion of the station. I hope to obtain from the Madras Irrigation Company the levels prepared for the distribution of water. I would suggest that Captain Hunter, Royal Engineers, attached to the Kurnool District, should be called upon, with these important aids at his disposal, in consultation with the local authorities, Civil and Military, and with the Municipal Commission, to prepare a well digested scheme and estimate for the improvement of the town.

16. It will not, I believe, be possible for Captain Hunter to carry out the improvement of the town of Kurnool without some assistance being given him, for he has charge of a large Range, which necessitates his frequent absence from the station.

APPENDIX

A.

Table exhibiting the number of Admissions and Deaths amongst the Native Troops stationed at Kurnool, during a period of three years, from 1840 to 1842 inclusive.

AGGREGATE STRENGTH, 3810.		Admitted.	Died.	Admissions from each class.	Deaths from each class.	Percentage of sick to strength.	Percentage of deaths to sick.
Classes.	Diseases.						
Fever...	Febris ephemera.....	250	0	685	2	17-979	0-291
	„ intermit. quot.....	403	2				
	„ remittens.....	5	0				
	„ com. continua.....	27	0				
Diseases of the abdominal viscera...	Cholera.....	40	19	202	5	5-301	2-475
	Diarrhoea.....	78	0				
	Dysentery acuta et chronica ..	53	5				
	Colica.....	5	0				
	Obstipatio.....	6	0				
	Hæmorrhoids.....	9	0				
	Icterus.....	1	0				
	Gastritis.....	5	0				
	Hepatitis.....	2	0				
	Dyspepsia.....	43	0				
Diseases of the lungs....	Catarrhus.....	2	1	18	4	0-472	22-222
	Asthma.....	1	0				
	Phthisis pulmonalis.....	3	1				
	Pneumonia.....	10	1				
Diseases of the brain...	Palpitatio.....	2	1	11	0	0-288	0-000
	Apoplexia.....	1	0				
	Paralysis.....	7	0				
	Mania.....	3	0				
Eruptive Fevers....	Varicella.....	44	0	57	0	1-496	0-000
	Rubeola.....	13	0				
Dropsies....	Anasarca.....	6	3	6	3	0-157	50-000
	Ascites.....	0	0				
Rheumatic affections...	Rheumatismus acutus et chronicus.	236	2	236	2	6-194	0-847
	Syphilis primitiva.....	111	0				
Venereal affections.....	„ consecutiva.....	6	0	168	0	4-409	0-000
	Gonorrhoea.....	29	0				
	Hernia humoralis.....	21	0				
	Stricture urethra.....	1	0				
	Leprosy.....	2	0				
	Beriberi.....	2	1				
Specific diseases....	Dracunculosis.....	21	0	50	1	1-312	2-000
	Atrophia.....	17	0				
	Serophula.....	8	0				
	Morbi oculorum.....	51	0				
	„ cutis.....	71	0				
	Other diseases.....	44	1				
Total...		2,040	37	2,010	37	53-543	1-813

* Of this number were Phlogosis 122; Ulcers 66. Percentage of deaths to strength 0-971, and rate per mille 9-71.

(Signed) H. B. MONTGOMERY, M.D.,

Secy. to the Sanitary Commissioner.

Proceedings of the Madras Government, Judicial Department,
2nd March 1867.

B.

Table of Stations occupied by Native Troops, arranged according to their order of salubrity, calculated on the average of 10 years from 1847 to 1856-57.

Ratio per 1000 of sickness to strength.	Ratio per 1000 of deaths to strength from all causes.	Ratio per 1000 of deaths to strength, excluding those from Cholera.	Ratio per 1000 of deaths to strength from Cholera only.
1. Malacca... 374	1. Quilon... 6.8	1. Hurryhur... 4.9	1. Mangalore... 0
Kurnool... 547	Jaulnah... 7.3	Vellore... 5.6	Henzada (2)... 0
Cannanore... 598	Bellary... 7.8	Bellary... 6.1	Labuan (8)... 0
Kamptee... 611	Cannanore... 8.4	Jaulnah... 6.4	Penang... 0
5. Penang... 647	5. Secunderabad... 8.5	5. Quilon... 6.5	5. Cannanore... 0
Mangalore... 650	Paulghaut... 9.1	French Rocks... 7.0	Rangoon (4)... 0.1
Vellore... 660	Hurryhur... 9.6	Secunderabad... 7.1	Vizagapatam... 0.2
Samulcottah... 693	Bangalore... 10.1	Madras... 7.2	Singapore... 0.2
Jaulnah... 727	Mangalore... 10.2	Paulghaut... 7.6	Quilon... 0.3
10. Hurryhur... 748	10. Masulipatam... 10.2	10. Cuddapah... 7.6	10. Masulipatam... 0.4
Bellary... 772	Vellore... 10.4	Trichinopoly... 7.8	Samulcottah... 0.9
Secunderabad... 774	Madras... 10.5	Kurnool... 8.0	Jaulnah... 0.9
Palamcottah... 787	Kurnool... 10.5	Cannanore... 8.4	Bangalore... 1.0
Quilon... 787	Malacca... 10.8	Palamcottah... 8.6	Secunderabad... 1.4
15. French Rocks... 787	15. French Rocks... 11.6	15. Malacca... 8.7	15. Paulghaut... 1.5
Madras... 807	Kamptee... 11.9	Bangalore... 9.1	Bellary... 1.7
Berhampore... 824	Cuddapah... 12.0	Kamptee... 9.7	Moulmein... 2.0
Cuddapah... 837	Samulcottah... 12.2	Masulipatam... 9.8	Malacca... 2.1
Paulghaut... 839	Mercara... 14.4	Mangalore... 10.2	Kamptee... 2.2
20. Trichinopoly... 858	20. Palamcottah... 15.9	20. Mercara... 10.9	20. Tonghoo (4)... 2.4
Bangalore... 900	Trichinopoly... 16.1	Samulcottah... 11.3	Kurnool... 2.5
Vizianagrum... 966	Vizagapatam... 16.3	Berhampore... 13.5	Vizianagrum... 3.0
Masulipatam... 972	Penang... 17.2	Meaday (1)... 15.1	Madras... 3.3
Mercara... 985	Singapore... 17.3	Vizagapatam... 16.1	Mercara... 3.5
25. Singapore... 1035	25. Rangoon (4)... 17.7	25. Vizianagrum... 16.8	25. Cuddapah... 4.4
Rangoon (4)... 1358	Meaday (1)... 19.6	Singapore... 17.1	French Rocks... 4.5
Vizagapatam... 1383	Vizianagrum... 19.8	Penang... 17.2	Meaday (1)... 4.5
Moulmein... 1512	Berhampore... 20.2	Rangoon (4)... 17.6	Hurryhur... 4.7
Tonghoo (4)... 1831	Tonghoo (4)... 21.9	Tonghoo (4)... 19.5	Vellore... 4.8
30. Henzada (2)... 1996	30. Moulmein... 22.8	30. Moulmein... 20.8	30. Berhampore... 6.7
Meaday (1)... 2504	Labuan (8)... 29.1	Labuan (8)... 29.1	Palamcottah... 7.3
32. Labuan (8)... 2714	32. Henzada (2)... 29.2	32. Henzada (2)... 29.2	32. Trichinopoly... 8.3

The figures underlined indicate the number of years for which average has been obtained.

(Signed) H. B. MONTGOMERY, M.D.,
Secy. to the Sanitary Commissioner.

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2nd March 1867.

C.

Statistics of Mortality in the Native Army of the Madras Presidency in 1865.

Stations.	Mean strength.	Admissions.	Daily sick.	Deaths.	Rates to strength per 1000.		
					Admissions.	Daily sick.	Deaths.
Kurnool (a)...	468.50	388	20.82	...	828.01	44.43	...
Cuttack ...	480.86	326	9.83	...	679.08	20.47	...
Vizagapatam ...	934.92	387	15.59	1	413.93	16.67	1.069
Rangoon ...	824.33	543	29.82	3	658.71	36.17	3.639
Cuddapah (c) ...	817.27	312	23.31	4	385.75	28.52	4.894
Quilon ...	384.33	183	8.81	2	476.15	22.92	5.203
Tonghoo (d) ...	574.25	225	31.44	3	391.81	54.74	5.224
Raipore ...	760.25	1014	30.02	4	1333.77	39.48	5.261
Malacca ...	187.00	115	4.64	1	614.97	24.81	5.347
Vellore (a) ...	736.20	145	9.30	4	196.95	12.63	5.433
Bellary ...	1904.04	995	35.89	13	522.52	18.84	6.827
Mysore Cantonment (b) ...	702.00	911	74.33	5	1297.72	105.88	7.122
Thayetmyoo ...	688.00	531	26.20	5	771.80	38.08	7.267
Hoshungabad ...	382.50	470	24.79	3	1228.75	64.81	7.843
Mangalore ...	890.40	295	12.82	7	331.31	14.39	7.861
Cannanore ...	1352.92	497	18.60	12	367.35	13.74	8.869
Palamcottah ...	650.83	298	7.74	6	457.87	11.89	9.219
Bangalore ...	2467.66	1199	52.46	23	485.88	21.25	9.320
Vizianagrum ...	715.58	172	5.98	7	242.36	8.35	9.782
Madras ...	2254.58	1204	44.05	23	434.02	19.53	10.201
Mercara ...	634.83	318	9.41	7	500.92	14.82	11.026
Hurryhur (b) ...	633.88	238	11.19	7	375.46	17.64	11.043
Samulcottah ...	704.00	475	15.96	9	674.71	22.67	12.784
Secunderabad ...	2621.12	1581	70.53	34	603.17	26.91	12.971
Moulmein ...	628.08	271	19.39	9	431.47	30.87	14.329
Trichinopoly ...	1321.23	422	14.93	19	319.37	11.29	14.379
Berhampore ...	706.41	288	18.17	13	407.69	25.72	18.402
Singapore ...	533.58	373	18.57	12	699.50	31.80	22.189
Kamptee ...	1162.10	1941	62.83	44	1167.79	37.80	26.472

(a) For 8 months but no death occurred in the whole year. (b) For 9 months. (c) For 11 months. (d) For 4 months.

(Signed) H. B. MONTGOMERY, M.D.,
Secy. to the Sanitary Commissioner.

No. 21. ORDER TIERLON, 1st March 1867, No. 335.

It is evident, from the facts stated in the foregoing letter, that the unhealthiness of the Town of Kurnool has not been such as to justify the heavy expenses which would have to be incurred in removing either the Regiment or the Civil Establishments to another station. This project must consequently be abandoned.

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2nd March 1867.*

2. The Government will be prepared to consider the expediency of aiding the Municipal Commissioners in any well digested scheme which may be submitted by them for improving the drainage and ventilation of the town.

(True Extract).

Chief Secretary.

To the Sanitary Commissioner, with Map.
 „ Collector of Kurnool.
 „ Municipal Commission, Kurnool.
 „ Principal Inspector General, Medical Department.
 „ Military Department.

Ed. J. H. Burns.

Judicial Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

Read letter from the Sanitary Commissioner for Madras.

of 12 Decr 1866 No 328

Order thereon 1st March 1867 No 335

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Sanitary Commissioner
with the Mayor
Collector of Kurrucol
Municipal Commission Kurrucol
Principal Inspect. General, Medical Dept
Military Department

dis 29/3

General 1864. Department.

No. 335.

PROCEEDINGS OF GOVERNMENT.

Dated, 1st March 1864.

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