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MADRAS RECORD OFFICE.

Government of Madras.

Finance DEPARTMENT.

G.O. No. 244. Press ~~Mis.~~
145-147.

Dated 20-2-1873.

24/25

Not to be folded or roughly handled

Read t. following papers :—

No. 145. From W. R. CORNISH, Esq., F.R.C.S., Sanitary Commissioner for Madras, to the Chief Secretary to Government, Fort St. George, dated Madras, 27th January 1873, No. 195.

I have the honour to submit, for the information of Government, the results of my recent inspection of the Municipality of Cannanore.

2. The chief object of my inquiry was to ascertain how far insanitary conditions within the cantonment or neighbourhood of the European Barracks might have contributed to the appearance of typhoid fever in Her Majesty's 43rd Regiment, L. I., recently arrived from England. The sanitary condition of the European Infantry Barracks was jointly investigated by Dr. Massy, Deputy Inspector-General, British Medical Service, and myself, and this subject will be dealt with in a separate report.

3. In my report on Cannanore, submitted to Government in letter, No. 680, of 10th November 1871, I pointed out the difficulties experienced by the Municipal authorities in dealing with the conservancy of the cantonment on account of certain tracts of land belonging to the Sultan, but within cantonment limits, being out of the jurisdiction of the Commissioners; such lands and houses thereon contributing nothing to the municipal revenues while deriving all the advantages accruing from municipal expenditure on roads, conservancy, lighting, &c. The effective action of the Municipality in regard to the conservancy of a village called Barnacherri, close to the barracks, I pointed out was impeded owing to that village being in what is known as "Karar" limits, while the sanitation of the old town of Cannanore, about one mile to the south of the barracks, was, for the same cause, entirely neglected.

4. The Municipal Commissioners have, so far as I can judge, done fairly well with the very small income at their disposal. The small portion of the cantonment over which they have any control is kept clean. Several latrines have been built for camp-followers, but these are not much required; for the natives of the district, as their houses are nearly all detached in separate garden-grounds, and each house has its own latrine, the contents of which are utilized in growth of plantains and other products of the gardens, I do not see how the Commissioners can be held responsible for the sanitary state of the area over which, up to the present date, they have had no control.

5. The village named Barnacherri (the Malayalum corruption of *parcherry* or pariah village) is nothing more than the old place of residence of the married men of the European Regiment. This regimental parcherry was well laid out with broad and rectangular streets, and many of the houses are detached and surrounded by small gardens; but there are also many small bazaar-houses crowded with people. It is difficult to arrive at an estimate of the population of this village, but in all probability the numbers do not exceed 1500 or 2000. Since the erection of family-quarters in rear of the barracks, in the year 1863, the place has not been occupied by the Military, but the houses are now mostly in the possession of Portuguese, Moplahs, and camp-followers of the regiment, and it contains several bazaars and a fish-market.

6. Some of the detached houses have private privies in their gardens, but, from what I saw of them, I have reason to suppose that these are often kept in a filthy state. The commoner houses have no privy accommodation, nor is there any public latrine within reach of the people. The consequence is that the native inhabitants resort to a nullah which runs through the village and to the low ground on the north-east of the barracks, where the nullah falls into the sea, and to every little indenture of the sea-beach under the cliff on which the European Barracks are built.

7. At the time of my visit on this occasion, the Military authorities had taken steps to have the surface of the village cleaned, and, so far as the streets were concerned, there was not much to find fault with; but the effect of this activity seems to have been to drive the people further away from the village for purposes of nature, and the strong fœcal odour all along the sea face of the cliff in front of the barracks showed but too plainly that the want of proper latrine accommodation for the village had become a positive nuisance, if not actually a source of disease to the inmates of the barracks.

8. The bad odours from the sea-beach have often been complained of as a nuisance by visitors at the band-stand, and it was suggested to me that the smell came from the main drain of the barracks, which empties itself over the cliff. But, on examining the locality carefully, I found that, although the drain was to some extent a nuisance, every little irregularity in the sea face of the cliff had been used as a latrine, and fœcal deposits in abundance existed at every turn. These places are never reached by the ordinary tides, so that the deposits are constantly tainting the pure sea-breeze before it reaches the barracks.

9. The essential remedies for the present insanitary condition of Barnacherri are the provision of two public latrines (on the Coimbatore pattern), and daily removal of all filth both from public and private privies under the inspection and control of the Municipal authorities, and in fact to include this village, as well as all other portions of the "Karar" area of the cantonment, within municipal limits.

10. It is very much to be regretted that, on the vacation of the old parcherry by the European families in 1863, a number of persons of dirty habits should have been permitted to settle in such close vicinity to the European Barracks; but the thing being done, it is of the highest importance to all concerned that the village should be brought under efficient sanitary control.

11. So far as my inquiries went, the people of this village had not been suffering from typhoid fever prior to the outbreak in the 43rd Regiment. The matter was very carefully inquired into by Dr. Johnstone, the Surgeon of the 43rd Regiment, who spent much time in visiting every house in which cases of sickness were reported, and the conclusion arrived at by him, in which I fully concur, was that the febrile cases witnessed in the village were the ordinary malarious fevers of intermittent type, common in Cannanore and on the Western Coast during the prevalence of the land winds of the north-east monsoon. I saw in the Garrison Hospital several patients with fever of this description, many of whom had contracted the disease in returning from Bangalore, where they had proceeded on duty with H. M.'s 89th Regiment. And, as regards the population of the cantonment generally, and the

old town of Cannanore, my inquiries failed to elicit any facts regarding the prevalence of typhoid fever. The disease, as a matter of fact, has been confined entirely to the men inhabiting the Infantry Barracks. The inhabitants of the married quarters of the 43rd Regiment, Officers, and families, and the Garrison Battery of Artillery quartered at Cannanore, in addition to the detachments of the 43rd Regiment at Calicut and Malliapooram, have had no cases of fever of this description.

12. While, in the present instance, the causes of disease are apparently purely local to the barracks, I have shown that the use of the sea face of the cliff, as a latrine by the native population of the adjacent village, is a positive nuisance to the inhabitants of the barracks, and a probable source of danger to them, and, under any circumstances, the evil should be promptly remedied. The matter was reported to the Brigadier-General Commanding, and probably measures will at once be adopted to place the locality under the supervision of the Regimental Police; but, until proper accommodation is provided for the villagers, their filth must be a certain source of trouble to their Military neighbours.

13. To the east of the barracks and between the fort and the old town of Cannanore there is a bay of the sea which receives the drainage of the parade-ground, and also of the town of Cannanore. The land around the margin of the bay lies low, and, at this season of the year, the mouths of the nullahs opening into the bay are closed by sand-bars, so that the water is stagnant. Into this stagnant water flows all the refuse of the dhobies, who utilize some natural springs in the sides of the nullah for their trade; and close upon the mouth of the nullah are built the cantonment slaughter-houses, so that the blood and offal find their way into the stagnant water, adding materially to its offensiveness. On an adjoining piece of low land a cart-stand (unenclosed) has been allowed to spring up. The whole of this locality requires to be kept under efficient sanitary control, and the slaughter-houses and cart-stand should, in my opinion, be removed to higher and more eligible sites, while the encroachment of native settlers in this direction should be resisted.

14. I have been informed that, in the original cession of land for the cantonment of Cannanore, 1000 yards radius from the fort walls were given up to the British Government. If this be true the whole of the buildings on these low lands (now claimed as the property of the Sultan) must be encroachments, as the distance is much within 1000 yards of the fort walls.

15. Since the departure of the Horse Battery of Royal Artillery some of the huts of native followers have been dismantled. Care should be taken to prevent squatters from settling in this locality and to keep the neighbourhood clean. The locality in question is divided from the civil town of Cannanore only by a nullah, and the appearance of epidemic disease in the civil town is very likely to be followed by an outbreak in the cantonment.

16. And this brings me to what I conceive to be the most important measure of all in regard to the sanitation of Cannanore.

The civil town of Cannanore is entirely, I believe, the private property of the Sultan; but, in considering the general question of the health of troops at the station, the conditions under which the native population of this town exist cannot be lost sight of. In all my wanderings through the towns of the east, I have never met with a locality in which nature has done so much to ensure salubrity, and man has

done so much to harbour disease. The natural drainage of the wooded bay, in which the town is built, is excellent; the soil porous and the water pure; but the filth of the place is really astounding. When I saw the town in 1871, it was immediately on the close of the monsoon when the heavy rains (average 150 inches in the year) had scoured the face of the town and carried off its surface impurity; but on the present occasion no rain had fallen for three months, and I saw the town as it normally is in the long dry season from October till May—filth and dirt everywhere abounded. There are, I believe, no scavengers for the 20,000 inhabiting this town, whose occupations are mostly connected with trade or the sea fisheries. The public streets have been so encroached upon by buildings that the ways are narrow and tortuous, and effectually shut out the sea-breeze. Many of the wells are broken and the water filthy. The Moplah Burial Grounds in the heart of the town are full to overflowing. The drying of fish and the disposal of the fish-offal is carried on in such a manner as to be exceedingly offensive, while the one public and the many private latrines are the filthiest things I have ever seen of the kind.

17. The merchants of Cannanore are evidently men of substance. The houses are, in the main, well-built and commodious, although the town has been allowed to grow up most irregularly. There is evidently a considerable trade in the town and a constant intercourse between the people of the cantonment and the town, so that epidemic disease in the town would most probably spread to the cantonment. There appears to be no sanitary control whatever over this wealthy and important town, and, so long as it remains in its present state, it must be a perpetual source of anxiety and danger to the troops in the cantonment.

18. In my former letter, above referred to, I strongly advised the inclusion of this town within the Cannanore Municipality, and I feel certain that this will be the only effective method of bringing it under efficient sanitary control.

19. On consulting with some of the Municipal Commissioners, I find that they are of the same opinion. It has been calculated roughly that the municipal income from the town and cantonment, including Karar territories of the latter, would yield an annual revenue of from 25,000 to 30,000 Rupees. With such an income the Municipality might undertake really useful sanitary works, such as the cleansing of the old town, widening and paving streets, &c.; but if their operations are confined to the cantonment only, they cannot do what is really necessary for the public health of the community. The existence of such a town as Cannanore in British territories, a place full of wealthy men and an important centre of trade (from whatever causes its neglected sanitary condition have arisen), is scarcely creditable to our administration, and at whatever cost the present privileges of the landowner in regard to moturpha taxes may have to be secured, I am strongly of opinion that the difficulty should at once be promptly dealt with, so that the hinderances to municipal progress which have been described may be removed.

20. I may mention, in conclusion, that the Municipal Commissioners of Cannanore have grave doubts whether the so-called "Karar" lands, within the cantonment, actually belong to the Sultan. It would seem, from a recent investigation and survey by the Revenue Inspector, that the claim in regard to the greater portion of these lands is a very dubious one; and the Commissioners have sent on

Proceedings of the Madras Government, Financial Department,
20th February 1873.

to the President a map showing what they believe to be "Karar." Mr. Macgregor will, doubtless, furnish Government with his views on this question.

No. 146. From the Officiating Quartermaster-General, to the Chief Secretary to Government, Military Department, Fort St. George, dated Fort St. George, 31st January 1873, No. 849.

I have the honour, by order of the Commander-in-Chief, to forward, for submission to Government, copy of a letter, dated 18th January 1873, from Dr. Massy, C.B., Deputy Inspector-General of Hospitals, Mysore Circle, reporting on a recent outbreak of fever in the 43rd Regiment at Cannanore.

2. The insanitary condition of the village of Barnacherri is alluded to by Dr. Massy as one of the probable causes of the outbreak. His Excellency the Commander-in-Chief recommends that early measures be taken to bring the village under the control of the Military authorities, in order that a strict system of conservancy may be enforced there.

From Dr. H. H. MASSY, C.B., Deputy Inspector-General of Hospitals, Mysore Circle, to the Brigadier-General Commanding Malabar and Canara, dated Cannanore, 18th January 1873.

Having received instructions to proceed to Cannanore with reference to sickness prevailing in the 43rd Regiment, after careful inspection and inquiry, I have the honour to suggest the following for your consideration.

2. I find that nineteen cases of enteric fever have occurred in the 43rd from the 20th December 1872 to the 6th of the present month, the date of the last case, and that four of these died. The immediate steps that I would recommend in the sanitary interest of the regiment I shall state as briefly as possible.

3. I have selected 116 young and delicate soldiers of the 43rd Regiment, many of whom have not been dismissed drill, whom I would recommend being sent at once to Wellington, as this is the class, not only most liable to enteric fever, but most prone to suffer from the effects of climate, and I am strongly of opinion that these men will benefit largely by the change, and most probably, with but few exceptions, will return to their regiment quite fit to serve in the plains of India.

4. I would recommend that the duties be so arranged that the men remaining at Cannanore should continue to have not less than five nights in bed.

5. The barracks are clean and the general conservancy seems to be carefully attended to, but the men's rooms are built in the form of a square, and are in a large degree surrounded by buildings, forming almost another square outside. This, of course, impedes the current of fresh air from the sea and from other directions. To relieve this in a small degree some bazaar-houses at the south-east should be pulled down, and also one in course of construction on the sea face.

6. The latrines at the four corners of the barracks are badly placed and are of bad construction, but no immediate structural alteration is practicable. I would suggest that the tarred-tubs, even if used with dry earth, be emptied twice daily, and that at night a solution of carbolic acid of from one part of acid to 50 or 100 parts of water be used with them, and continued at the discretion of the Surgeon. The sand should be removed from the floors of the latrines, and the earth underneath examined, and if, as is probable, it is found impregnated with excreta should be removed, and fresh earth laid and rammed. It would likewise be well, after flushing the drains, to daily use some carbolic acid solution in the covered drains in the barrack enclosure where found offensive.

7. Arrangements are being made to analyse the water used for drinking, but the wells should at once be cleaned and repaired.

8. The village of Barnacherri abounds, as you are aware, with insanitary conditions. I am sensible of your anxiety to relieve this state of things, so shall here only record my opinion as to the importance of obtaining the authority of Government, if necessary, to keep this locality, so very close to the barracks, in a state of cleanliness.

9. It will be necessary for me to make a report to the Head of my Department at Madras upon this outbreak of enteric fever in the 43rd, and my recommendations will involve structural alterations of some extent in the barracks; and, as it will take some time to prepare it, I forward to you this letter as including the recommendations which I will trust you will be able to carry into effect at once should you approve of them.

Transferred to the Financial Department.

FORT ST. GEORGE,
3rd February 1873.

(Signed) W. HUDLESTON,
Chief Secretary.

No. 147. ORDER THEREON, 20th February 1873, No. 244.

The Government have under consideration the arrangements necessary for bringing the whole of Cannanore under municipal administration, the imperative necessity for which step is more strongly proved than ever by the present reports.

2. But pending the completion of these arrangements, the Governor in Council is anxious to adopt immediate measures to remove some of the most glaring defects in the sanitary arrangements of the neighbourhood of the barracks as pointed out by Dr. Cornish, and resolves to instruct the Magistrate to select sites at once for permanent latrines, on the Coimbatore plan, sufficient to provide for the requirements of the inhabitants of Barnacherri, and at once to commence building them at Government expense. Meanwhile, and until these permanent latrines can be constructed, the Magistrate will cause temporary latrines to be erected, and will take the necessary steps to ensure their use and regulation, and to prevent the pollution of the sea face. He will absolutely prohibit the use of the sea face and the nullah mentioned by Dr. Cornish as a latrine.

3. The Magistrate's attention will also be at once directed to the removal of the nuisance described in paragraph 13 of Dr. Cornish's letter as resulting from the position occupied by the dhobies, by the regimental slaughter-houses, and by the unenclosed cart-stand which has been allowed to spring up.

4. He will consult the Military authorities and the Officer of the Department of Public Works at Cannanore as to the best means to be adopted for the abatement of the nuisance described, and will carry them out to the best of his ability at the cost of Government. He will inquire whether the rights of the occupants of the village of Barnacherri, which would seem to have been the site of the former family-quarters of the troops, are such as to render it undesirable to question them, and will ascertain whether any permission was given for the use of the ground and water used by the dhobies and for the establishments of the slaughter-houses and cart-stand; but, under any circumstances, these objectionable establishments must be removed as speedily as possible to more suitable sites. The necessary precautions will also be adopted to prevent squatters from settling themselves in the dismantled huts of the

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20th February 1873.

native followers of the Royal Artillery Horse Battery which has left the station, and to keep this locality in proper order.

5. The Government are much indebted to Dr. Cornish for his report, which will receive further consideration in connexion with the question of extending municipal authority at Cannanore.

(True Extract.)

W. HUDLESTON,
Chief Secretary.

To the Magistrate of Malabar.
,, Sanitary Commissioner.
,, Military Department.
,, Public Works Department.
,, Inspector-General, Indian Medical Department.
,, Accountant-General.

Exd. J. Wright.

Govt. of India 1873 Works.

FINANCIAL.

To

The MAGISTRATE of MALABAR,

&c., &c., &c.

Dated February, 20th.

Recd.

Encl.

G. O., 20th February 1873, No. 244.

FEBRUARY.

Nos. 145–147.

Issuing orders for the improvement of the sanitary condition of Cannanore.

Cannanore 18th Jany 1873

From Surgeon 1st Class Lemuel

J. Mc Pitcher Imperl Mily

To The Brigadier General

Commanding Malabar & Canara

Cannanore.

Sir

Having received instructions to proceed to Cannanore with reference to sickness prevailing in the 43rd Regiment after careful Inspection & Enquiry, I have the honor to suggest the following for your Consideration –

2. – I find that 19 Cases of Enteric Fever have occurred in the 43rd from the 20th December 1872 to the 6th of the present month, the date of the last Case, & that 4 of these died. The immediate steps that I would recommend in the Sanitary Interest of the Regiment I shall state as briefly as possible.

3. I have selected 116 young and delicate Soldiers of the 43rd Regiment many of whom have not been discharged duty, whom I would recommend being sent at once to Wellington as this is the class not only most liable to Enteric Fever but most prone to suffer from the effects of climate; and I am strongly of opinion that these men will benefit largely by the change, and that probably both not few Cases will take place in their Regiment quite fit to serve in the plains of India

4. I would recommend that the duties be so arranged that the men remaining at Cannanore should continue to have not less than 8 hours in bed –.

5. The Barracks are clean & the general

Conservancy

Conservancy seems to be carefully attended to, but the Native Towns are built in the form of a Square, and are in a large degree surrounded by Buildings, forming almost another Square outside - This of course impedes the current of pure air from the Sea and from other directions; to relieve this in a small degree some bazaar Drains at the South East should be pulled down & also one in course of Construction on the Sea face.

6. The Latrines at the 4 Corners of the Barracks are badly placed and are of bad Construction, but the immediate Structural alteration is impracticable; I would suggest that the Tanned hides, Defiled with dry Earth, be emptied twice daily, and that at night a Solution of Carbolic acid of from 1 part of acid to 50 or 100 parts of Water be distributed there, and continued at the discretion of the Surgeon: the Sand should be removed from the floors of the Latrines, and the Earth underneath examined, and if as is probable it is found impregnated with Excreta should be removed and fresh Earth laid and Rammed. It would likewise be well after flushing the drains daily to use some Carbolic acid Solution in the Covered drains in the Barrack Enclosure also found offensive.

7. Arrangements are being made to analyze the Water used for drinking, but the Wells should also be cleaned and repaired -

8. The Village of Bernachery abounds as you are aware with insanitary Conditions: I am sensible of your anxiety to relieve this State of things so I shall here only record my opinion as to

to the importance of obtaining the authority of Government if necessary, to keep this locality, so very close to the Barracks, in a State of cleanliness -

9. It will be necessary for me to make a report to the Head of my Department at Madras upon this outbreak of Enteric Fever in the 43rd, and my recommendations will involve structural alterations of some extent in the Barracks, and as it will take some time to prepare it I forward to you this letter as including the recommendations which I trust you will be able to carry into effect at once should you approve of them -

I have the honor to be
&c.

Sigd H. H. Cuny
Dy Insp Genl of Hospitals
- Bengal Presy -

True Copy
E. J. Ring Town Capt
D Brigade Major

No 195 Office of Sanitary Commissioner
Madras 27th January 1873

ISP 1

From

The Sanitary Commissioner
for Madras

To

The Chief Secretary to Government
Public Department
Fort Saint George.

Sir, I have the honor to submit, for the information of Government, the results of my recent inspection of the Municipality of Cannanore.

2. The chief object of my enquiry was to ascertain how far insanitary conditions within the Cantonment or neighbourhood of the European barracks might have contributed to the appearance of typhoid fever in H. M's 46th Regiment L. I. recently arrived from England. The sanitary condition of the European Infantry barracks was jointly investigated by Dr. Hibbert Deputy Inspector General British Medical Service and myself and this subject will be dealt with in a separate report.

3. In my report on Cannanore submitted to Government in letter No 680 of 10th March 1871, I pointed out the difficulties experienced by the Municipal authorities in dealing with the conservancy of the Cantonment, on account of certain tracts of land belonging to the Sultan, but within Cantonment limits, being out of the jurisdiction of the Commissioners, such lands, and houses thereon, contributing nothing to the Municipal revenues while deriving all the advantages occurring from

Encl. No 1.
From Lieut. Col. Hibbert
To A letter from the Sanitary
Commissioner to the Chief
Secy. to Govt. Pub. Dept.
No 195 of 31st
January 1873

In Fasc. 327/73
Pub. Sec. 91

municipal expenditure on roads, conservancy, lighting &c. The effective action of the municipality in regards to the conservancy of a village called Barrachery, close to the barracks, I pointed out was impeded owing to that village being in what is known as "Varav" limits, while the cantonment of the old town of Cannanore, about one mile to the south of the barracks, was, for the same cause, entirely neglected.

4. The municipal Commissioners have, so far as I can judge, done fairly well with the very small income at their disposal. The small portion of the cantonment over which they have any control is kept clean. Several latrines have been built for camp followers but these are not much required, for the natives of the district, as their their houses are nearly all detached in separate garden grounds and each house has its own latrine, the contents of which are utilised in growth of plantains and other products of the gardens, I do not see how the Commissioners can be held responsible for the sanitary state of the areas over which, up to the present date, they have had no control.

5. The village named Barrachery (the malayalum corruption of Parchery or Pariah village) is nothing more than the old places of residence of the married men of the European Regiment. This regimental Parchery was well laid out with broad and rectangular streets and many of the houses are detached and surrounded by small gardens; but there are also many small barrack houses crowded with people. It is difficult to arrive at an estimate of the population of this village, but in all probability

the numbers do not exceed 1,500 or 2,000. Since the erection of family quarters in rear of the barracks, in the year 1863, the place has not been occupied by the military, but the houses are now mostly in the possession of Portuguese, Mopla's and camp followers of the Regiment and it contains several barrack and a fish market.

6. Some of the detached houses have private privies in their gardens but, from what I saw of them, I have reason to suppose that these are often kept in a filthy state. The common houses have no privy accommodation nor is there any public latrine within reach of the people. The consequence is, that the native inhabitants resort to a nullah which runs through the village and to the low grounds on the north east of the barracks, where the nullah falls into the sea, and to every little indenting of the sea beach under the cliff on which the European barracks are built.

7. At the time of my visit on this occasion the military authorities had taken steps to have the surfaces of the village cleaned, and so far as the streets were concerned, there was not much to find fault with; but the effect of this activity seems to have been to drive the people further away from the village for purposes of nature, and the stinking faecal odor all along the sea face of the cliff in front of the barracks showed but too plainly that the want of proper latrine accommodation for the village had become a positive nuisance if not actually a source of disease to the inmates of the barracks.

8. The bad odors from the sea beach have often been complained of as a nuisance by visitors at the band stands, and it was suggested to me that the smell came from the main drain of the barracks, which empties itself over the cliff. But on examining the locality carefully, I found that although the drain was to some extent a nuisance, every little irregularity in the sea face of the cliff had been used as a latrine and fecal deposits in abundance existed at every turn. These places are never reached by the ordinary tides so that the deposits are constantly tainting the pure sea breeze before it reaches the barracks.

9. The essential remedies for the present unsanitary condition of Bamacherry are, the provision of two public latrines (on the Bombalore pattern) and daily removal of all filth both from public and private privies under the inspection and control of the Municipal authorities and in fact, to include this village as well as all other portions of the "Cantonment" area of the Cantonment, within Municipal limits.

10. It is very much to be regretted that on the vacating of the old barracks by the European families in 1863, a number of persons of dirty habits should have been permitted to settle in such close vicinity to the European barracks; but the thing being done it is of the highest importance to all concerned that the village should be brought under efficient sanitary control.

11. So far as my enquiries went, the people of this village had not been suffering from typhoid fever prior to the outbreak in the 43rd Regiment. The matter was very carefully enquired into by Dr Johnstone the Surgeon of the 43rd Regiment who spent much time in visiting every house in which cases of sickness were reported, and the conclusion arrived at by him, in which I fully concur, was that the febrile cases witnessed in the village were the ordinary malarious fever of intermittent types, common in Bamanore and on the Western coast during the prevalence of the land winds of the N.E. monsoon. I saw in the Garrison hospital several patients with fever of this description, many of whom had contracted the disease in returning from Bangalore where they had proceeded on duty with H. M's 89th Regiment. And as regards the population of the Cantonment generally and the old town of Bamanore, my enquiries failed to elicit any facts regarding the prevalence of typhoid fever. The disease, as a matter of fact, has been confined entirely to the men inhabiting the Infantry barracks. The inhabitants of the married quarters of the 43rd Regiment, officers, and families, and the Garrison battery of Artillery quartered at Bamanore, in addition to the detachments of the 43rd Regiment at Calicut and Mallipooram have had no cases of fever of this description.

The disease is thus localized in a very small area & no subject to a relation first shown by the Guard room from the beach

12. While, in the present instance, the causes of diseases are apparently purely local to the barracks, I have shown that the use of the sea face of the cliff as a latrine by the native population of the adjacent village, is a positive nuisance to the inhabitants

of the barracks and as probable sources of danger to them; and under any circumstances this evil should be promptly remedied. The matter was reported to the Brigadier General Commanding, and probably measures will at once be adopted to place the locality under the supervision of regimental police; but until proper accommodation is provided for the villagers their fields must be a certain source of trouble to their military neighbours.

13. To the east of the barracks and between the fort and the old town of Cannanore there is a bay of the sea, which receives the drainage of the parade ground and also of the town of Cannanore. The lands around the margin of the bay lies low and at this season of the year the mouths of the nullahs opening into the bay are closed by sand bars, so that the water is stagnant. Into this stagnant water flows all the refuse of the dhobies, who utilise some natural springs in the sides of the nullahs for their trade; and close upon the mouths of the nullahs, are built the cantonment slaughter houses, so that the blood and offals finds its way into the stagnant water, adding materially to its offensiveness. On an adjoining piece of low land a cart stand (unenclosed) has been allowed to spring up. The whole of this locality requires to be kept under efficient sanitary control, and the slaughter houses and cart stand should, in my opinion, be removed to higher and more eligible sites, while the encroachment of native settlers in this direction should be resisted.

14. I have been informed that in the original cession of lands for the cantonment of Cannanore 1,000 yards radius from the fort walls were given up to the British Govt. If this be true the whole of the buildings on these low lands (now claimed as the property of the Sultan) must be encroachments as the distances is much within 1,000 yards of the fort walls.

15. Since the departure of the horse battery of Royal Artillery some of the huts of native followers have been dismantled. Care should be taken to prevent squatters from settling in this locality and to keep the neighbourhood clean. The locality in question is divided from the Civil town of Cannanore only by a nullah, and the appearance of epidemic disease in the Civil town is very likely to be followed by an outbreak in the cantonment.

16. And this brings me to what I conceive to be the most important measure of all in regards to the sanitation of Cannanore.

The Civil town of Cannanore is entirely, I believe, the private property of the Sultan but in considering the general question of the health of troops at the station, the conditions under which the native population of this town exist, cannot be lost sight of. In all my wanderings through the towns of the east, I have never met with a locality in which nature has done so much to ensure salubrity and man has done so much to harbour diseases. The natural drainage of the wooded bay, in which the town is built, is excellent. The soil porous and the water pure. But the filth of the places is

really astounding. When I saw the town in 1871, it was immediately on the close of the monsoon when the heavy rains (average 150 inches in the year) had scoured the faces of the town and carried off its surface impurity; but on the present occasion no rain had fallen for three months, and I saw the town as it normally is in the long dry season from October till May. Filth and dirt every where abounded. There are, I believe, no scavengers for the 20,000 inhabiting this town, whose occupations are mostly connected with trade or the sea fisheries. The public streets have been so encroached upon by buildings, that the ways are narrow and tortuous and effectually shut out the sea breeze. Many of the wells are broken and the water filthy. The municipal burial ground in the heart of the town are full to overflowing. The drying of fish and the disposal of the fish offal is carried on in such a manner as to be exceedingly offensive; while the one public and the many private latrines are the filthiest things I have ever seen of the kind.

17. The merchants of Cannanore are evidently men of substance. The houses are, in the main, well built and commodious although the town has been allowed to grow up most irregularly. There is evidently a considerable trade in the town and a constant intercourse between the people of the Cantonment and the town, so that epidemic disease in the town would most probably spread to the Cantonment. There appears to be no sanitary control whatever over this wealthy and important town, and so long as it remains in its present state, it must be a perpetual source of anxiety and danger to the troops in the Cantonment. VBP

18. In my former letter, above referred to, I strongly advised the inclusion of this town within the Cannanore Municipality and I feel certain that this will be the only effective method of bringing it under efficient sanitary control.

19. On consulting with some of the Municipal Commissioners, I find that they are of the same opinion. It has been calculated roughly that the Municipal income from the town and Cantonment, including Kasar Territories of the latter, would yield an annual revenue of from 25,000 to 30,000 Rupees. With such an income the Municipality might undertake really useful sanitary works; such as the cleansing of the old town, widening and paving streets &c but if their operations are confined to the Cantonment only, they cannot do what is really necessary for the public health of the community. The existence of such a town as Cannanore in British territories a place full of wealthy men and an important centre of trade, (from whatever causes its neglected sanitary condition have arisen) is scarcely creditable to an administration, and at what ever cost the present privileges of the landowner in regards to municipal taxes may have to be secured, I am strongly of opinion that the difficulty should at once be promptly dealt with; so that the hindrances to Municipal progress, which have been described, may be removed.

20. I may mention, in conclusion, that the Municipal Commissioners of Cannanore have grave doubts whether the so called "Karar" lands, within the Cantonment, actually belong to the Ballam. It would seem, from a recent investigation and survey by the Revenue Inspector, that the claim in regard to the greater portion of these lands, is a very dubious one; and the Commissioners have sent on to the President a map showing what they believe to be "Karar". Mr. Macgregor will doubtless furnish Government with his views on this question.

I have the honor to be,
Sir,
Your most obed^t Serv^t
W McCormick I.S.M.S.
Sanitary Commissioner
for Madras.

9th Inst.

Quarter Master General's Office,
Fort Saint George, 31st January
1873.

No 849

From

Colonel H. Hamell
Offg Quarter Master General

To

The Chief Secretary
to Government
Military Department

Sir,

I have the honor, by order of the Commander in Chief, to forward for submission to Government copy of a letter dated 18th January 1873, from Dr Massy CB, Dy Inspector General of Hospitals, Mysore Circle, reporting on a recent outbreak of fever in the 43d Regiment at Cannanore.

2 The insanitary condition of the village of Barnacherry is alluded to by Dr Massy, as one of the probable causes of the outbreak

His

4 2475 A/71

From Surgn. J. Finl. 1873 Medl. Departmt.

No. 244.

The Sanitary Comr. for Madras

&

The Chief Secy. to Govt. Public Dept.

Dated 27th Jany 1873
Rec'd 29th Jany 1873

No 195

Medl.

Reporting on the sanitary condition of the Cannanore Division of the Cannanore Station.

His Excellency the Commander in Chief recommends that early measures be taken to bring the village under the control of the Military Authorities, in order that a strict system of Conservancy may be enforced there.

I have the honor to be,
Sir,
Your obedient Servant.

J. O'Connell Colonel
Offg Quarter Master General

JmB

2 Pp
1851

Febmary. 5th 73. 29P

It was decided at a recent Council that no time should be lost in bringing the so called Karai limits of the Town of Namuanee, under Municipal law, and the Rajahs rights should be liberally compensated.

When the civil town of Namuanee is brought completely under Municipal control the evils brought to notice by the Sanitary Commissioner. in paras. 16 . 17. of his letter, recirculated, will be remedied and this large & flourishing town, which has many natural advantages will, as well as the portion within Military limits, be brought into a satisfactory sanitary condition. But a considerable

time must pass before the Municipal
Commissioners will be in a condition
to apply remedial measures. and in
the mean time there are certain nuisance
injurious to the health of our soldiers
which we have negligently allowed
to be created.
The description given in the earlier
portion of Dr. Cornish's letter of the
state of the old parchery. ~~passed~~
~~observation~~. renders it necessary that
the Govt should take immediate
action for the abatement of the
existing nuisances.

23 P 31 P

Bamachery. (the Parchery) formerly the place
of residence of the married soldiers. is now
occupied by Portuguese Mestahs & Lascar followers
It contains several bazaars & a fish market.
There do not appear to be any public Latrines
& the greater portion of the inhabitants make
a latrine of a Nullah which leads to the
sea face under the cliff on which the bazaars
are situated.
The first step to be taken is to build
a sufficient number of public Latrines
to meet the requirements of a population
of from 1500 to 2000 inhabitants &
absolutely to prohibit the use of the
nullah or of the sea face as a
Latrine.
I would advise that the Magistrate
be instructed to select sites for the

permanent Latrines required and that he be authorized at once to commence building these latrines. In the mean time and until the permanent Latrines can be constructed the Magistrate should be directed to erect temporary latrines & to take the necessary steps for preventing the pollution of the sea face.—

The Magistrate should also be directed to communicate with the officer of the D.P.W. at Kamaanise to devise & carry out to the best of his ability the removal of the nuisance described in para 13 of Dr Cornish's letter & he will in consultation with the Military authorities take the necessary steps for removing to more eligible

2

sites the establishment of Shobies. the slaughter house and the last Stand described by the Sanitary Commissioner. These improvements having been made at the expense of Govt. it is very desirable that the whole of Cannanore both military & civil should be included in the Municipal limits of a single Commission & be brought under proper sanitary control. and H.E. the Commander in Chief should be requested to permit of this arrangement. It is reported that the Municipal Funds, when

the Karur limits are brought under Municipal control, will be unable for the ~~proper~~ maintenance of the whole town in a healthy condition and there is no constant a communication between the Cantonment & the Civil Town - that it is impossible to separate their sanitary interests & requirements Then is no doubt great difficulty in procuring scavengers in sufficient numbers at Camanore - but this difficulty is not insuperable and

the Govt should not in my humble opinion, allow the health of the troops to be endangered a day longer than is absolutely necessary.

The Magistrate should be informed that the Govt attach the greatest importance to the execution of these instructions and that they will be prepared to entertain favorably any well considered recommendations in connection with the object in view which the Magistrate may wish to offer.

The Govt might suggest to the

Magistrate to enquire whether the rights of the occupants of the village of Bamaichery are such as to render it undesirable to proclaim them - and also whether any permission was given for the use of the ground & water occupied by the Dhobies & for the establishment of the Cart-stand & Slaughter Houses. But under any circumstances there last three objectionable establishments should be removed to a properly selected site.

R.E.

J. D.S

I fully concur in the action proposed by the Acting Mr. Ellis on D. Cowie's admirable Report on Cawnpore -

Friction sometimes arises from Municipal action in a Station of Military Cantonment - but I quite admit the advisability of establishing one Supreme Authority for the administration of Sanitary matters at Cawnpore and shall be happy to co-operate in this & all the measures proposed by Mr. Ellis -

6.2.73.

J.D.S.

6/2/73

PROCEEDINGS of the MADRAS GOVERNMENT.

Read the following letters from the Sanitary Commissioner, Madras, dated 27th Jan.y 1873 No. 195
Quarter Master General, Madras, dated 31st Jan.y 1873 No. 829.
Order thereon 20th February 1873 No. 244.

The Govt. have under consideration the arrangements necessary for bringing the whole of Cannanore under Municipal administration the imperative necessity for which step is more strongly proved than ever by the present reports.

But pending the completion of these arrangements the Governor in Council is anxious to adopt immediate measures to remove some of the most

most glaring defects in the sanitation of the neighbourhood of the barracks as pointed out by Dr. Cornish and resolves to instruct the Magistrate to select sites at once for permanent latrines on the Coimbatore plan, sufficient to provide for the requirements of the inhabitants of Bamachari, and at once to commence building them at Govt. expense. Meanwhile and until these permanent latrines can be constructed the Magte will cause temporary latrines to be erected and will take the necessary steps to ensure their use, and regulation and to prevent the pollution of

of the sea face. He will absolutely prohibit the use of the sea face and the nullah mentioned by Dr. Cornish as a latrine.

3 The Magistrate's attention will also be at once directed to the removal of the nuisance described in para 13 of Dr. Cornish's letter as resulting from the position occupied by the Dhobies, by the Regimental Slaughter Houses, and by the unenclosed Cart-Stand which has been allowed to spring up.

4 He will consult the Military authorities and the Officer of the D. P. W. at Cannanore as to the best means to be adopted for

for the abatement of the nuisance described and will carry them out to the best of his ability, at the cost of Govt. He will enquire whether the rights of the occupants of the village of Barnacheri which would seem to have been the site of the former family quarters of the troops are such as to render it undesirable to question them, and will ascertain whether any permission was given for the use of the ground and water used by the Dhobies and for the establishments of the Slaughter houses and Cart-stand, but under any circumstances these objectionable establishments

485/12

Retablishments must be removed as speedily as possible to more suitable sites. The necessary precautions will also be adopted to prevent squatters from settling themselves in the dismantled huts of the Native followers of the Royal Artillery Horse Battery which has left the station, and to keep this locality in proper order.

5. The Govt. are much indebted to Dr. Cornish for his report, which will receive further consideration in connection with the question of extending Municipal authority at Cannanore.

To The Registrate of Malabar.
" Sanitary Commissioner
" Military Department
" Public Works Department
" Inspector General I.M. Dept.
" Acct General

Govt. of {1873} Madras.

Financial

To

The Magte of Malabar.

Dated Feb 20 } 1873, No. 244.
Recd. }

Nos. 145-147.

Issuing orders for the improvement of the Sanitary Condition of Cannanore.

20-2-1873

12-605