& Munl. (189) Department.

PRINTED.

G.O., No. 86/Mun dated 10-4-97

DESPATCHED

[Despatch Abstract.]

Bubonic Plague.

Comg. to the Collrs. of Tinnevelly, Madura & Tanjore, extract from Dr. Fernando's report on his visit to Bombay in connection with the — and requesting them to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

Informing the Govt of Ceylon that a copy of para. 32 of Dr. Fernando's report in connection with the — has been comd. to the Collrs. of Tinnevelly Madura & Tanjore with instructions that they should continue to take the most careful precautions at the ports in their districts to prevent - - - - - Ceylon.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Government {1897} of Madras.

LOCAL AND MUNICIPAL.

Recd. } 1897. *Enclosures*

Regd. *Spare copies*

G.O., No. 861 M., 10th April 1897.

APRIL.

Bubonic Plague.

Communicating to the Collectors of Tinnevelly, Madura and Tanjore extract from Dr. Fernando's report on his visit to Bombay in connection with the — and requesting them to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—again the following paper:—

G.O., Mis. No. 629 M., dated 19th March 1897.

Read—telegram from the Colonial Secretary, Colombo, to the Secretary to Government, Local and Municipal Department, dated 16th March 1897.

"Plague Commission report persons from infected localities travel from Tuticorin or Negapatam to Colombo as immigrant coolies. Health Officer should satisfy himself that they are actually coolies."

Order—Mis. No. 629 M., dated 19th March 1897.

The following telegram will be despatched to the Collectors of Tinnevelly, Madura and Tanjore:—

"Ceylon telegraphs that persons from infected localities travel from Tuticorin or Negapatam to Colombo as immigrant coolies. This is contrary (to the) notification (of) Government of India in G.O., No. 442 M., of 9th instant, and must be stopped."

2. The following telegram will be despatched to the Colonial Secretary, Colombo:—

"Your telegram, 16th. Emigration (of) coolies from infected localities. Necessary orders issued."

(True Extract.)

(Signed) G. S. FORBES,
Secretary to Government.

Read—also the following papers:—

From the Colonial Secretary, Colombo, to the Secretary to Government, Local and Municipal Department, dated 20th March 1897.

I am directed to inform you that I despatched the following telegram to your address on the 16th March 1897:—

"Plague Commission report persons from infected localities travel from Tuticorin or Negapatam to Colombo as immigrant coolies. Health officer should satisfy himself that they are actually coolies."

2. I am to state that this Government will be prepared to remunerate the Health Officer for the services which he may in this connection render.

From the Colonial Secretary, Colombo, to the Secretary to Government, Local and Municipal Department, dated 22nd March 1897.

I am directed to forward, for the information of the Government of Madras, the enclosed copy of a report made by Dr. H. M. Fernando on his recent visit to Bombay in connection with the bubonic plague.

Enclosure.

Dr. Fernando's report, dated 11th March 1897.

* * * * *

32. At Tuticorin the following precautions are taken before passengers are permitted to sail for Colombo. Every traveller before booking his ticket for a passage has to obtain a certificate from the Medical Officer in charge of the port and special plague duties. This certificate declares that the holder is in good health and has produced documentary evidence to prove that he has been away from an infected district for over fifteen days. It is only on the strength of such a certificate that an ordinary passenger can book his passage to Ceylon. A number of travellers — first, second and third class—are at present detained in Tuticorin to undergo a fifteen days' stay there as they have been unable to produce the evidence necessary for the medical certificate. On the other hand, no such precautions exist in the case of estate labourers. These can obtain tickets without any reference to the Port Medical Officer from the Agent of the British India Steam Navigation Company for the passage to Colombo on the bare statement of a Kangany that they are estate coolies. Taking for granted that all estate labourers come from the Madras Presidency and therefore outside the area of plague infection, the regulations now in force cannot prevent a plague refugee from joining a Kangany's gang of coolies at Tuticorin and thus obtain his passage to Colombo without the fifteen days' stay there. The passengers and crew of a ship are examined by the Medical Officer before leaving Tuticorin. This examination is a hurried one, as over 150 deck passengers have to be examined in about an hour. This is the only examination that the so-called cooly emigrant has to undergo.

* * * * *

Order—No. 861 M., dated 10th April 1897.

Paragraph 32 of Dr. Fernando's report received with the second letter read above will be communicated to the Collectors of Tinnevelly, Madura and Tanjore with the request that, as indicated in G.O., No. 629 M., dated 19th March 1897, they will continue to take the most careful precautions at the ports in these districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

2. The liberal offer of the Ceylon Government contained in the second letter regarding the remuneration of the Health Officer at Tuticorin cannot, of course, be entertained. If, however, that Government deputes a medical officer to Tuticorin as proposed in its telegram of the 19th March 1897, he may be usefully employed in helping the examination of the emigrant coolies for the estates in the Colony, no person being shipped as an estate cooly for Colombo who is not able to satisfy the examining officer that he comes from a non-infected area and has not been within an infected area for fifteen days previous to his embarkation.

3. The following letter will be despatched to the Colonial Secretary, Colombo:—

* * * * *

(True Extract.)

G. S. FORBES,
Secretary to Government.

To the Collector of Tinnevelly.
" " of Madura.
" " of Tanjore.
" Marine Department.

Government {1897} of Madras.

LOCAL AND MUNICIPAL.

Recd. }1897. *Enclosures*

Regd. *Spare copies*

Letter, No. 862 M., 10th April 1897.

APRIL.

Bubonic Plague.

Informing the Government of Ceylon that a copy of paragraph 32 of Dr. Fernando's report in connection with the — has been communicated to the Collectors of Tinnevelly, Madura and Tanjore with instructions that they should continue to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

LOCAL AND MUNICIPAL DEPARTMENT.

LETTER—TO

THE COLONIAL SECRETARY, COLOMBO.

SIR,

I am directed to acknowledge with thanks the receipt of your letter of the 22nd ultimo, enclosing a copy of Dr. H. M. Fernando's interesting report on his recent visit to Bombay in connection with the bubonic plague.

2. I am to state, for the information of His Excellency Sir West Ridgeway, that the Governor in Council has communicated a copy of paragraph 32 of Dr. Fernando's report to the Collectors of Tinnevelly, Madura and Tanjore with instructions, in continuation of those already issued, requiring them to continue to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations in the guise of Madras coolies. With regard to this matter, I am to say that, if in accordance with the arrangement indicated in my telegram of the 31st ultimo in reply to yours of the 19th idem, a Colonial officer is deputed to Tuticorin, His Excellency the Governor in Council will be glad of the assistance which he may be able to afford in examining persons embarking as Madras emigrant coolies for Ceylon, in view of ascertaining whether they really are such or are persons from infected areas seeking to evade the regulations in that guise.

I have the honour to be,
Sir,
Your most obedient servant,

FORT ST. GEORGE,
10*th April* 1897.

G. S. FORBES,
Secretary to Government.

Encl. A. Rait.

Government {1897} of Madras.

LOCAL AND MUNICIPAL.

Proof for approval

Recd. } 1897. *Enclosures*
Regd. } *Spare copies*

Please Strike off
29/4/97.

G.O., No. 861 M., 10th April 1897.

APRIL.

Bubonic Plague.

Communicating to the Collectors of Tinnevelly, Madura and Tanjore extract from Dr. Fernando's report on his visit to Bombay in connection with the — and requesting them to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—again the following paper:—

G.O., Mis. No. 629 M., dated 19th March 1897.

Read—telegram from the Colonial Secretary, Colombo, to the Secretary to Government, Local and Municipal Department, dated 16th March 1897.

Order—Mis. No. 629 M., dated 19th March 1897.

The following telegram will be despatched to the Collectors of Tinnevelly, Madura and Tanjore:—

"Ceylon telegraphs that persons from infected localities travel from Tuticorin or Negapatam to Colombo as immigrant coolies. This is contrary (to the) notification (of) Government of India in G.O., No. 412 M., of 9th instant, and must be stopped."

2. The following telegram will be despatched to the Colonial Secretary, Colombo:—

"Your telegram, 16th. Emigration (of) coolies from infected localities. Necessary orders issued."

(True Extract.)

(Signed) G. S. FORBES,
Secretary to Government.

READ—also the following papers:—

From the Colonial Secretary, Colombo, to the Secretary to Government, Local and Municipal Department, dated 20th March 1897.

I am directed to inform you that I despatched the following telegram to your address on the 16th March 1897:—

"Plague Commission report persons from infected localities travel from Tuticorin or Negapatam to Colombo as immigrant coolies (Insisti) Health officer should satisfy himself (Bicordem) that they are actually coolies."

2. I am to state that this Government will be prepared to remunerate the Health Officer for the services which he may in this connection render.

From the Colonial Secretary, Colombo, to the Secretary to Government, Local and Municipal Department, dated 22nd March 1897.

I am directed to forward, for the information of the Government of Madras, the enclosed copy of a report made by Dr. H. M. Fernando on his recent visit to Bombay in connection with the bubonic plague.

ENCLOSURE.

~~Extract from~~ Dr. Fernando's report, dated 11th March 1897.

* * * * *

32. At Tuticorin the following precautions are taken before passengers are permitted to sail for Colombo. Every traveller before booking his ticket for a passage has to obtain a certificate from the Medical Officer in charge of the port and special plague duties. This certificate declares that the holder is in good health and has produced documentary evidence to prove that he has been away from an infected district for over fifteen days. It is only on the strength of such a certificate that an ordinary passenger can book his passage to Ceylon. A number of travellers — first, second and third class—are at present detained in Tuticorin to undergo a fifteen days' stay there as they have been unable to produce the evidence necessary for the medical certificate. On the other hand, no such precautions exist in the case of estate labourers. These can obtain tickets without any reference to the Port Medical Officer from the Agent of the British India Steam Navigation Company for the passage to Colombo on the bare statement of a Kangany that they are estate coolies. Taking for granted that all estate labourers come from the Madras Presidency and therefore outside the area of plague infection, the regulations now in force cannot prevent a plague refugee from joining a Kangany's gang of coolies at Tuticorin and thus obtain his passage to Colombo without the fifteen days' stay there. The passengers and crew of a ship are examined by the Medical Officer before leaving Tuticorin. This examination is a hurried one, as over 150 deck passengers have to be examined in about an hour. This is the only examination that the so-called cooly emigrant has to undergo.

* * * * *

ORDER—No. 861 M., dated 10th April 1897.

Paragraph 32 of Dr. Fernando's report received with the second letter read above will be communicated to the Collectors of Tinnevelly, Madura and Tanjore with the request that, as indicated in G.O., No. 629 M., dated 19th March 1897, they will continue to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

2. The liberal offer of the Ceylon Government contained in the second letter regarding the remuneration of the Health Officer at Tuticorin cannot, of course, be entertained. If, however, that Government deputes a medical officer to Tuticorin as proposed in its telegram of the 19th March 1897, he may be usefully employed in helping the examination of the emigrant coolies for the estates in the Colony, no person being shipped as an estate cooly for Colombo who is not able to satisfy the examining officer that he comes from a non-infected area and has not been within an infected area for fifteen days previous to his embarkation.

3. The following letter will be despatched to the Colonial Secretary, Colombo:—

* * * * *

(True Extract.)

Secretary to Government.

To the Collector of Tinnevelly.
" " of Madura.
" " of Tanjore.
" Marine Department.

Exd. A. Rait.

Government {1897} of Madras.

LOCAL AND MUNICIPAL.

Copy for approval.

Recd. } 1897. Enclosures

Regd. } 1897. Spare copies

Please State if

Sent to Govt.

29/4/97

Letter, No. 862 M., 10th April 1897.

APRIL.

Bubonic Plague.

Informing the Government of Ceylon that a copy of paragraph 32 of Dr. Fernando's report in connection with the — has been communicated to the Collectors of Tinnevelly, Madura and Tanjore with instructions that they should continue to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

LOCAL AND MUNICIPAL DEPARTMENT.

LETTER—TO

THE COLONIAL SECRETARY, COLOMBO.

SIR,

I am directed to acknowledge with thanks the receipt of your letter of the 22nd ultimo, enclosing a copy of Dr. H. M. Fernando's interesting report on his recent visit to Bombay in connection with the bubonic plague.

2. I am to state, for the information of His Excellency Sir West Ridgeway, that the Governor in Council has communicated a copy of paragraph 32 of Dr. Fernando's report to the Collectors of Tinnevelly, Madura and Tanjore with instructions, in continuation of those already issued, requiring them to continue to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations in the guise of Madras coolies. With regard to this matter, I am to say that, if in accordance with the arrangement indicated in my telegram of the 31st ultimo in reply to yours of the 19th idem, a Colonial officer is deputed to Tuticorin, His Excellency the Governor in Council will be glad of the assistance which he may be able to afford in examining persons embarking as Madras emigrant coolies for Ceylon in view of ascertaining whether they really are such or are persons from infected areas seeking to evade the regulations in that guise.

I have the honour to be,
Sir,
Your most obedient servant,

Secretary to Government.

FORT ST. GEORGE,
10*th April* 1897.

Ext. A. Raitt.

LOCAL AND MUNICIPAL DEPARTMENT.

Papers to be read in Proceedings:—

Again G.O., dated 19th March 1897, No. 629 Mis.

Current No 311-M of 1897, dated 20th March 1897 from the Colonial Secretary, Colombo
Current No 312-M of 1897, dated 22nd March 1897 from the ——— do ———

Read Mis Order No 861 M 10-4-97

Paragraph 32 of Dr Fernando's report received with the second letter read above will be communicated to the Collectors of Tinnevelly Madura and Tanjore with the request that the most careful precautions may be taken at the ports in these districts to prevent persons from infected areas evading the plague & quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

as indicated in G.O. No 629 19-3-97 they will continue to take

2. The liberal offer of the Ceylon Government contained in the second letter regarding the deputation of a Health officer at Tuticorin for services which may be rendered by him in this connection can not be accepted, nor can be found time for this work. If however that Government deputes a Medical officer to Tuticorin as proposed in the telegram of the 19th March 1897, he may be usefully employed

keeping on the
inspection and passing the
emigrant coolies for the estates in
the Colony, ~~and his authority~~
~~will be confirmed by a regu-~~
~~lation issued under the Epidemic~~
~~Diseases Act, declaring that~~ no
person shall be shipped as an
estate cooly for Colombo who is
~~able to~~
~~does not~~ satisfy the ~~Colonial~~ Ceylon ~~Emigration~~
~~Inspecting~~ Officer that he ~~does not~~ comes
from an infected area ~~or~~ has
not been within ~~such~~ an infected area
for fifteen days previous to
his embarkation.

3. The following letter
will be despatched to the
Colonial Secretary, Colombo.

Letter. No. 862 Medl 5/4/97

From

The Secretary to Government
Local & Municipal
Department.

To

The Colonial Secretary
Colombo.

Sir,

I am directed to acknowledge
with thanks the receipt of your letter of the 22d ultimo enclosing a copy
of Dr. [illegible] Fernando's interesting
report on his recent visit to
Bombay in connection with

the bubonic plague, forwarded
~~with your letter of the 22nd March~~
~~1897,~~ and to state that instruc-
~~have been issued~~ to the Collectors
of Tinnevelly, Madura and Tanjore to
~~take every precaution to prevent~~
~~the evasion of coolies therein~~
~~referred to.~~

2. In reply to your
letter of the 22nd March, 1897 and
in continuation of my telegram
of the 31st idem, I am to
forward for the information
of the Government of Ceylon
a copy of the Proceedings
of this Government No
dated

(From orders)

V.P.
7/4/97

His Excellency has been pleased that
the Govt. have since communicated
a copy of para 32 of Dr. Fernando's
report to

with instructions, in continuation of
those forwarded a copy of
Govt Proc to enclose
Dr. when the matter can be
replied [illegible]

those already issued, ~~to continue~~
requiring them to continue to
take the most careful precautions
at the ports in their districts to
prevent persons from infected
areas evading the plague &
quarantine regulations in the
guise of Madras coolies ~~emigrating~~
~~for Ceylon~~. With regard to this matter
I am to say that if in accordance with the arrangement indicated in
~~my telegram of the 30th ultimo in reply to yours of the 19th idem a~~
~~Health Officer at Tuticorin~~ Colonial Surgeon is deputed ~~by~~ to
~~the Government of Ceylon and that the Health Department suggests~~ that the Govt. will be glad
to ~~ask~~ the Govt. of Ceylon to depute
Tuticorin ~~Health Officer~~ himself
~~to attend to the matter~~ for the examination
~~of~~ persons embarking
as emigrant coolies for Ceylon
~~Madras coolies~~ at the ports
~~proceeding~~ ~~to Ceylon~~
~~and~~ of all persons from
~~infected~~ ~~districts~~ depots ~~and~~ ~~to~~
infected areas seeking
~~Madras~~ to evade the regulations in
that guise.

The Collector of Tinnevelly
" " Madura
" " Tanjore
.. Marine Department with
Notes and Connected papers.

Dy No 15/4/97

Dr. Thomas Lewis, Health Officer
W. Lewis
Health Officer

LOCAL AND MUNICIPAL DEPARTMENT.

Again G.O., dated 19/3/97 189 , No. 629 Mis

Current No. 1311 of 189 , dated from the Govt of Ceylon

Current No. 1312 of 189 , dated from the " "

Hon the Colonial Secretary
H.E. the Governor

FOR ORDERS.

11/4.

On the 16th March Ceylon telegd. to us that "persons from infected localities travel from Tuticorin a suppressed to Ceylon as immigrant coolies" We informed the Govts of Tinnivelly, Madura, & Tanjore & warned them that the thing must be stopped (Govt. 19.3.97 no 629 Mis)

What probably led Ceylon to address us was the report of Dr Fernando which is in Current no 1312. Dr Fernando is the officer whom that Govt sent to Bombay to report on the plague. In para 32 after detailing the precautions taken at Tuticorin with reference to passengers from infected areas he writes:—

"On the other hand no such precautions exist in
"the case of estate labourers. These can obtain tickets

without any reference to the Port Med. Off.r, from the Agent of the B.I.S.N.Co.r for the passage to Colombo, on the bare statement of a Kangani that they are estate coolies. Taking for granted that all estate labourers come from the Madras Pres.y & therefore outside the area of plague infection, the regulations now in force cannot prevent a plague refugee from joining a Kangani's gang of coolies at Tuticorin & thus obtain(ing) his passage to Colombo without the 15 days' stay there. The passengers & crew of a ship are examined by the Med. Off.r before leaving Tuticorin. The exam.n is a hurried one as over 150 deck passengers have to be examined in about an hour. This is the only exam.n that the so-called cooly emigrants has to undergo"

This also probably explains their desire to have one of their own Medical Officers at Tuticorin. If so, it is a pity they did not state definitely that it was [illegible] either this cooly traffic that caused them particular anxiety. I do not see any reason why they shd not send a Med. Officer to deal with the estate coolies.

In current no 1311 will be found

* G.O. no 756 d 31/3/97

a letter of the 20th March from Ceylon in which, in continuation of their telegram of the 16th March about the cooly traffic, they inform us that they are prepared to remunerate the Health Officer for the services which he may render "in ~~arranging~~ this connection" i.e. as I take it, in investigating whether the ~~coolies~~ passengers who travel as estate coolies are actually coolies from an uninfected area. Of course no Port of Ceylon is to send over an officer with reference to our letter of 31st March (G.O. no 756), he might be usefully & unobjectionably employed in testing the cooly rolls. He wd appear in a recognized position*; & we might confirm his authority by a Regulation or rule declaring that no person shall be shipped as an estate cooly for Colombo who does not satisfy the Ceylon (Med.) officer that he does not come from an infected

remuneration cd be accepted, nor cd the Health Officer find time for the work ~~these~~ persons

* i.e. we have always given facilities to Ceylon officers to examine & pass intending emigrant coolies before they leave this country for the estates in the colony.

I send no form in this case

area, or has not been within such area for 15 days prior to his embarkation.

If this suggestion is accepted we may inform Ceylon in continuation of our telegram of the 31st March.

WB

The relevant para 32 of Dr. Fernandos' report ~~should~~ should be sent to the Collectors of Tinnivelly (Madura) & Tanjore with instructions that every precaution must be taken to prevent the evasion referred to.

S-B
2/4/97

Yes & thank Ceylon for this interesting report

WB
3/4/97

A.S.H 6.4.97.

[1, & 30/200—28-10-96]

Local & Munl. (1897) Department.

CURRENT No. 1311/97

For Orders

On receipt of the telegram referred to in para 1, the necessary orders were issued to the Collectors of Tinnevelly, Madura and Tanjore and the Ceylon Government was informed of this - Vide G.O No. 629 mis. dated 19th March 1897. As the examination of emigrants has to be conducted by the Officers of this Government with reference to the notification of the Government of India printed in G.O No. 442m dated 9th March 1897, there is no need for their charges paid for it by the Ceylon Government as proposed in para 2.

F.R
26/3/97

Intimate that newspaper extract about Emigrant coolies at Tuticorin

F.R

From The Colonial Secretary

Colombo.

No.

Dated 24-3-1897

Received 25-3-1897

Registered 25-3-1897

Enclosures

Spare copies

SUBJECT.

Stating that the Ceylon Govt. will be prepared to remunerate the Health Officer for certifying that Immigrant coolies are actually coolies.

BACK PAPERS.

G.O.	No.	Department	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

LOCAL & MUNICIPAL DEPT.
CONFT No. 1311/h

Colonial Secretary's Office,

Colombo, 20 March, 1897.

No. .....

CHIEF SECRETARY
25 MAR 1897
GOVERNMENT OF MADRAS

Sir,

I am directed to inform you that I despatched the following Telegram to your address on the 16th March 1897:-

"Plague Commission report persons from infected "localities travel from Tuticorin or Negapatam to "Colombo as Immigrant coolies- (Insuisti) Health "Officer should satisfy himself (Bicorden) that they "are actually coolies".

2. I am to state that this Government will be prepared to remunerate the Health Officer for the services which he may in this connection render.

I am, Sir,

Your Obedient Servant,

for Colonial Secretary.

The Hon'ble,

The Chief Secretary to Government,

Fort St. George - MADRAS.

367-333-417.

[2000-2-97]

Local & Munl. (1897) Department.

CURRENT No. 1312 R

Nil

Order

Recorded.

V R
24/3/97

From

The Colonial Secretary
Colombo

No.

Dated 22-3-1897
Received 25-3-1897
Registered 25-3-1897
Enclosures 2
Spare copies

Note - only one spare copy is available

SUBJECT.

Forwarding for information copy of report made by Dr.H.M. Fernando on his recent visit to Bombay in connection with the Bubonic plague.

Copy to the Surg: Genl.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

LOCAL & MUNICIPAL DEPT.
CURRENT No. 1312/97

Colonial Secretary's Office,
Colombo, 22 March 1897

No. .....

CHIEF SECRETARY
25 MAR. 1897
GOVERNMENT OF MADRAS

Sir.

I am directed to forward for the information of the Government of Madras, the enclosed copy of a Report made by Dr H. M. Fernando of his recent visit to Bombay in connection with the Bubonic Plague.

I am, Sir,
Your obedient servant

for Colonial Secty

The Honble
The Chief Secretary
to the Government
Fort St George.
Madras

THE BUBONIC PLAGUE IN BOMBAY.

Dr. H. M. FERNANDO to the PRINCIPAL CIVIL MEDICAL OFFICER AND INSPECTOR-GENERAL OF HOSPITALS, Ceylon.

Colombo, March 11, 1897.

SIR,—IN accordance with the instructions received from Government through you, I proceeded to Bombay on the 10th February last with Mr. F. H. Price for the purpose of reporting on the epidemic of bubonic plague now raging in that city. On my arrival in Bombay I called at the Secretariat and obtained from the Assistant to the Secretary to the Government of Bombay a letter to the Municipal authorities. This enabled me to obtain all the available information from the Health Officer and the other officials now engaged in carrying out sanitary and other measures in connection with the prevention of the epidemic. I also visited the Petit Laboratory, where Mons. Haffkine is conducting the manufacture and the inoculations of his "plague prophylactic." The Surgeon-General of the Bombay Presidency kindly introduced me to the officers in his Department who were either connected in the actual treatment of plague-patients or were engaged in the study of the disease. Thus I was enabled to visit the European General Hospital, where European and Eurasian patients suffering from plague were under treatment, and the Grant Medical College Laboratory, where Dr. Child was conducting microscopic and bacteriological investigations on plague bacilli.

During my stay in Bombay I visited the following places and institutions for the purpose of study and information, viz., (1) the Arthur Road Plague Hospital; (2) the Parsee Fever (Plague) Hospital; (3) the European General Hospital; (4) the Petit Laboratory and Grant Medical College; (5) the plague-stricken districts of Parel, Byculla, Sion, Mahim, and Worli, with the Municipal Medical Officers in their rounds of inspection.

I left Bombay on the 21st February, and on my way back to Ceylon I stayed a few days in Madras, where I obtained information from the President of the Madras Corporation and the Health Officer as to the arrangements they had made against a probable invasion of the epidemic into Madras.

After a careful study of the disease from the information thus obtained and from the information available in the current literature of the disease, I have the honour to submit the accompanying report.

I am, &c.,

H. MARCUS FERNANDO, M.D., B.Sc.

REPORT on the Epidemic of Plague, or Bubonic Fever, now raging in Bombay, and its Prophylaxis and Treatment as carried on in that City.

Commencement of Plague in Bombay and its course in Mandvee.—The first official mention of the occurrence of plague in Bombay was when Dr. Viegas brought to the notice of the Sanitary Committee of the Municipal Corporation that the disease had been observed by him to prevail in the Mandvee District for over a fortnight on the 23rd September last. It is now asserted that cases had occurred in August, but of such occurrences there is no definite information. Before the end of September, however, a number of cases were brought to the notice of the Municipal authorities, and the first 18 or 19 cases thus notified all occurred in a big "chawl," or dwelling-house, inhabited by over 600 inmates. All the persons who were attacked by the disease in this house were coolies employed in the grain stores in the neighbourhood of the docks. In these stores, before the outbreak of the epidemic, a great mortality amongst the rats had been observed. Up to the end of November, although a large number of cases of plague occurred in the Mandvee District, the other wards of Bombay were not infected, and except a few imported cases no great outbreak was known outside Mandvee. From the beginning of December the epidemic spread rapidly into the other wards of Bombay, and soon not only did the epidemic involve almost the whole of the town, but also settled in a virulent form in Bandora, a seaside suburban township immediately outside the city, and spread to Kurrachee, a seaport in constant communication with Bombay. The spread of the epidemic from ward to ward in Bombay and to the outlying suburbs and Kurrachee can only be looked upon as having taken place by human intercourse. An infected person leaving an infected house goes to a non-infected district. There he develops the disease and infects several others, who in their turn flee to other healthy districts and develop the disease, forming so many more centres of infection. Thus plague settles down in a town. The Municipal authorities are able to trace the spread of plague from Bombay to several of the outlying suburbs as described above.

2. *Its spread to the other Wards of the City.*—By the middle of December the epidemic had attained alarming proportions, creating considerable panic, and interfering with the trade of this great port. The inhabitants of the city ran away from their houses in large numbers both by land and sea. By January the total death-rate from all causes had amounted to over 200 per day, of which nearly half were reported to be deaths from plague. This high death-rate has continued until now, without any marked or continued remissions. At present the Mandvee District, where the plague first appeared, and the districts included in Wards B and A (see map of Bombay annexed) are almost free from the epidemic, and the parts where the epidemic is raging most virulently at present are the outlying suburbs of Parel, Sion, Mahim, and Worli, which were the last to be attacked, and Ward E (Byculla).

3. *Its present intensity and death-rate.*—During the week ending on February 20 the daily average number of cases of plague reported amounted to 122 with 121 deaths, and the daily total mortality from all causes to 250. Over a thousand persons were leaving the city per diem during this week. The records are very defective as to the cause of death, and several deaths from plague undoubtedly are returned under fever and other heads. A fairer index of the deaths from the epidemic can therefore only be gauged, if we can deduct from the death-rate from all causes the average death-rate of the city from causes other than the plague. Before the onset of the epidemic the average death-rate per diem seems to have been about 70 for a population of about 900,000 inhabitants. At present a third, or even more, of the inhabitants have left the city, and accordingly 50 or even less may be looked as the daily death-rate of Bombay from causes other than plague. From this computation the mortality from plague amounts to over 200 per day—a number much in excess of the daily returns. From the commencement of the epidemic up to 20th February nearly 7,000 cases with 5,500 deaths have been reported. Perhaps 18,000 deaths would be nearer the truth. At Kurrachee, with a population of little over 100,000, over 30 deaths per day are reported, and already 3,300 cases with 1,200 deaths have been recorded. The epidemic has spread to Poona, where from four to five cases occur daily, but these are not fresh importations from Bombay, but are of local origin, showing that the malady has already taken its hold of the town. Already 200 cases have been reported with 180 deaths there. In Bandora, with a population of only about 20,000, the epidemic is raging very intensely. It has appeared in Bassein and in several other small villages around Bombay.

4. *Sanitary measures at present in vogue.*—At the commencement of the epidemic in Mandvee, owing to the opposition on the part of the native inhabitants of the town, no systematic attempt seems to have been made to compel the treatment of plague-stricken patients in special hospitals, and the compulsory segregation of persons who had exposed themselves to the infection. The important sanitary measures now undertaken by the Municipal officers to check the epidemic are the following, viz. :—

(1) The disinfection of infected houses with sulphur dioxide gas or chlorine.
(2) The limewashing of the walls, ceiling, and floors when possible of infected houses and rooms.
(3) When the floors are earthen they are thoroughly dug up and disinfected with chloride of lime.
(4) The roof is taken up in places to send in sunlight and air.
(5) All the rubbish and contaminated clothing are burnt.
(6) Furniture and other articles that cannot be burnt are disinfected with phenyle or carbolic acid.
(7) Dead rats are carefully looked for and burnt up.
(8) Houses which are of mud and cadjan, when considered unfit and insanitary, are completely burnt down.
(9) When a case of plague occurs in a shop or store the whole store is thoroughly disinfected, and the stores and grain are exposed to the sun for a day or two. When supposed to be contaminated they are burnt up, and business is only permitted to be resumed after a lapse of a period of quarantine.
(10) Besides the disinfection of infected houses a systematic disinfection of all the houses in badly infected areas and districts of the town is carried on.
(11) In districts where the epidemic prevails most virulently house-to-house visitation is carried on to check concealment of cases.
(12) The demolition of insanitary houses in the city is being taken in hand systematically since the regulations were drawn up under the Epidemic Diseases Act of 1897.

5. *"Chawls," and their overcrowding.*—One of the peculiar features of Bombay is the large number of dwelling-houses that exist in the city, called "chawls," for coolies and labourers. These chawls are supposed to accommodate from 100 to 1,000 inhabitants each, and vary from two to four stories. The majority of these buildings are badly ventilated, dark, and dirty. Overcrowding is a common feature. The Corporation having supplied water on a liberal scale, a considerable amount of dampness prevailed in these houses, as the inhabitants had permitted the water to wet the floors of the living rooms. This has now been partially remedied by diminishing the water supply. At present the sanitary condition of these chawls, thanks to the vigilance of, and the wholesale disinfection and cleaning undertaken by, the Municipal Corporation, is satisfactory. No dirt is allowed to accumulate, and gullies and drains are kept clean.

6. *The Plague Hospitals.*—For the treatment of patients suffering from the bubonic plague the following institutions exist at present in Bombay, viz. :—

7. *Arthur Road Hospital*, provided by the Municipal Corporation under the supervision of Dr. Weir, the Health Officer of Bombay, and Dr. Chowksy, the Medical Superintendent.—This building is of a temporary nature, and consists of three long sheds, each of which forms a ward. The floor is of earth, intended to be renewed from time to time, but on account of continued use now for over five months is very dusty. The roof is supported by pillars, and the central ward is partitioned off from a narrow verandah by tat frames. There is ample provision for circulation of air, and as a dry-weather hospital it is satisfactory. Two wards are used for acute cases and one ward is used for convalescent patients. The wards are now almost full and contain about 120 patients. The authorities have had considerable difficulty in obtaining trained nurses and attendants until recently. Three trained English sisters from the Sir Jamsetjee Jeejeebhoy Hospital now supervise the nursing. Out of over thirty attendants, &c., who have been associated in the treatment of the patients here, only one native attendant has so far contracted the disease. The death-rate is about 60 per cent. of the number treated in this institution.

8. At the *European General Hospital* the infectious disease wards and specially built wards of a temporary nature with mat walls and cadjan roof are utilized for the treatment of patients (European and Eurasian) who are afflicted with bubonic plague. This institution is under the charge of the Medical Officers of the Indian Medical Service. A special Medical Officer of the Service is in charge of the plague wards. About 19 patients are under treatment here, and over 50 cases had been admitted up to 18th February. The death-rate is 44 per cent.

9. The leading citizens of the various communities of Bombay have come forward to supply out of public subscriptions hospital accommodation for patients suffering from plague, as a further inducement to encourage hospital treatment. The largest and most successful institution of this kind is the *Parsee Fever Hospital*, which is chiefly due to the initiation, enterprise, and zeal of Dr. K. N. Bahardurji, who has not only undertaken the management of the hospital, but also the treatment of the patients in it.

In this institution, unlike all other plague hospitals now in operation, the patients are treated in a substantial permanent building. A commodious two-storied dwelling-house in Parel has been engaged, and each room forms a ward containing from four to six beds; each bed is further separated from the adjoining bed by low screens, thus ensuring privacy. The upper floor is utilized for convalescents and the lower one for new admissions. A horse ambulance is in readiness at the hospital to bring in patients, and the institution is in telephonic communication with the city. A qualified Resident Medical Officer resides on the premises, and the nursing is performed by a trained nurse, with three native female probationers who have now acquired great proficiency. Here, too, great difficulty has been experienced in obtaining nurses and attendants, and partly on this account, and partly to encourage patients to come into the hospital more freely, one or even two of a patient's relatives are permitted to remain in hospital for nursing the patient. The death-rate here is about 55 per cent. Neither the attendants nor the relatives nursing the patients have so far contracted the disease.

10. *The Hindu and other Hospitals.*—The members of the Hindu community have established a temporary hospital for the Hindus. In this institution about eight patients were under treatment. The Port Trust authorities have got up a hospital for their employés and the European residents another one for their domestic servants. From four to six patients are under treatment at each of these institutions. In all these hospitals there are not more than 190 patients under treatment, with a death-rate of 200 from plague at least. 250 fresh cases may safely be reckoned to occur daily; so that if compulsory treatment of the sick had been undertaken in Bombay, taking an average stay of at least ten days for each patient in hospital, accommodation for at least 2,500 patients should have been provided in hospitals. The actual accommodation in operation is less than a tenth of this amount.

11. *The Camps of Segregation.*—Several camps of segregation have been put up. By the Municipal Corporation for the general public, by the Government of Bombay for the soldiers, and by the various communities for the members of such communities. These camps are not however popular. Only a few of them are occupied. These are all temporary mat and cadjan buildings run upon available open places both within and in the neighbourhood of the city. When the walls of the camps do not reach from the floor to the roof, natives object to occupy them on the ground of chills and draughts at night. One great advantage which Bombay enjoys for the speedy erection of these temporary hospitals and camps is the dry weather which has prevailed since August last, and a continuance of which is expected for another three months. The roofs of most of these buildings are far from water-tight, and one tropical shower will render a large proportion of these structures uninhabitable.

12. *The outbreaks at Sewree and Kamatipoora, and Disinfection.*—Mr. C. C. James, the Drainage Engineer of the city, who personally supervises a great deal of the disinfection, kindly placed at my disposal the following interesting information.

(*a*) In *Sewree* village, an outlying suburb of Bombay, the epidemic broke out in December last. Its total population was 600, 200 of whom fled and 400 remained in the village until the epidemic spent itself out. The detailed record of the appearance of the cases, which were watched very closely in this isolated and small hamlet, is as follows :—

Group I. :—		
December 15	1	case occurred
Do. 16	1	do.
Group II., after an interval of six days :—		
December 22	1	do.
Do. 23	1	do.
Do. 25	1	do.
Group III., after an interval of four days :—		
December 29	1	do.
Do. 31	2	do.
January 1	3	do.
Do. 3	1	do.
Do. 4	2	do.
Group IV., after an interval of seven days :—		
January 11	1	do.
Do. 13	4	do.
Do. 14	3	do.
Do. 17	3	do.
Do. 19	1	do.
Do. 20	3	do.
Do. 21	3	do.
Do. 22	2	do.
Do. 23	4	do.
Do. 25	1	do.
Do. 26	1	do.
Do. 27	5	do.

In all 45 cases were reported, all of which ended fatally. Disinfection of the whole village was commenced on the 27th January, and was completed on the 30th January. After the 27th only one case was reported. Dead rats were not noticed in this village, although carefully looked for. These occurrences arrange themselves into four groups with intervals of from four to seven days between

them. The two first cases have been traced to importation from the infected area of Central Bombay, and the conclusion is irresistible that in Sewree the epidemic spread from group to group through human agency until the fourth group of cases was reached, when the disease became widespread over the village. The epidemic ceased suddenly on the first day the disinfection of the village was undertaken, and it is clear it was not in consequence of the disinfection. By that time the epidemic had spent itself out in this limited community. In this epidemic out of 400 people who remained in the village and were freely exposed to the contagion, it is interesting to note that only 45 deaths occurred, and perhaps not more than 50 cases. I contend that here we have some data to make an approximate quantitative estimate of individual susceptibility to this disease when exposed freely under the ordinary circumstances of life. Fifty cases out of a population of 400 gives us a percentage of 12·5.

(*b*) *Kamattipura Outbreak.*—In Kamattipura, a division of Ward E (see map), one of the most thickly inhabited and insanitary parts of Bombay, up to 24th December last 191 cases of bubonic plague had been reported. This district contained a population of 30,000 spread over an area of 340,000 square yards. Thorough and systematic disinfection and limewashing of all the houses of this division were undertaken by the Municipality on the 25th December. The occurrences of plague from that day are as follows :—

During week ending 31st December, 15 cases.

During week ending 7th January 132 cases occurred : 32 cases in houses which had been limewashed and disinfected and the rest in undisinfected houses ; by this time only one-third of the houses had been disinfected.

During week ending 15th January 89 cases occurred, 42 of which were in limewashed houses. Over half of the houses had been disinfected.

During week ending 21st January 66 cases occurred : 39 in limewashed houses. About 60 per cent. of the houses had been limewashed.

During week ending 29th January 27 cases occurred, 17 being in disinfected houses. About 70 per cent. of the houses had been limewashed by this time.

During week ending 5th February 25 cases occurred, all in disinfected houses, as the whole district had been completely limewashed and disinfected during this period.

13. It is clear from the above figures that limewashing and disinfection had made no impression on the progress of the epidemic. Mr. James has in his possession an interesting map of this district with the ground plan of the houses. In this map the infected houses have been carefully noted. On examining it, it is striking how irregularly the infected houses are distributed ; although the whole district is dotted freely with the infected houses, yet considerable free spaces exist here and there free from infection.

Since the commencement of the epidemic the largest number of cases reported from a single house or chawl so far is twenty-four. This occurred in a chawl of over 200 inhabitants. It is curious that here, too, we obtain 12 per cent. as the susceptibility on free exposure to the contagion.

14. *The Epidemic at Byculla Jail.*—The outbreak in the Byculla jail is also very instructive. This institution is under the medical supervision of Surgeon Lieutenant-Colonel Waters, who had taken with great energy and perseverance several sanitary precautions against an invasion of the epidemic into the jail. In spite of all these precautions plague broke out on the 23rd January, and raged till 6th February. Out of a population of 321 prisoners 32 occurrences of bubonic fever took place, with 18 deaths. Thus about 10 per cent. of the inmates exposed to the contagion contracted the disease.

Apparently the inmate of the well-lighted, limewashed, and disinfected Byculla jail enjoyed no greater immunity from the ravages of this disease than the poor villager of a low-roofed mud dwelling of Sewree, or the cooly resident of an overcrowded, ill-lighted, and foul-smelling "chawl" of Central Bombay.

The Clinical Symptoms of the Disease.

15. The bubonic plague manifests itself in man with sudden fever, which may be ushered in by chills, and occasionally rigors. The fever may go up to 102° or 103° F. This initial fever subsides to 100° or even lower in two to three days, but in a number of cases it takes four or five days to attain its maximum. Sometimes a second rise of temperature takes place on suppuration of buboes. Quinine and other antipyretics have little or no effect on the course of the fever. Hyperpyrexia is not a common feature, although cases where the fever runs up to 107° or even 108° have been met with. Headache exists from the commencement, and sometimes is very persistent and unbearable. The respirations are hurried with the onset of the fever, and as far as the Bombay cases are concerned a soft, quick, and rapid pulse exists from the very commencement. The tongue is covered with white fur, but is generally moist. In the majority of cases a painful enlargement of a superficial gland makes its appearance with the fever or within the first day of its onset. The glands most often involved are the femoro-inguinal, cervical, and axillary. The inflamed gland gives a soft boggy feeling to the touch, due to sanguineo-serous infiltration of the surrounding cellular tissues. Although only one set of glands is generally involved, cases are met with occasionally where two or more sets are inflamed. The seat of the gland implication seems to be a very variable one : the submaxillary, sublingual, and even the poplitcal gland is known to be the only one affected in some cases. It has been stated that when a scratch or skin wound exists the poison enters the system through such an opening, and under these circumstances the nearest lymphatic glands get involved. Such a connection has not been traced in the Bombay cases.

Cerebral symptoms form a leading feature of this disease. Restlessness, sleeplessness, delirium, and even mania may exist. Convulsions are not common. An injected conjunctiva, persistent headache, and vomiting with hurried respiration or Cheyne-stokes respiration are considered to indicate meningeal inflammation. These are unfavourable and fatal symptoms. Strabismus and conjugate deviation of eyeballs have been noticed. Muscular spasms are also seen occasionally. Subcutaneous extravasations of blood and patechiae are common, but hæmorrhages from the bowels, stomach, and vagina though met with are far from common.

Constipation at the onset of the disease is a very common feature. In some cases the bowels act freely, and this is considered a good symptom, although persistent diarrhœa with mucous is of serious import.

The quick and soft pulse which is met with at the onset may become soon a very small, thready, running, or an intermittent one. Sudden heart failure with fatal syncope is a remarkable feature of the disease, liable to supervene at any stage of it.

The blood rapidly loses its hœmoglobin, and its coagulability is also diminished. Spleen shows slight enlargement occasionally, but acute hepatitis is not common. The appearance of a plague-stricken patient is characteristic. Dr. Lowson describes it as a "mixture of anxiety, cyanosis, and dyspnœa." The fear of impending death and mental prostration which the majority of patients display is one of the chief difficulties of treatment.

Respiratory complications may also be met with. Bronchitis is common, but cases with hypostatic pneumonia and œdema of lung also occur. Some authorities have described cases of plague without external buboes, where broncho-pneumonia is the only feature, but in such cases the patient's general condition is much more grave than can be accounted for by the bronchitis or slight pneumonia which is present.

In cases where the fever persists, coma or the typhoid state may be developed. Carbuncular ulcers and abscesses other than glandular are of common occurrence. Ulcers of cornea with hypopion are occasionally met with.

If a diminution of the fever takes place in five or six days after the onset of the disease, with a concomitant improvement in the pulse and respiration, rapid convalescence ensues. On the other hand, with prolonged suppuration improvement is slow and tardy.

16. *Treatment.*—Although many drugs have been tried, no medicinal specific has so far proved successful in the treatment of plague. The treatment pursued in Bombay is on general lines, and is chiefly symptomatic. When constipation occurs a calomel purge at the commencement is given with great benefit. Headache, delirium, and restlessness are best treated with continued applications of an ice bag to the head. If fever is high, a wet pack answers well for hospital cases. Depressant antipyretics should be avoided, as cardiac weakness is a common concomitant. Ammonium bromide for the sleeplessness is a favourite drug. For symptoms of cardiac failure nothing seems to have done so much good in Bombay as hypodermic injections of strychnine with or without digitalis

The bubonic swellings are not freely incised at the commencement of the attack, as free incisions lead often to extensive suppuration. At the Arthur Road Hospital the buboes are injected at the onset of an attack with liquor iodi twenty minims and acid carbolici five minims. When suppuration has occurred the pus is let out by a small incision if possible, and the wound is dressed antiseptically with iodoform, oil of eucalyptus, &c. At the Parsee Hospital Dr. Bahadurji, even before suppuration has occurred, makes a small incision into the bubo where the temperature is keeping up owing to acute pain and tension of bubonic inflammation. Soothing applications and fomentations of belladonna and opium are applied to painful buboes, but general poulticing is not looked upon with favour.

The native patients are fed chiefly on milk during the acute stage of the illness. Constant feeding in small quantities is necessary to keep up the strength of a patient. Rum from four to six ounces is the stimulant given. Mixtures containing digitalis, ammonia, nux vomica, and ether are often prescribed. In the European General Hospital beef-tea is given freely with the milk.

17. *Relapses and second attacks: their frequency.*—It is generally held that second attacks of plague occur in the same individual. In Bombay up till now three cases have been re-admitted to the Arthur Road Hospital. I was not able to obtain full particulars of these cases, and in one case I learn that a month had elapsed between the two admissions, which is believed to prove that this was a second attack and not a relapse. Only one case has been re-admitted to the Parsee Fever Hospital, and this the Medical Officer is of opinion was a case of relapse, and not a second attack. The patient had exerted himself before he was completely well, when another set of glands showed signs of suppuration with fever.

18. *The Incubation Period.*—The incubation period of the disease has been estimated by several competent observers to be between two and seven days. Dr. Lowson, in his report on the Hongkong epidemic of 1894 to the Government, mentions a case of a prisoner who developed a bubonic swelling nine days after incarceration, but he had fever for over two days before the swelling appeared, and hence the incubation period here too should be reckoned as seven days.

19. *The Plague Bacillus.*—In June, 1894, during the Hongkong epidemic, Dr. S. Kitasato, of Tokyo, discovered a bacillus in the blood, gland contents, and fœces of patients suffering from bubonic plague. The characters of the plague bacilli, as described by Professor Kitasato, are as follows :—

They have capsules, and the poles are more easily stained than the middle part. Mice inoculated from spleen and blood died in two days with œdema around the point of inoculation, and the same bacilli reproduced in the blood and internal organs. The colonies in tube cultivations have a globular appearance, and are like glass wool. They grew best at a temperature of 28° to 30° C. The bacilli die on desiccation and exposure to the sun after four hours.

In Bombay the dust of houses, where cases of plague had occurred, has been examined by several competent observers with negative results. Dr. Yersin discovered bacilli, similar to plague bacilli, in the soil of an infected house in Hongkong, nine inches below the surface, but the identity has not been established, as he was unable to obtain virulent cultures from such organisms.

Dr. Cantlie, in his Address on Plague read before the Epidemiological Society in December, 1896, contends that a casual relationship exists between the true plague and a benign form known as *pestis minor*. Before this can be established, further evidence seems to be essential, especially as some cases, which Dr. Cantlie proposes to call *pestis ambulans*, have been described, in which it is held that the benign form had been transformed into the malignant type. In two cases of the so-called *pestis ambulans*, examined in Calcutta, bacilli have been detected of similar shape and form as the bacilli of plague, but cultures obtained from such organisms did not prove to possess any virulence. It is rash to conclude, from the similarity of shape alone, the identity of a particular micro-organism to the bacillus of plague. Further, Professor Cunningham, a most competent observer, declares "that the bacillus found in the Calcutta cases is non-infective, and that probably it is not the same bacillus as that described by Kitasato in 1894."

20. *The Plague Prophylactic of Haffkine.*—Mons. W. M. Haffkine has been working in Bombay with great zeal and success at the preparation of (*a*) prophylactic culture of the virus of plague ; and (*b*) anti-toxin for plague, or what has been termed anti-pest serum.

On the 18th January last Mons. Haffkine made the following communication to the Municipal Commissioner of Bombay :—

I have the honour to communicate the following facts relating to the problem of protective inoculation of man against the plague. In the course of the present researches I have found different media which give rich cultures of the plague bacillus, permitting to cultivate them in abundant and concentrated quantities. The virulence of these cultures is shown by the fact that one or two minims are sufficient to communicate certain death to the largest rodents. The destruction of the bacilli in the culture by delicate processes, such like the addition of essence of mustard, of very weak solution of carbolic acid, or by desiccation or by heat, deprives these cultures of their fatal properties, and makes a dose forty to fifty times bigger than the fatal one quite harmless to the animals. But, while depriving the cultures of their noxious properties, the above processes leave to them the power of protecting the system against fatal infection. Rodents which have had an injection of such cultures (with microbes killed in them), when infected five days after the prophylactic treatment, stand easily a dose of living virus, which would be fatal to ten other not protected animals. Having established these facts, I caused myself to be inoculated on the 10th of this month to observe the symptoms of this operation in man. The injection was done in the flanks with ten cubic centimetres of a culture in which the microbes were killed by heating during one hour at a temperature of 70° C. The symptoms produced consisted in pain at the seat of inoculation and in a rise of temperature. The highest point reached was 102° F. 8½ hours after the injection, which was accompanied by slight headache and feeling of faintness. The temperature got again normal twenty-four hours later. The bowels remained normal. The pain at the seat of the inoculation was mostly felt next morning while getting up from bed. It extended on the left side to the region above the Poupart's ligament, and on the right towards the axilla without reaching it. Since the next day the pain gradually disappeared. A small nodule remained at the seat of inoculation, but got rapidly absorbed. These symptoms show the perfect harmlessness of the operation. The observations made in the laboratory lead to the conclusion that the inoculation as described above will increase the resistance of man against the disease, but the extent of that protection and the modifications to be introduced in the method for the object of increasing that protection can be shown only by observation on man during the epidemic.

The most important facts to be solved by such observations are the following :—

(1) Which are the doses necessary to produce in man a marked increase of resistance against the conditions of infection as they exist in nature?

(2) How many days after the injection is the highest resistance reached?

(3) And how long the resistance will last?

Since the publication of the above letter the inoculation of the "plague prophylactic" has been systematically carried on in Bombay. Mons. Haffkine uses from 2½ to 3½ cubic centimetres to each adult as the first dose, and recommends a second or even a third inoculation to ensure a longer and more lasting effect. Recently the administration of 30-grain dose of calcium chloride has been tried with the inoculation of this substance, with a view of diminishing the local pain and duration, as Professor Wright, of Netley, has now established by a series of experiments that this drug has a remarkable effect in increasing the coagulability of blood in various toxœmic conditions. The results obtained from the administration of calcium chloride are so far very satisfactory.

21. *Inoculation of Plague Prophylactic at Byculla Jail.*—During the outbreak of the epidemic in the Byculla jail the prophylactic power of this substance was put to an interesting experimental test. Although the outbreak commenced on the 23rd January, inoculations with the "plague prophylactic" were not performed till the 30th January, when out of a total strength of 321 prisoners 148 elected to be inoculated and 173 remained uninoculated. From the 31st January to the 6th February, when the outbreak disappeared from the jail altogether, amongst the 173 uninoculated prisoners 12 cases of plague occurred with 6 deaths; and amongst the inoculated 148 only two cases occurred, both of which recovered. Mons. Haffkine's report on the above experiment is as follows :—

In view of the urgency of the case, I have the honour to communicate the following information concerning the outbreak of plague in Her Majesty's House of Correction, Byculla, where a considerable portion of inmates had volunteered to undergo the prophylactic treatment, and where the first observations on the effect of the treatment have been collected. Between the 23rd and 29th of January last 9 cases of plague have occurred in the jail, of which 5 proved fatal, the population at the beginning of the outbreak numbering 345 souls. The prophylactic treatment has been applied on the 30th January, 154 inmates out of a total 337 volunteering to be inoculated. In the forenoon of the day of inoculation 6 new patients have been admitted to the hospital suffering from plague; of these, 3 proved fatal. The inoculations were applied in the afternoon. One of the uninoculated, Keshow Amar Shanker, prisoner No. 672, had at the time of inoculation a painful gland in the left groin; two others, Abdul Karim, No. 1,356, and Govind Pandoo, No. 1,122, developed painful glands in the left axilla the same evening. These 3 cases have also proved fatal. On the first day after inoculation there were amongst 177 not inoculated prisoners 2 cases, of which 1 proved fatal; amongst 151 inoculated 1 case rapidly improved and recovered. On the second day after inoculation there was amongst 172 non-inoculated 1 case, which proved fatal; amongst the inoculated—*nil*. On the third day after the inoculation there was amongst 173 non-inoculated 1 case, which proved fatal; amongst 146 inoculated—*nil*. On the fifth day after inoculation there was amongst 171 non-inoculated 1 case, which proved fatal; amongst 146 inoculated—*nil*. On the sixth day after inoculation there was amongst 169 non-inoculated 1 case, which proved fatal; amongst the inoculated—*nil*. On the seventh day after inoculation there were amongst 169 non-inoculated 5 cases, of which 1 proved fatal; amongst 146 inoculated, there was 1 case, who is alive. Since the 6th instant no more cases have occurred in the jail. The following is a tabulated form of the occurrences :—From the 23rd to the 29th January, 1897, there were amongst the non-inoculated 9 cases, of which 5 proved fatal. The following day, 30th January, was the day of inoculation. On the forenoon and before inoculation there were 6 cases amongst the non-inoculated, of which 3 proved fatal; in the afternoon and after inoculation there were 3 cases amongst the inoculated, which proved fatal. From the 31st January, the first day after inoculation, to the 6th instant, the seventh day after inoculation, there were amongst the non-inoculated 12 cases, of which 6 proved fatal; in an average daily strength of 173 non inoculated; amongst the inoculated there were 2 cases, in an average daily strength of 148 inoculated. The experience gained by the observation in this jail tends to show: (1) that the injection of 3 cen. of the prophylactic seems to be sufficient to effect the desired protection, no repetition of inoculation being necessary to arrest the disease during an existing epidemic; (2) that the prophylactic is powerless to arrest the symptoms of plague already started, or which develop in a few hours, but there is the possibility of its influencing the disease in the inoculation period in individuals infected three or four days previously; (3) that the time necessary for the plague prophylactic to produce the protective effect is shorter than in any preventive treatment known, this period being in the anti-cholera inoculation of four days, in vaccination against smallpox of seven days, in the inoculation against anthrax of twelve days, in the inoculation against rabies of fifteen days, and in the present treatment, apparently less than one day; (4) the question remains open as to how long will the inoculated persons remain proof against the disease, and, therefore, in order to ensure the probability of a more lasting effect it is advisable to apply repeated inoculation, with doses higher than the above-mentioned. The above conclusions are temporary, and refer only to the teaching of the particular outbreak in question. There remains fully the possibility of the future experience compelling us to modify the above conclusions, though I am unable to abstain from expressing my hope that the general bearing of the results, as above detailed, will remain unshaken. The inoculations in the Byculla jail have been made possible owing to the enlightened efforts Dr. Murphy, Deputy Health Officer of the Ward; Brigade-Surgeon Lieutenant-Colonel Waters, Medical Officer in Charge of the Jail; Mr. Hall, Superintendent; and Dr. Kingz, on medical duty in the jail; and of a number of professors and students of the Grant Medical College, who volunteered to be inoculated in front of the prisoners in order to show them an example.

I have, &c.,

W. M. HAFFKINE.

Adjoined is a summary stating the total number of persons inoculated against the plague between the 10th January and the 16th February, 1897 :—Hindoos: Brahmans 40, other castes 210, total 250; Parsees 222, European Christians 124, native Christians 28, total 152; Mohammedans 74; Jews 6; grand total 704. Of this number 66 persons have been inoculated by Dr. Murphy, Deputy Health Officer, and 21 by Surgeon-Major Dimmock, Professor of the Grant Medical College; 170 were inoculated at the Byculla jail and 447 at the Petit Laboratory, Jamsetjee Jejeebhoy Hospital.

Bombay, February 16, 1897. W. M. HAFFKINE.

22. *Anti-pest Serum.*—Towards the end of the Hongkong epidemic Dr. Yersin of Annam succeeded in preparing an anti-toxin from immunized horses, which had a curative influence on patients suffering from plague. Dr. Yersin had no opportunity of testing his serum on an extensive scale at Hongkong, as by the time he was prepared with his serum the plague had died out, but it is reported that in Amoy twenty cases recovered out of twenty-two treated by him. Dr. Yersin has very recently arrived in Bombay with his serum. Mons. Haffkine has also been engaged in the preparation of a similar serum or anti-toxin in Bombay, and for months past several horses, cows, goats, and sheep have been undergoing the immunizing process at his hands at the Government lazaretto at Sewree. This process is long and tedious, and it takes several months before an animal can be immunized to supply an effective serum. On the 28th of February, however, Mons. Haffkine announced publicly that he had secured an effective anti-toxin from his immunized animals, and this method of treatment is now being put to the test at Bombay. The results so far are encouraging.

23. *Rats and the Plague.*—The connection between rats and the plague is a very intimate one. It is now definitely established that the rats suffer from an epidemic identical with the plague in man. The same micro-organisms are invariably met in diseased rats, but, on the other hand, rats seem to be very much more susceptible to the disease. In Bombay rats are so scarce now, that even for laboratory experiments they have to be obtained from provincial towns. In the Kumaon hills and in China an epidemic amongst the rats had been often noticed to precede an epidemic of plague amongst human beings. In Bombay, immediately before the outbreak of the present epidemic, rats in large numbers were found to have died in the granaries and warehouses in the neighbourhood of the docks. There is a large amount of clinical evidence to support the view that rats can communicate the disease to man, and *vice versâ*. How the plague was introduced into Bombay, is a matter of speculation. Although plague existed in Hongkong and China in 1896, it is difficult to understand how it could have been introduced from such distant ports through human agency without detection. A passenger travelling from Hongkong or China with the infection in his system is bound to manifest the disease before he arrives in Bombay, as the incubation period of plague does not appear to be longer than seven days. On the other hand, it is quite possible for the plague-stricken rats of a steamer or ship to communicate the disease to the rats infesting the granaries in the neighbourhood of the docks without arresting attention. This can occur all the more easily in Bombay, as ships take in and clear cargo after entering the docks; and that there is a constant communication between steamer rats and dock rats is a well known fact. That a rat plague first manifested itself in the grain stores, and that the earliest cases in Mandvee occurred entirely amongst the coolies working in such stores, lend further support to the above view.

24. *Grain and Plague.*—A great deal has been written on the connection between grain and plague. It has been held in Bombay by competent observers that plague may be due either to eating diseased grain or breathing noxious gases emanating from damp and mouldy grain. These views were vigorously put forth when the epidemic was restricted to Mandvee, the grain store district of Bombay; but the subsequent course of the epidemic has completely upset them. Mr. E. H. Hankin, Chemical Examiner and Bacteriologist, North-West Provinces, has been engaged in Bombay studying this matter. He has looked for the characteristic bacilli in grain from houses where epidemics of plague in man and rats have occurred, but with negative results. He has further conducted several laboratory experiments to find out whether the organisms of plague when artificially introduced into grain and flour can live or thrive in such media. In his report to the Secretary of the Government of Bombay he comes to the conclusion that micro-organisms of plague when placed in grain cannot live in the majority of instances for a period of over four days. In his letter to the Chamber of Commerce, Bombay, he sums up this question thus: "It is my opinion that the only connection of grain with the plague in Bombay is that at the beginning of the outbreak large numbers of rats were affected, and that these animals were especially common to the neighbourhood of granaries."

25. *Infection of Soil.*—Dr. Cantlie puts forth the suggestion that plague bacilli growing and propagating in the soil may infect a district like the malarial poison. He further contends that the slow progress of the disease, inasmuch as it took nine months to reach Scho from the city of London, is an argument in favour of soil infection. In Bombay, however, the epidemic has spread from ward to ward, and the outlying villages with much greater rapidity. In my description of the spread of the epidemic in Kamatipura I emphasized the fact that the distribution of plague was very irregular in the district. On a careful examination of the ground map of the district it is evident that the poison has spread more in accord with the irregular movements of men, rather than from one or more foci of soil, slowly extending to constantly widening areas. Again, in the Sewree epidemic the peculiar grouping of the cases into four batches, with three well-marked intervals, corresponding closely to the incubation period of the disease, is altogether antagonistic to soil infection, and the propagation of the disease from such a source. That the specific bacilli of plague can live and multiply in the soil has not yet been demonstrated.

26. *Weather and Plague.*—No special meteorological or climatic condition has yet been demonstrated to either favour or diminish the spread of a plague epidemic. In Canton an epidemic raged during the drought at a temperature of 60° F. In Hongkong (1894) it increased in virulence during the rainy months with a temperature ranging between 80° and 90°. It exists now in Bombay during a prolonged and continued drought with a temperature between 70° and 85° F. It has been asserted that plague epidemics are restricted to a certain belt or zone, and that latitude 19° N. is the southern limit of this area. I cannot conceive that any special virtue exists in the number of a latitude. If, however, the latitude of a place is merely taken as an index of the climatic and meteorological conditions which are likely to prevail there, then it may be safely asserted that the

climatic and meteorological conditions which existed in Hongkong during the epidemic of 1894, and which now prevail in Bombay, are conditions which may be met with in places further south and much nearer the equator than latitude 19° N.

27. *Overcrowding and other Insanitary Conditions*.—Overcrowding and living under insanitary conditions are looked upon as favouring the spread of plague. In the Byculla jail, where the sanitary requirements left nothing to be desired, the epidemic raged as virulently as in the dirtiest part of the city. At the present time the epidemic in Bombay is chiefly restricted to the sparsely-populated outlying suburbs. It has almost died out of several overcrowded wards, where it had raged during the commencement of the epidemic.

28. *Animals affected by Plague*.—Snakes, dogs, jackals, and even pigs have been suspected to contract the disease in China and elsewhere. In Bombay some observers have suspected pigeons to have died of the malady. The evidence, however, on which such ideas are based is very meagre, and far from conclusive. Some competent authorities in Bombay, at the commencement of the epidemic, believed that the disease was propagated in man by ants, bugs, and other insects. So great was the confidence in this belief at one time that a large and representative committee of Bombay inhabitants, acting as they said on the advice of expert opinion, circulated freely handbills in several languages cautioning the inhabitants against feeding ants and insects, and advising them not to tread on ants. At present this belief seems to have died out.

29. *How does the Poison enter the Human Body?*—The poison of bubonic plague is generally believed to enter the human body in three ways: (*a*) by the respiratory system; (*b*) by inoculation through a scratch or skin wound; and (*c*) by the alimentary tract, the poison gaining entry in food or drinks. The great mass of clinical evidence of the disease at present available is in support of the first mode of infection mentioned above. The chief arguments in support of the second and third methods are derived from laboratory experiments. Mice and rats inoculated with pure cultures of the plague bacillus or fed on diseased tissues have contracted the disease. But these are artificial methods of propagating the disease, and probably far different from the processes of natural infection. Dr. Ayoma received a cut in his finger whilst conducting a post-mortem examination on a case of plague at Hongkong, soon after which he developed the disease. This has been freely quoted as a case where the disease had been communicated by inoculation. There is nothing in the circumstances connected with this case to disprove the view that the poison even here entered the body through the respiratory tract. The fact that the majority of Chinese developed femoral buboes has been put forth as favouring this view, that as they used to go about with bare feet the poison entered their system by wounds in the feet, and thus involved the nearest lymphatic glands; but against this Dr. Lowson mentions that the majority of English soldiers who contracted the plague developed femoral buboes although they wore boots.

Conclusions as to the Nature of the Poison.

30. The conclusions to be drawn from the study of the epidemic of plague in Bombay are:—

(1) That the disease is due to a specific bacillus, which grows in the blood and lymphatic glands.
(2) That the disease attacks both rats and man, and may be communicated from man to man, from man to rats, and *vice versâ*.
(3) That the plague is an infectious disease, and that its poison enters the human body through the respiratory tract, although under special and exceptional circumstances the poison may enter through a skin wound, or through the alimentary tract.
(4) That the bacillus of plague does not grow and multiply in grain, or flour, nor can it retain its virulance over four days in such food products when artificially introduced.

This remarkable disease has only been studied from the standpoint of modern pathology since 1894. It may therefore be looked upon as practically a new disease. The information at present available with respect to the nature of the poison, and its methods of spread and infection, is both meagre and confusing. Yet, from a general survey of the modes in which this dire malady spreads, of its apparent disrespect to sanitary reforms in the onward course of its progress through a town, and of the manner in which it is communicated to human beings, the conclusion is irresistible that in plague we have to deal with an infectious disorder analogous to measels or chickenpox, but with this difference, that whereas in measles or chickenpox perhaps over 50 per cent. of persons exposed to the poison are liable to contract the disease, in plague not more than 10 or 12 per cent. are susceptible to the poison under similar circumstances.

Examination of Travellers leaving Bombay.

31. The following precautions are taken by the Government of Bombay and Madras to prevent the spread of the epidemic. Travellers leaving the Port of Bombay by a steamer or ship are examined just before the vessel starts by a large staff of medical officers, both male and female. No vessel is permitted to leave the port with a passenger who is either suffering from plague or from any symptoms suggestive of the disease. Passengers leaving by land are examined at one or two stations in the Bombay Presidency along all the routes. A person travelling to Madras is examined at four places:—

(1) At Kalyan Junction, about 34 miles beyond Bombay. Here the first and second class passengers are examined in their carriages, whilst the third class passengers are taken out of the carriages and are examined individually in a room at the station.
(2) At Wadi, in the dominion of the Nizam of Hyderabad.
(3) At Raichur, the frontier station for the Madras Presidency.
(4) At Arkonum Junction before entering Madras.

At Arkonum passengers coming from Bombay are only permitted to enter Madras when they are able to give the address of the house they intend to live in there. When no such address is available, passengers are made to pass two or three days in a "chatrum," or camp, at Arkonum, where they are carefully watched.

Examination at Tuticorin.

32. At Tuticorin the following precautions are taken before passengers are permitted to sail for Colombo. Every traveller before booking his ticket for a passage has to obtain a certificate from the Medical Officer in charge of the port and special plague duties. This certificate declares that the holder is in good health, and has produced documentary evidence to prove that he has been away from an infected district for over fifteen days. It is only on the strength of such a certificate that an ordinary passenger can book his passage to Ceylon. A number of travellers—first, second, and third class—are at present detained in Tuticorin to undergo a fifteen-days' stay there, as they have been unable to produce the evidence necessary for the medical certificate. On the other hand, no such precautions exist in the case of estate labourers. These can obtain tickets without any reference to the Port Medical Officer, from the Agent of the British India Steam Navigation Company for the passage to Colombo, on the bare statement of a kangany that they are estate coolies. Taking for granted that all estate labourers come from the Madras Presidency, and therefore outside the area of plague infection, the regulations now in force cannot prevent a plague refugee from joining a kangany's gang of coolies at Tuticorin, and thus obtain his passage to Colombo without the fifteen days' stay there. The passengers and crew of a ship are examined by the Medical Officer before leaving Tuticorin. This examination is a hurried one, as over 150 deck passengers have to be examined in about an hour. This is the only examination that the so-called cooly emigrant has to undergo.

Recommendations in case of a Plague Epidemic.

33. If in spite of the quarantine regulations now in force at Colombo the bubonic plague be introduced into this port, I beg to recommend the following measures with a view of stamping out the epidemic at its commencement:—

(1) The compulsory removal of all persons suffering from the disease to suitable special hospitals for treatment.
(2) The segregation of persons who have exposed themselves to the contagion in special camps or houses set apart for such purposes.
(3) The inoculation of all persons thus segregated with the Haffkine "plague prophylactic."
(4) The thorough and complete disinfection of all houses where cases have occurred after the removal of the patients.

To carry out the above measures successfully, concealment of cases should be prevented by stringent rules. At the same time the system of registering deaths must be rigorously and satisfactorily carried out, to check burials of persons dying from plague, under other causes of death, and thus evade notification.

In the narrative of the Bombay outbreak it will be seen that the general measures of sanitation undertaken by the Municipal Corporation have so far proved of little use in stamping out the epidemic. His Excellency Lord Sandhurst, the Governor of Bombay, in a letter recently addressed by him to the Municipal Corporation, writes thus: "Cleansing and disinfecting of the city has been thorough, and it is scarcely an exaggeration to say that the continued presence of the epidemic in Bombay to its present extent is conclusive proof that it cannot be kept in check by cleansing and disinfecting and all the other measures that have so far been relied on as sufficient." The compulsory removal of plague patients to special hospitals, and the segregation of those who have been exposed to the infection in special camps, are the only measures which can hold out any hopes of success in stamping out this disease.

H. MARCUS FERNANDO, M.D., B.Sc, London,
Fellow of University College, London,
Lecturer on Pathology, Ceylon Medical College.

Colombo, March 11, 1897.

Loc & Mul Deptt

Proceedings of the Madras Govt. 18

Read again Ltr no 629 M. Mis dy 19 March 1897

Read telegram from the Colonial Secretary, Colombo to the Secy to Govt Loc & Mul Deptt no dated 16th March 1897

"Plague Commission report persons from infected localities travel from Tuticorin or Negapatam to Colombo as immigrant Coolies (Inamists) Health officer should satisfy himself (Bicordeau) that they are actually Coolies."

A

Order no 629 M. Mis dy 19th March 1897

The following telegram will be despatched to the Collrs of Tinnevelly, Madura & Tanjore:—

"Ceylon telegraphs that persons from infected localities travel from Tuticorin or Negapatam to Colombo as immigrant Coolies. This is contrary (to the notification (of) Government of India in Govt no 442 M of 9th instant and must be stopped"

2 The following telegram will be despatched to the Colonial Secretary Colombo:—

"Your telegram 16th Emigration (of) Coolies from infected localities. necessary orders issued.

(True Extract)

G. S. Forbes
Secy to Govt

Read the following papers:

From the Colonial Secy Colombo dy to the Secy to Govt Lt M Deptt dy 20th March 1897

I am directed to inform you that I despatched

the following telegram & memorandum on the 16th March 1897:—

(See enclosure A)

2 I am to state that this Port will be prepared to remunerate the Health officer for the services which he may in this connection render

From the Colonial Secy Colombo to Port Officer Galle No dated 22d March 97

I am directed to forward for the information of the Port of Madras the enclosed copy of a report made by Dr H de Fernando on his recent visit to Bombay in connection with the Bubonic Plague.

Enclosure.

Extract from Dr Fernando's report dated 11th March 1897

32. At Tuticorin the following precautions are taken before passengers are permitted to sail for Colombo. Every traveller before booking his ticket for a passage has to obtain a certificate from the Medical officer in charge of the port and special plague duties. This certificate declares that the holder is in good health and has produced documentary evidence to prove that he has been away from an infected district for over fifteen days. The strength of such a certificate that an ordinary passenger can book his passage to Ceylon. A number of travellers — first, second and third class — are at present detained in Tuticorin undergoing a fifteen days' stay there as they have been unable to produce the evidence necessary from the Medical certificate. On the other hand, no such precautions exist in the case of estate labourers. These can obtain tickets without any reference to the Port Medical Officer from the Agents of the British India Steam Navigation Company for the passage to Colombo, on the bare statement of a Kangany that they are estate coolies. Taking for granted that all estate labourers come from the Madras Presidency & therefore outside the area of plague infection the regulations now in force cannot however prevent a plague refugee from joining a Kangany's gang of coolies at Tuticorin and then obtain his passage to Colombo without the fifteen days' stay there. The passengers and crew of a ship are examined by the Medical Officer before leaving Tuticorin. This examination is a hurried one, as over 150 deck passengers have often been examined in about an hour. This is the only examination that the so called Coolie Emigrant has undergone.

Order No 861 Med (10 April 97)

(See enclosure B)

Letter to the Colonial Secretary, Colombo, No. 862 Med (10-4-97)

I am directed to acknowledge with thanks the receipt of your letter of the 22nd Ultimo enclosing a copy of Dr. H. M. Fernando's interesting report on his recent visit to Bombay in connection with the Bubonic Plague.

2

2 I am to state for the information of His Excellency Sir West Ridgeway that the Governor in Council has communicated a copy of para 32 of Dr. Fernando's report to the Collectors of Tinnevelly, Madura and Tanjore with instructions in continuation of those already issued requiring them to continue to take the most careful precautions at the ports in their districts to prevent persons from infected areas evading the plague and quarantine regulations in the guise of Madras Coolies. With regard to this matter, I am to say that if in accordance with the arrangement indicated in my telegram of the 31st ultimo in reply to yours of the 19th idem, a colonial officer is deputed to Tuticorin, His Excellency the Governor in Council will be glad of the assistance which he may be able to afford in examining persons embarking as Madras emigrant coolies for Ceylon in view of ascertaining whether ~~are~~ they really are such or are persons from infected areas ~~not~~ seeking to evade the regulations in that guise.

[25]
2,093 -8-11-96.

Local and Municipal Department,

38

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read again G.O. No. 629 mins. dy 19th March 1897.

READ the following papers—

From the Colonial Secretary, Colombo, dated 20th March 1897, ~~stating that the Ceylon Government will be prepared to remunerate the Health Officer for proceeding in the examination of emigrant coolies.~~

From the Colonial Secretary, Colombo, dated 22nd March 1897, ~~forwarding for the information a copy of report made by Dr. H.M. Fernando on his recent visit to Bombay in connection with the plague.~~

Order No. 861 M. dated 10th April 1897.

Paragraph 32 of Dr. Fernando's report received with the second letter read above will be communicated to the Collectors of Tinnevelly, Madura and Tanjore with the request that, as indicated in G.O. No. 629 M. dated 19th March 1897 they will continue to take the most careful precautions at the ports in these districts to prevent persons from infected areas evading the plague and quarantine regulations under the guise of Madras coolies proceeding to Ceylon.

2 The liberal offer of the Ceylon Government contained in the second letter regarding the remuneration of the Health Officer at Tuticorin cannot of course be entertained. If however that Government deputes a Medical officer to Tuticorin as proposed in in its telegram of the 19th March 1897,

~~The Collector of Tinnevelly.~~
~~" " Madura.~~
" " Tanjore.
~~" " Marine Department.~~

he

he may be ~~empty~~ usefully employed in helping the examination of the emigrant coolies for the estates in the Colony, no person being shipped as an estate cooly for Colombo who is not able to satisfy the examining officer that he comes from a non-infected area and has not been within an infected area for 15 days previous to his embarkation.

3. The following letter will be despatched to the Colonial Secretary, Colombo.

× × × × × × ×

The Collr of Jaffna (Sgd) Extract)
" " Madras
Tanjore
" Marine Dept — with notes & remarks below
for Secretary to Government

Dupl. mailed 16/4/97

Dupl. sent (Extract) 3/5/97

15-4-97
3-5-97
3-5-97

Order complete. 80
Letter only.
Order complete with Letter.

the whole thing to be printed.

ORDER OF GOVERNMENT

LETTER OF GOVERNMENT

STATEMENT WITH DITTO.

PAPERS NOT FILED UP BEING MEANT FOR DESPATCH IN ORIGINAL.

N.B.—
A = Print in full.
B = Not to be printed.
P = Print abstract only.
Q = Print heading only.