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(2) Date of repair 10-6-88

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MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 78.

Press
~~Mis.~~

Dated 11.1.1871

Not to be folded or roughly handled

12/10/88

*Proceedings of the Madras Government, Revenue Department,
11th January 1871.*

No. 161. Read the following letter from the Officiating Secretary to the Government of India, (Home Department—Public,) to the Secretary to the Government of Bengal, Fort William, 24th December 1870.

* To Government of Bengal, No. 5,679, dated 24th December 1870.
From do., No. 3,232, dated 15th November 1870.
To do., No. 5,680, dated 24th December 1870.

Government of Bengal on the subject of the manufacture of Quinine in this country, from which it will be seen that it has been proposed to the Lieutenant-Governor that the best plan for the settlement of the many doubtful points in connection with this important question would be to appoint a Commission, and that it has been suggested to His Honour that it would be advisable to secure the services of Mr. Broughton, the Government Quinologist at Ootacamund, in the Commission, as his advice and assistance would be of very great value. The Government of Bengal also is anxious to have the benefit of Mr. Broughton's knowledge and experience, and has recommended his deputation to Darjeeling to assist in carrying out an experiment that is in progress at the Cinchona Plantation at that station.

2. Under these circumstances, I am desired to inquire whether the Madras Government can spare Mr. Broughton's services for a short time without detriment to the other important work on which he is engaged. The Governor-General in Council attaches very great importance to the experimental operations being carried on at Darjeeling which, if successful, will result in immense advantages not to the Lower Provinces alone, but to the whole of India; and His Excellency in Council will be much obliged if the Madras Government can arrange for the proposed deputation of Mr. Broughton.

No. 162. ORDER THEREON, 11th January 1871, No. 78.

Miscellaneous.

ORDERED that these papers be communicated to Mr. Broughton (to be returned with his reply), with the request that he will state whether circumstances will admit of his proceeding on duty to Calcutta and probably eventually to Darjeeling in the course of the present and next two ensuing months, without serious detriment to any important operations.

(True Extract.)

(Signed) W. HUDLESTON,
Secretary to Government.

To the Government Quinologist.
,, the Commissioner of the Neilgherry Hills.

Exd. F. R. Bantleman.

No 3-679.

From

A. C. Maune Esq. C.B.
Offg Secy to the Govt of India

To The Secy to the Govt of Bengal

For William the 24 December 1870.

Memorandum
Public

Sir, I am desired to state for the information of His Honor the Lt Gov. that in the opinion of His Esq. the Govt. in C. the ^{time} has now come for a preliminary decision as to how the Cinchona bark of produced at the Govt. Plantations at Darjeeling the supply of which is even now considerable & will yearly rapidly increase may be best utilized.

His Esq. in C. therefore proposes if His Honor sees no objection to appoint a Commission as per margin

* President

to consider and report upon this important question. The nomination of the President His Excellency in Council would leave to His Honor the Lt Governor

Members.

Dr. Clarke - Offg. Supdt. of the Botanical Gardens
Dr. Simpson -
Dr. Broughton.

Govt. of 11871 Madras.

REVENUE.

THE GOVERNMENT QUINOLOGIST.

Ac, Ac, Ac.

Dated January 11th.

Recd.

For.

G. O. 11th January 1871, No. 78.

JANUARY.

Nos. 161-162.

Mr. Broughton's services required by the Bengal Government - Papers relating to this subject communicated to Mr. Broughton, with the request to state whether circumstances will admit of his proceeding on duty to Calcutta, without serious detriment to any important operations.

only remarking that in His opinion
the gentleman chosen as President
should be an officer of some rank and
standing if possible he should be an
officer attached to the Presidency so that
his employment in this special duty
may entail as little extra expense as
may be.

3. The Commission would be specially
instructed to consider amongst other matters
whether in general as well as commercial
grounds it would be best.

(1) To send home the whole of the bark which
bears a marketable value, or

(2) To extract by a single process all soluble
matter from the bark and send home
the gross proceeds of the first precipitation, or

(3) To proceed further with manufacture
in India and if so how much further
whether (a) only so far as is necessary to
separate the several Alkaloids from
the resin coloring matter and other
foreign elements which the first precipitate
which contain, or (b) as far as the
manufacture of the pure Sulphate
of Quinine?

4. Should the Commission recommend

the second or third alternative they will
have to consider what principles will
under all the circumstances of the case
be most likely to prove appropriate.

5. A certain percentage of the
total yearly yield of bark will owing
to its extreme poverty in Alkaloids
always be unfit for the Home market
it will be for the Commission to enquire
how this bark may be most profitably
dealt with here.

6. It is also believed that a valuable
febrifuge can be readily extracted from
the leaf of some species any rate of the
Cinchona and this also as well as other
kindred questions will appropriately
form subjects for the inquiries of
the Commission whose sittings would
be in the first instance in Calcutta
but who might later if it proved
desirable be desired to visit the plan-
tations themselves.

7. In conclusion I am to remark
that His Excy. in C. is well aware
that any conclusions we may now
come to on these subjects will when
a larger experience affords us better
data than now exist doubtless need

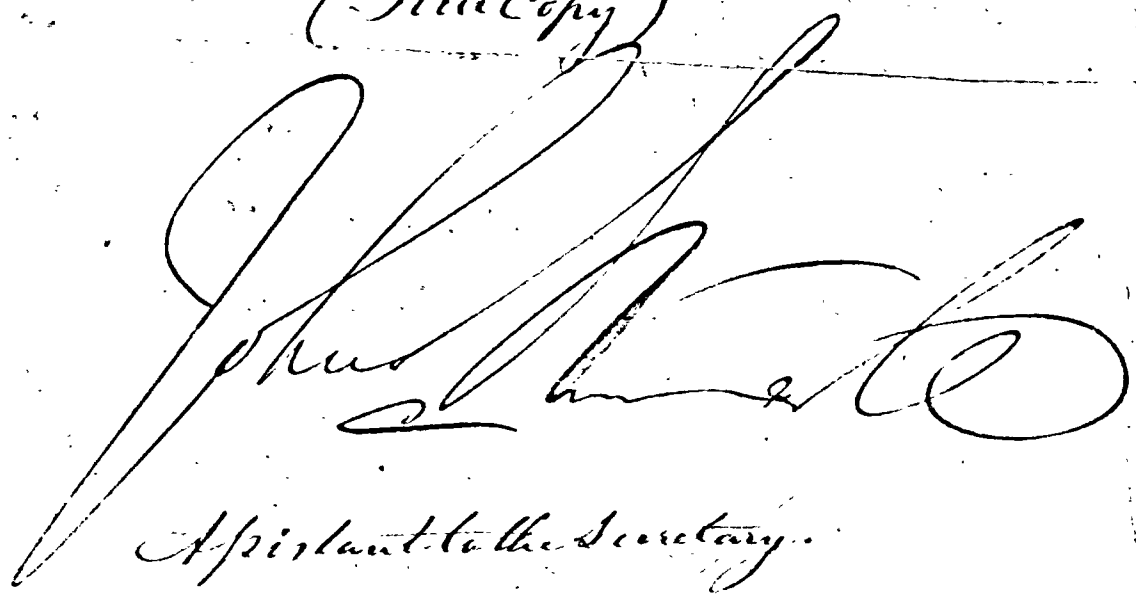
considerable

considerable modifications at the same time he is of opinion that the speedy adoption of some regular system (the best that the existing state of our knowledge may enable us to devise) of dealing with the produce of our growing Chinese Plantations is most essential and he is of opinion that the most probable method of securing this object is the apptⁿ as above suggested of a Commission composed for the most part of gentlemen who have made these questions their especial study.

D. A Resolution in the sense of the above letter will be as soon as the concurrence of His Honor and the name of the Officer he may nominate as Pres^t shall have been notified to His Excell^{cy}.

I have &c
Wm A O Shume
Offg Secy to the Govt of India.

(True Copy)


Assistant to the Secretary.

Recd 8/11/71
Rev. Secy 14/2/71
No. 14-11-11-11-11

No 5680.

7

To,

The Secretary to the Government of Bengal,
General Department

Home Department

Fort William, the 24 December 1870.

Public

Sir,

I am directed to acknowledge the receipt of your letter, No. 3232, dated the 15th ultimo, on the subject of the manufacture of Gunpowder in this country, and to observe that the Governor General in Council, attaches very great importance to the experiment which is in progress at Dargeling. —

2. Concurring in the Lieutenant Governor's opinion that Mr Broughton's advice and assistance would be of great value in the furtherance of the project, His Excellency in Council has made a reference to the Madras Government, enquiring whether that officer's services can be spared for a short time without detriment to other important work on which he may be engaged. The result of this reference will be duly communicated to you. —

3. I am at the same time desired to remark that, if the Madras Government to lend Mr Broughton's services,

From, A. O. Hume, Esq., C.B.
Offy Secy to the Govt. of India.

To, The Secy to the Govt. of Fort St. George.
Dated Fort William 24 Decr 1870.

Sir, I am directed to forward to you
a copy of a correspondence with the Government
of Bengal on the subject of the manufacture of
quinine in this country, from which it will be
seen that it has been proposed to the Lieutenant
Governor that the best plan for the settlement
of the many doubtful points in connection with
this important question would be to appoint a
Commission, and that it has been suggested
to His Honor that it would be advisable to
secure the services of Mr. Broughton, the Govt.
Quinologist at Calcutta, in the Commission
as his advice and assistance would be of very
great value. The Government of Bengal
also is anxious to have the benefit of Mr.
Broughton's knowledge and experience, and
has recommended his deputation to Darjeeling
to assist in carrying out an experiment that
is in progress at the Cinchona Plantation

to Govt. of Bengal No. 5579
of 24 Decr 70
From S. No. 2232 of 15th Nov.
1870.
No. 5580 of 24 Decr 70.

Recd 8/17
J 14/2/71

the extensive knowledge and experience
possessed by him in the cultivation
of Cinchona, and manufacture of Qui-
nine should, His Excellency considers,
be in the first instance utilized in the
enquiries suggested in my letter, etc.
of this date, by appointing him
a member of the proposed Commission.

I have &c
Signed Allan Hume
Offy Secy to the Govt. of India
Two Copy

No. 5581-11-1870

Wm. A. Hume
Asst. Secy to the Secretary

at that station.

2. Under these circumstances, I am desired to enquire whether the Madras Government can spare Mr. Braughton's services for a short time without detriment to the other important work on which he is engaged. The Governor General in Council attaches very great importance to the experimental operations being carried on at Dorsetting which, if successful, will result in immense advantages not to the Lower Provinces alone but to the whole of India; and His Excellency in Council will be much obliged if the Madras Government can arrange for the proposed deputation of Mr. Braughton.

I have the honour to be,

Sir,

Your most obed^t. Servant.

Blair Allen
Offy Secy to the Govt of India

GA

Recd B. P.

Not seen by Secy

Rev. Secy

1898
Proceedings of the Madras Government
Under date the 17 January. 1898.

Read the following
letter from the Offy Secy. to the
Govt of India (Home Dept).

Forwarding copy of
correspondence with the Govt of
Bengal on the subject of the
manufacture of quinine there
& enquiring whether Mr.
Broughton's services can be
spared in furtherance of the
project.

18.24 Dec: 1898, N° 5601.

Ordered that these
papers be communicated
to Mr. Broughton (to
be returned with his reply),
with the request that
he will state whether
circumstances will
admit

B. P. N.

L. O. S.

Revenue 1898 Dept

Thru
the Offy Secy. to the
Govt of India

Subject is the 1898
Recd. 11 Jan: 1898
G. S. D. 1898, N° 5601

Forwarding copy
of correspondence with
the Govt of Bengal on the
subject of the manufacture
of quinine there & enquiring
whether Mr. Broughton's
services can be spared
in the furtherance of
the project.

Decr 98 11 Jan: 1898 -

26 Jan 1898

admit of his proceeding
on duty to Calcutta
& probably eventually
to Darjeeling in the
course of the present
& next two ensuing
months, without serious
detriment to any im-
portant operations

L.R.

1 To the Govt. Zoologist with 3 Insects Dec 12
3 Comm. of the Shalgherry Hills

Robert

Mr. J. M. P. M.
Service, 1896
Bengal, India

Specimen

Deer

No. 3232.

FROM RIVERS THOMPSON, Esq.,

*Offg. Secy. to the Govt. of Bengal
in the General Department.*

TO THE SECRETARY TO THE GOVT. OF INDIA
IN THE HOME DEPARTMENT.

Fort William, the 15th November 1870.

GENERAL DEPARTMENT.
General.

SIR,

IN continuation of the letters noted on the margin, I am directed
No. 478 dated 21st February 1870. to forward a copy of a letter, No. 223 dated 24th
No. 3088 dated 4th November 1870. October, from Mr. Clarke, officiating superin-
tendent of the Botanical Gardens, and in charge of the cinchona cultivation
in Bengal, together with a copy of the orders*
* No. 3230 dated 15th November 1870. passed by the Lieutenant-Governor thereon, rela-
tive to the prosecution of the experiment of quinine manufacture on the
Rungbee plantation at Darjeeling.

2. After the sanction given by the Lieutenant-Governor, on the 21st
February last, to the trial of the method proposed by Mr. Clarke for the
extraction of the quinine alkaloid from cinchona bark, that officer, with the
Lieutenant-Governor's approval, proceeded to the Neilgherries in March, and
in communication with Mr. Broughton, the Government quinologist, examined
the process in operation at the manufactory in Madras. The valuable
information obtained by this visit, and the result of Mr. Clarke's enquiries, will
be found detailed in paragraphs 32 to 39 of his letter of the 1st July 1870,
which accompanied the letter of the 4th November. Mr. Clarke's present
letter describes his later proceedings since his return from Ootacamund, and
the measures he contemplates in furtherance of the experiment, for which the
following proposals are submitted for the sanction of Government:—

(1.) The construction of copper boilers at the Government dock-yard at
a cost of Rs. 5,000.

(2.) Also of a press at a cost not exceeding Rs. 2,500.

(3.) To obtain a patent fractional still from England at a cost of £75.

(4.) To sanction an outlay of Rs. 500, in addition to Rs. 2,500 sanctioned
in February last, for the construction of certain machinery at the dock-yard.

3. The Lieutenant-Governor has sanctioned these proposals, the charges
involved being debitable to the current budget grant for cinchona cultivation.

4. With reference to the 7th paragraph of the officiating superintendent's
letter, I am desirous to say that, in view of the great assistance which may be
obtained from Mr. Broughton's knowledge and experience, the Lieutenant-
Governor will be glad if the request made for the deputation of that gentleman
to Darjeeling in February or March next can be complied with.

I have the honor to be,

SIR,

Your most obedient servant,

RIVERS THOMPSON,

Offg. Secy. to the Govt. of Bengal.

F. P.

34

From C. B. CLARKE, Esq., M.A., Officiating Superintendent of the Botanical Gardens and in charge of Cinchona Cultivation in Bengal, to the Secretary to the Government of Bengal, —(No. 223, dated Rungbee, Darjeeling, the 24th October 1870.)

SIR,

THE Government of Bengal by their letter No. 476 of 21st February 1870, sanctioned my commencing an experimental manufacture of quinine on this plantation, the gross outlay on such experiment not exceeding Rs. 2,500, and further sanctioned my paying a visit to Ootacamund to consult Mr. Broughton, the quinologist to the Government of India, and to see the manufacture he had commenced there of the bark from the Government cinchona plantations in the neighbourhood.

2. I accordingly visited Ootacamund in March and April last, where Mr. Broughton afforded me every facility for observing the manufacture of cinchona alkaloid which he was there carrying on. This cinchona alkaloid (called by Mr. Broughton amorphous quinine) had at that time given great satisfaction to the medical officers of Madras, as possessing the therapeutic qualities of commercial sulphate of quinine. Its manufacture requires much less expense than that of the crystallized sulphate, and I returned from Ootacamund convinced that the manufacture of this cinchona alkaloid could, without doubt, be carried out successfully at Rungbee.

3. Under this conviction I have not so much made any further experiment in manufacturing different product from bark, but have expended somewhat more than Rs. 3,000 in machinery of a very durable kind, calculated for carrying out the manufacture of cinchona alkaloid exactly as performed by Mr. Broughton. This expenditure has been chiefly by a book debit for work done at the Government dockyard in Kidderpore, the only other considerable outlay being about £75 for a patent fractional still, not yet received complete from England.

4. The result of my attempts to imitate Mr. Broughton's process has been very encouraging, the later experiment in particular having given a very fine alkaloid, and the expenditure of alcohol in the process diminishing rapidly with increased experience. But I do not expect to be able to produce cinchona alkaloid to any economic advantage until the fractional still is at work, and I am therefore carrying on work on a very limited scale.

5. From the middle of December to the middle of February the sap is down, and the bark cannot conveniently be stripped. The Rungbee plantations require considerable thinning and pruning before next growing season. My present plan is to perform this thinning and pruning regularly from present date up to middle of December, and recommence as soon as practicable in February. Of the bark taken off before the middle of December, I propose to send the prime portion for sale in London, and to boil down here the inferior bark from young shoots which will not well bear the expense of carriage to London.

6. I hope the fractional still may be completed and mounted before the end of January, and I desire now to suggest to Government that, during the cold weather, the necessary preparations for boiling down bark on a considerable scale be made. This will require a large shed, which can be built here of bamboos at small cost, and a number of large copper boilers, which can be made at the Kidderpore dockyard. I request that sanction be given me to order such boilers to the extent of Rs. 5,000 at the Kidderpore dockyard, and other machinery, especially a powerful press, to the extent of Rs. 2,500. The budget for the current year for this plantation will be ample to meet these charges; and I may add that whatever particular course of manufacture be adopted, the class of machinery which I contemplate will be utilizable therein.

7. I beg leave also to propose that the Government of India be asked to direct Mr. Broughton to pay a visit to this plantation in February or March next, as most convenient to him, with instructions to report on the general question of manufacture here, and particularly on the staff to be employed. I need hardly point out that the Government interest involved will be very large, and that it will be well that Government should avail itself of all advice of skilled officers at its command. Moreover, the conditions of manufacture here are, as regards cost of material, price of fuel, and numerous other details, exceedingly different from the conditions existing on the Neilgherries, and it is probable that minor differences in the course of the manufacture, producing considerable economy in the result, may be suggested by Mr. Broughton's experience.

No. 3230.

FROM H. S. BEADON, Esq.,

*Offg. Under-Secy. to the Govt. of Bengal,*TO THE OFFG. SUPDT. OF THE BOTANICAL GARDENS, AND IN
CHARGE OF CINCHONA CULTIVATION IN BENGAL.

GENERAL DEPARTMENT.

General.

SIR,

Fort William, the 15th November 1870.

I AM directed to acknowledge the receipt of your letter No. 223 dated 24th October, and in reply to communicate to you the Lieutenant-Governor's sanction to the proposals submitted by you, as specified below, in connexion with the manufacture of amorphous quinine from the bark of the cinchona grown at Darjeeling, viz.—

(1.)—Expenditure of Rs. 500 in excess of the sum of Rs. 2,500 granted for the experiment under orders No. 476 dated 21st February 1870, for the construction of machinery at the Government dock-yard.

(2.)—Outlay of Rs. 750 for the cost of a patent fractional still ordered out from England.

(3.)—Construction of boilers at the dock-yard, at a cost of Rs. 5,000.

(4.)—Also of a press, the cost not to exceed Rs. 2,500.

2. These charges, aggregating Rs. 8,750 in addition to the amount sanctioned on the 21st February last, or altogether a total of Rs. 11,250, will be debitable to the budget allotment under the head of cinchona cultivation for the current year.

3. In accordance with the suggestion contained in the 7th paragraph of your letter, application will be made to the Government of India for the deputation of Mr. Broughton to visit the Darjeeling cinchona plantations in February or March next.

I have the honor to be,

SIR,

Your most obedient servant,

H. S. BEADON,

Offg. Under-Secy. to the Govt. of Bengal.

W. E. B.

Copy
Home {1870} Dept.

[*Public*]

FROM GOVERNMENT OF BENGAL.

D. 15th Nov. }

R. 21 Dec. }

D. No. 4578

L. No.

No. 3232.

Enclosures

Spare copies.

Progs. { D.
No.

See No. 41-11-1870/11
Recd 8/13/71
1/12
for 4461
41 49
290
1/12
FORWARDS correspondence relative to the further prosecution of the experiment of quinine manufacture, and recommends that Mr. Broughton be deputed in February or March to visit the Darjeeling plantation.