

EAST INDIA (TEA PLANTATIONS).

S188

RETURN to an Address of the Honourable The House of Commons,  
dated 5 March 1863;—for,

“COPY of any REPORTS made to the Government on the EXTENSION of  
TEA PLANTATIONS in *India*.”

India Office, }  
9 March 1863. }

FRANCIS W. PRIDEAUX,  
Secretary, Revenue Department.

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A863

(*Mr. William Ewart.*)

Ordered, by The House of Commons, to be Printed,  
12 March 1863.

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COPY of any REPORTS made to the Government on the EXTENSION of TEA  
PLANTATIONS in *India*.

— No. 1. —

EXTRACT from a Narrative of the Proceedings of the Government of Bengal in  
the Revenue Department (No. 7 of 1857), dated 25 September.

ASSAM.

Para 1. THE papers noted in the margin relate to tea seeds supplied from the Government plantations at Kumaon to the Commissioner of Assam for distribution in that province.

Supply of tea seeds to the Commissioner of Assam.

R. P., 11 September 1856,	Nos. 16 @ 18.
„ 30 October „	31 and 32:
„ 20 November „	3.
„ 11 December „	6.
„ 12 March - 1857	1 @ 3.

Enclosure 1, in No. 1.

EXTRACT from the Proceedings of the Government of Bengal in the Revenue Department,  
under date 11 September 1856.

(No. 330.)

From the Officiating Secretary to the Board of Revenue, Lower Provinces, to the Secretary  
to the Government of Bengal; dated Fort William, 3 September 1856.

No. 16.

Land Revenue.  
W. Dampier and H  
Stainforth, Esqrs.

Sir,

I AM directed by the Board of Revenue to submit for the favourable consideration and orders of the Lieutenant-Governor of Bengal, the accompanying copy of a letter from the Commissioner of Assam, No. 70, dated the 15th ultimo, applying on behalf of an Assam tea planter for two or three maunds of the green tea seed which Mr. Fortune has introduced into the Kumaon Government plantation.

2. The Board recommend that a small quantity of each kind of seed, if available, be supplied for distribution, three-fourths in Assam and one-fourth in Cachar, with a view to furthering Colonel Jenkins' project in the former province, and developing the resources of the latter district.

I have, &c.  
(signed) *E. T. Trevor*,  
Officiating Secretary.

Enclosure 2, in No. 1.

(No. 70.)

From Colonel *F. Jenkins*, Commissioner of Revenue, Assam, to the Board of Revenue,  
Lower Provinces, Fort William; dated Gowahatty, 15 August 1856.

Gentlemen,

A GENTLEMAN tea planter of Assam, wishing to procure some of the seed of the green tea and of the true Bohea variety, which he understands Mr. Fortune has introduced into the Kumaon Government plantations, has applied to me to endeavour to get him two or three maunds of seed, for which he will be glad to pay all expenses, and I would beg to request the Board's good offices in his favour.

2. It must always be desirable to try in this province any variety of good tea, of which we can obtain information, and I would beg to request that on Mr. Fortune's importing any  
95. further

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(signed) *E. T. Trevor*,  
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2. It must always be desirable to try in this province any variety of good tea, of which we can obtain information, and I would beg to request that on Mr. Fortune's importing any further

PAPERS RELATING TO THE

further stipulated that small quantities of such seed should be placed in my hands for distribution in the province of such persons as would be willing to pay the charge incurred on the importation; and if I could be informed of the probable date of arrival I would be glad to make the same known to all the planters.

I have, &c.  
(signed) T. Wilson

Board of Revenue, Fort William,  
3 September 1855.

Commissioner of Revenue

True copy.

(signed) E. T. Fryer,  
Officiating Secretary.

Enclosure 3, in No. 1.

No. 22

(No. 327.)

Revenue.

From the Secretary to the Government of Bengal to R. Fortune, Esq., Agent Fort William  
3 September 1855.

Sir,

I AM directed by the Lieutenant Governor of Bengal to forward to you the accompanying copy of a letter\* from Colonel Jenkins, the agent to the Governor General in Assam, and to request that you will be good enough to comply with the request of the officer for a supply of green tea seed so far as you may be able to do so.

\* No. 74, dated  
15 August 1855.

The Board of Revenue, through whom this letter was forwarded to Government have suggested that whatever quantity of seed may be sent should be distributed between Assam and the province of Cachar, in the proportion of three-fourths to the former and one-fourth to the latter. If, therefore, you will be good enough to send the seed to Calcutta, packed in the proportions suggested, the packages will be forwarded from here to their respective destinations.

I have, &c.  
(signed) W. Grey.

Secretary to the Government of Bengal.

(No. 324.)

Copy forwarded to the Officiating Secretary to the Board of Revenue for information with reference to this letter, No. 330, dated 3d instant.

Enclosure 4, in No. 1.

EXTRACT from the Proceedings of the Government of Bengal in the Revenue Department under date 30 October 1855.

No. 21.

From R. Fortune, Esq., to W. Grey, Esq., Secretary to the Government of Bengal.

H. C. Steamer "Magna," of Benares,  
14 October 1855.

Sir,

I HAVE the honour to acknowledge the receipt of a letter from you, dated the 5th of September, with its enclosure. In reply, I beg to inform you that having left China for some time (nine months), I have no means of complying with Colonel Jenkins' request to forward seeds of the finest kinds of tea for the new plantations in Assam. The same remark applies to the suggestions of the Board of Revenue, that a proportion of such seeds should be sent to the province of Cachar where tea plantations are now being formed.

I regret this very much, for had such an application been made to me while in China I would have had great pleasure in complying with the wishes of the Honourable the Lieutenant Governor expressed in your letter. As I expect to reach Calcutta in a few days, en route for England, I shall have the honour of calling upon you, and shall then explain this matter more fully.

I am, &c.  
(signed) R. Fortune.

## EXTENSION OF TEA PLANTATIONS IN INDIA.

5

## Enclosure 5, in No. 1.

(No. 282.)

From the Secretary to the Government of Bengal to the Secretary to the Government,  
North Western Provinces; dated Fort William, 23 October 1856.

No. 32.  
Revenue.

Sir,

I AM directed to forward the accompanying extract para. 1 of a letter, No. 70, dated the 15th of August, from the Commissioner of Assam, and to state that the Lieutenant Governor will be glad if the quantity of seed named by Colonel Jenkins can, with the permission of his Honour the Lieutenant Governor, North Western Provinces, be supplied to him from the Kumaon plantations, and also if another maund of the same seed can be sent to Calcutta for transmission to Cachar.

I have, &c.  
(signed) *W. Grey*,  
Secretary to the Government of Bengal.

## Enclosure 6, in No. 1.

EXTRACT from the Proceedings of the Government of Bengal, in the Revenue Department,  
under date 20 November 1856.

No

(No. 5781 of 1856.)

From *R. C. Oldfield*, Esq., Assistant Secretary to Government, North Western Provinces,  
to the Superintendent of Tea Plantations, North Western Provinces; dated Agra,  
11 November 1856.

Revenue Depart-  
ment.

Sir,

I AM directed by the Honourable Lieutenant Governor to forward the accompanying copy of a letter, No. 282, dated 23d ultimo, from the Government of Bengal, and to direct early compliance with the request therein contained for two or three maunds of seed of the "green" and "Bohea" teas, introduced by Mr. Fortune into the Kumaon plantations.

Agra, 11 Nov. 1856.

I have, &c.  
(signed) *R. C. Oldfield*,  
Assistant Secretary to Government,  
North Western Provinces.

## Enclosure 7, in No. 1.

(No. 5782 of 1856.)

Revenue Department, North Western Provinces, dated Agra, 11 November 1856.

ORDERED, that copy of the above be forwarded to the Secretary to the Government of Bengal, for information in reply.

(signed) *R. C. Oldfield*,  
Assistant Secretary to Government,  
North Western Provinces.

(No. 812.)

COPY forwarded to the officiating Secretary to the Board of Revenue, for information with reference to his letter, No. 330, dated the 3d September last.

Fort William,  
18 November 1856.

By order, &c.  
(signed) *W. Grey*,  
Secretary to the Government of Bengal.

## PAPERS RELATING TO THE

## Enclosure 8, in No. 1.

EXTRACT from the Proceedings of the Government of Bengal, in the Revenue Department,  
under date 11 December 1856.

No. 6.

(No. 686.)

General Department.

From *W. Jameson*, Esq., Superintendent, Botanical Garden, North Western Provinces, to  
*R. C. Oldfield*, Esq., Assistant Secretary to Government, North Western Provinces,  
Agra; dated Seharunpore, 15 November 1856.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 5781, dated the 11th instant, with enclosure, and in reply, beg to state that the indent for tea seeds will be complied with as soon as possible.

Office of the Superintendent,  
Botanical Garden,  
North Western Provinces.

I have, &c.  
(signed) *W. Jameson*,  
Superintendent, Botanical Garden,  
North Western Provinces.

(No. 6117 of 1856.)

Revenue Department, North Western Provinces, dated Agra, 3 December 1856.

ORDERED, that a copy of the foregoing be sent to the Secretary to Government of Bengal, for information with reference to this Government docket, No. 5782 of 11th ultimo.

(signed) *R. C. Oldfield*,  
Assistant Secretary to Government.

(No. 877.)

COPY forwarded to the officiating Secretary to the Board of Revenue, in continuance of endorsement, No. 812, of the 18th ultimo.

Fort William,  
9 December 1856.

By order, &c.  
(signed) *C. T. Buckland*,  
Junior Secretary to the Government of Bengal.

## Enclosure 9, in No. 1.

No. 1.

EXTRACT from the Proceedings of the Government of Bengal in the Revenue Department,  
under date 12 March 1857.

From Messrs. *Allan, Deffell & Co.*, to *R. B. Chapman*, Esq., Officiating Under Secretary  
to the Government of India, Home Department.

Sir,

Calcutta, 12 February 1857.

COLONEL F. JENKINS, of Gowhatty, Assam, has requested us to take charge of three maunds of tea seed despatched per bullock train by Surgeon *W. Jameson*, for him, to your care, as per copy of his letter annexed, to the address of Colonel *F. Jenkins*, dated Camp Holta, Kangra, 7th ultimo, which we shall be happy to do. If the seed has arrived, or when it does arrive, on your intimating the same to us, we shall be glad to send for it. We also annex copy of Colonel *Jenkins*' letter to us, dated Cooch Behar, 2d instant, on the subject of this tea seed, and shall feel obliged by your requesting the Superintendent of Marine to send instructions to the Steam Office to receive the seed "free of freight," by the steamer, to Gowhatty, Assam, as Colonel *Jenkins* states in his letter that it is not for himself but for distribution in the province.

Colonel *Jenkins* also states in his letter to us that he wanted to share in the tea seed imported from China by Mr. *Fortune*, but he does not know what has been sent to him. We shall be obliged by any information you may be able to give on this point.

We have, &c.  
(signed) *Allan, Deffell & Co.*

Enclosure



## Enclosure 10, in No. 1.

From *Wm. Jameson, Esq.*, to Colonel *Jenkins*, Commissioner, Gowhatty, Assam,  
dated Camp Holta, Kungra, 7 January 1857.

My dear Sir,

By orders of Government I have sent three maunds of tea seeds, but as in your letter to the Revenue Board you did not mention the name of your Calcutta agent, I sent them, per bullock train, to the care of Mr. Chapman, Assistant Secretary to Government of Bengal, through whom the request for the seeds came. Be so good as to order your agents in Calcutta to receive them on arrival.

Believe me, &c.  
(signed) *Wm. Jameson.*

## Enclosure 11, in No. 1.

From *F. Jenkins, Esq.*, to Messrs. *Allan, Deffell & Co.*, dated Cooch Behar,  
2 February 1857.

Dear Gentlemen,

Will you be good enough to inquire regarding the seeds mentioned within, and forward them to me. Mr. Chapman will probably be good enough to frank them by the steamer; the seeds are not for me, but for distribution in the province.

What I wanted was to share in the seeds imported from China by Mr. Fortune; what Mr. Jameson has sent me I know not; but if they are seeds of good stock, they may serve as well as those imported direct.

I am &c.,  
(signed) *F. Jenkins.*

(No. 310.)

TRANSFERRED to the Government of Bengal for disposal, together with copy of the reply sent to Messrs. Allan, Deffell & Co.

Home Department,  
23 February 1857.

By order, &c.  
(signed) *R. B. Chapman,*  
Officiating Under Secretary.

## Enclosure 12, in No. 1.

(No. 407.)

From *R. B. Chapman, Esq.*, Officiating Under Secretary to the Government of India,  
to Messrs. *Allan, Deffell & Co.*, dated 23 February 1857.

Gentlemen,

Your letter dated the 12th instant respecting certain tea seeds intended for Colonel Home Jenkins has been transferred to the Government of Bengal for orders, to which Government the seeds, if received at this office, will also be forwarded.

I have, &c.  
(signed) *R. B. Chapman,*  
Officiating Under Secretary to the Government  
of India.

Council Chamber,  
23 February 1857.

(True copy.)

(signed) *R. B. Chapman,*  
Officiating Under Secretary to the Government  
of India.

(No. 105.)

## Enclosure 13, in No. 1.

From *E. H. Lushington, Esq.*, in charge of the Office of the Secretary to the Government of Bengal at the Presidency, to Messrs. *Allan, Deffell & Co.*, Calcutta; dated Fort William, 10 March 1857. No. 3.  
Revenue.

Gentlemen,

With reference to your letter, dated the 12th ultimo, to the Officiating Under Secretary to the Government of India, Home Department, I am directed to forward herewith the three boxes of tea seeds referred to in Colonel Jenkins' letter of the 2d idem to your address.

2. The Superintendent of Marine will be requested to issue the necessary instructions for receiving the tea seeds, free of freight, on board a steamer proceeding to Gowhatty, for delivery to the Commissioner of Assam.

I have, &c.  
(signed) *E. H. Lushington*,  
In charge of the Office of the Secretary to the  
Government of Bengal at the Presidency.

(No. 106.)

COPY of the foregoing letter forwarded to the Superintendent of Marine for his information and guidance.

(No. 107.)

COPY of the foregoing letter forwarded to the Secretary to the Board of Revenue for information with reference to his letter, No. 330, dated the 3d September last.

— No. 2. —

EXTRACT REVENUE LETTER to *India*, 26 May (No. 3) 1859.

Letter from, 16 November (No. 15) 1857.  
Narrative dated 25 September (No. 7) 1857.

ASSAM.

(I.) Tea seeds supplied to Commissioner for distribution from the Government plantations at Kumaon.

30. It is very satisfactory to find that there is a demand for tea seeds for private plantations in the districts of Assam and Northern Cachar, and that Captain Jenkins' application for some for distribution was so promptly complied with. I shall be glad to hear that success has attended the cultivation of this plant, as it seems likely to prove of much use in civilising and giving security to these wild districts.

— No. 3. —

COLLECTION No. 5.

EXTRACT from a Narrative of the Proceedings of the Government of Bengal in the Revenue Department, No. 1 of 1859, dated 18 February.

CACHAR.

Report on the Tea Plantations in Cachar.  
R. P., 26 November 1857, No. 7.  
" 8 July " Nos. 15 & 16.

8. IN consequence of the remarks made by the late Honourable Court, in paragraph 5 of their Revenue Despatch, No. 12 of 1857,\* on the offer of one Mr. Williamson to undertake the experimental cultivation of tea in Cachar, the Board were requested to submit a report on the subject.

9. As it appeared from the report submitted, that the cultivation of the tea plant in Cachar was extensively and vigorously prosecuted by numerous parties, both singly and in companies, the Lieutenant Governor considered that the establishment of a Government tea plantation in that district would be superfluous, and attended with no advantage.

\* EXTRACT REVENUE DESPATCH from the Court of Directors, 2 September (No. 12) 1857, referred to above.

Discovery of the real tea plant in the province (Cachar). Offer of Mr. Williamson to engage for lands for a tea plantation, if he were made acquainted with the terms on which a grant could be obtained, referred to the Board of Revenue. Reward of 50 rupees to the person who made the discovery sanctioned, and offer of a further reward for the discovery of coal or lime approved.

5. WE shall be glad to learn that arrangements have been concluded with Mr. Williamson (who has already a tea plantation in Assam) to enable him to undertake the experimental cultivation of tea in Cachar, so as to render the establishment of a Government plantation there unnecessary.

## Enclosure 1, in No. 3.

EXTRACT from the Proceedings of the Government of Bengal in the Revenue Department, under date 26th November 1857.

(No. 553.)

From the Junior Secretary to the Government of Bengal to the Secretary to the Board of Revenue; dated Fort William, 13 November 1857. No. 7.

Sir,

Revenue.

WITH reference to the correspondence noted in the margin,\* I am directed to forward herewith to the Board of Revenue for report an extract, paragraph 5, of a Despatch, No. 12 of 1857, from the Honourable the Court of Directors.

\*Letter from the Under Secretary to the Government of Bengal to the Secretary to the Board of Revenue, No. 432 dated 26 July 1855.  
Board to Government, No. 373, dated 14 November 1855  
Ditto - - ditto ,, 435, dated 22 December 1855  
Government to Board, ,, 45, dated 12 January 1856

I have, &amp;c.

(signed) C. T. Buckland.

Junior Secretary to the Government of Bengal.

## Enclosure 2, in No. 3.

EXTRACT from the Proceedings of the Government of Bengal, in the Revenue Department, under date 8th July 1858.

(No. 15.)

From E. T. Trevor, Esq., Secretary to the Board of Revenue, L. P., to the Secretary to the Government of Bengal (No. 215), dated 18 June 1858.

Sir,

WITH reference to Government Order No. 553, dated 13th November last, I am directed by the Board of Revenue to submit the accompanying copy of a letter from Mr. Allen, member of the Board of Revenue, on deputation, No. 718, dated 28th ult., and its enclosures, reporting on the tea plantations of Cachar.

2. It will be seen that both the superintendent of Cachar and Mr. Allen are of opinion, that a Government plantation is quite unnecessary for the encouragement of the cultivation of tea in Cachar.

## Enclosure 3, in No. 3.

From W. J. Allen, Esq., Member of the Board of Revenue, on deputation, to E. T. Trevor, Esq., Secretary to the Board of Revenue, L. P., (No. 718), dated 28th May 1858.

Sir,

WITH reference to your letter, No. 144, of the 23d ultimo, with enclosure, I have the honour to forward for the information of the Board, in original, a letter† of the Superintendent of Cachar, containing the information called for by the Honourable the Court of Directors regarding the grant of lands in Cachar for the cultivation of tea and the progress made in the tea plantations.

†No. 88, dated 26 instant, with two statements.

2. I concur with the superintendent in thinking that a Government plantation is not at all required in Cachar for the encouragement of the cultivation of tea. Most of the tea planters are pursuing their vocation with energy and success, and any interference on the part of Government with tea planting in Cachar, is not likely, I think, to be attended with any advantage.

## Enclosure 4, in No. 3.

From Lieutenant R. Stewart, Officiating Superintendent of Cachar, to the Commissioner of Revenue, Cherrah (No. 88), dated Cachar, 26th May 1858.

Sir,

I HAVE the honour to acknowledge the receipt of your letter; No. 688, dated 10th May 1858, with enclosures, and as requested, beg to forward the two forms duly filled up.

2. You will perceive that only one of the grants has as yet been regularly settled. The others have mostly all been surveyed, and some of them partially mapped; but in the latter part of the work consists the great difficulty, as there is only one competent draftsman in Cachar.

3. The delay in the final settlement of these grants has not in the least retarded the progress of the cultivation, and all the applicants who have felt so inclined have commenced operations. Some three or four thousand acres must already be cleared, and the yield of tea during the present year may be estimated at not less than two or three hundred maunds gathered almost entirely from the indigenous trees.

4. In my opinion a Government experimental plantation is quite unnecessary, as most of the parties engaged have entered into the concern with spirit, and are most sanguinely alive to its profits, which are described to be enormous.

## PAPERS RELATING TO THE

(No. 1.)

## LIST of TEA TRACTS in the Cachar District granted under the Rules for the Grant of Waste Lands in Assam.

Number of Grant.	Name of Grant.	Name of Grantee.	Name of Occupant or Manager.	Date on which Grant was given.	AREA.		Annual Rent.	REMARKS.
					District Measurement.	Acres.		
1	Burrasungun	G. Williamson	Soroop Ram, Jemadar.	1st May 1856.	454 halls 4 J. R., 1 P.	742 acres 26 polee.	16 years' rent free, 10 years at Rs. 104 5. 10. 73 years at Rs. 208 11. 8.	Mr. Williamson is allowed one year rent free, more than the period granted by the Assam Rules, in consideration of his being the first applicant.

(No. 2.)

## LIST of APPLICATIONS under the ASSAM RULES, for TEA LANDS for which formal GRANTS have not yet been made.

Number.	Name of Applicant.	Estimated Area.	REMARKS.
		<i>Acres r. p.</i>	
2	J. P. Wyse & Co. - -	669 0 23	This grant is surveyed, and the map is nearly ready.
3	Borrodaile & Co. - -	2,551 1 3	Surveyed, but not mapped.
5	Cachar Company - -	12,075 3 29	This grant is surveyed and mapped, and ready for confirmation, awaiting a reference to the Company with regard to its means.
6	Moran & Co. - - -	1,512 2 35	Surveyed, but not yet mapped.
7	Assam Company - - -	3,849 1 21	Ditto.
8	Borrodaile & Co. - -	799 1 7	Ditto.
11	Borrodaile & Co. - -	2,691 0 11	Ditto.
12	Assam Company - - -	2,170 1 2	Ditto.
13	Borrodaile & Co. - -	2,790 2 12	Ditto.
14	Joseph Hogg, for Cachar Tea Association.	14,988 1 7	Ditto.
16	Moran & Co. - - -	519 3 17	Ditto.
18	Wyse & Co. - - -	2,521 0 8	Ditto.
21	Borrodaile & Co. - -	618 1 12	Surveyed, but not mapped.
22	Mr. Francis Tydd - -	490 3 5	Surveyed, and the map is nearly ready.
23	Mr. Foley - - -	4,809 0 30	Surveyed, but not mapped.
25	Bengal Tea Company - -	8,415 2 29	Ditto.
27	Mr. Francis Tydd - -	844 3 33	Surveyed, and the map nearly ready.
29	J. P. Wyse & Co. - -	488 2 5	Surveyed, but not mapped.
32	Equitable Tea Company -	1,929 0 7	Ditto.
35	Equitable Tea Company -	888 2 5	Surveyed, and the map nearly ready.
36	Mr. Parker - - -	139 1 7	Surveyed, but not mapped. There is a dispute between this case and No. 25; some of the lands of No. 25 are to be transferred to this case.
40	Assam Company - - -	1,445 3 23	Surveyed, but not mapped.
42	Silchar Tea Company - -	12,098 3 14	Ditto.
47	Silchar Tea Company - -	1,004 0 9	Ditto.
48	Moran & Co. - - -	1,000 0 0	Estimated area not surveyed.
49	Bengal Tea Company - -	2,095 2 38	Ditto.
50	Pogose & Thomas - - -	1,000 0 0	Ditto.
51	Francis Tydd - - -	500 0 0	Ditto.
52	Francis Tydd - - -	1,000 0 0	Ditto.
53	Pogose & Thomas - - -	500 0 0	Ditto.
54	R. Wright, Esq. - - -	500 0 0	Ditto.

Enclosure

## Enclosure 5, in No. 3.

(No. 16.)

From *A. R. Young*, Esq. Secretary to the Government of Bengal, to the Secretary to the Board of Revenue (No. 1470), dated the 26th June 1858.

Sir,

I AM directed to acknowledge the receipt of your letter, No. 215, dated the 18th instant, and in reply to state that as the cultivation of the tea plant in Cachar appears from Mr. Allen's report to be extensively and vigorously prosecuted by numerous parties, singly and in companies, the Lieutenant Governor considers that the establishment of a Government tea plantation in that district would be superfluous, and attended with no advantage. A report to that effect will be forwarded to the Honourable the Court of Directors.

## — No. 4. —

REVENUE LETTER to *India*, dated 22d March (No. 19) 1860.

My Lord,

I HAVE considered in Council the narrative of the proceedings of the Lieutenant Governor of Bengal for the third quarter of 1858, transmitted in your letter of the 22d of July 1859, No. 12, and in reply have only to express my satisfaction that the cultivation of tea in Cachar is being pursued with such energy and success by private individuals, and by companies, as to render any interference for the encouragement of plantations unnecessary.

I have, &amp;c.

(signed) *Charles Wood*.

## — No. 5. —

Revenue Department.—No. 90 of 1860.

LETTER from the Government of Madras to the Secretary of State for India.

WE have the honour to forward herewith 20 copies of a useful and interesting report by Dr. Cleghorn, our conservator of forests, on the suitability of various places in this Presidency to the growth of the tea plant.

2. It will be seen from our order of this date, that we have resolved to give publicity to the report.

(signed) *W. A. Morehead.*  
*Patrick Grant.*  
*E. Malby.*

Fort St. George,  
24 August 1860.

## Enclosure 1, in No. 5.

(Revenue Department.)

## PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following Letter from *H. Cleghorn*, Esq., M.D., Conservator of Forests, to *J. D. Bourdillon*, Esq., Secretary to Government, Revenue Department, Fort Saint George; dated Madras, 11th August 1860, No. 96.

Sir,

1. WITH reference to the order of Government, dated 9th November 1859, No. 1531, Revenue Department and Proceedings of Government, dated 25th July 1860, No. 30, Revenue Department, I beg to state that I have found it impossible, owing to my other engagements, to visit the tea plantations at Caldooty and Udagiri, mentioned by General Cullen, in his letter to the Chief Secretary, dated 27th October 1859.

2. I regret this, as the vegetation of that part of the Travancore territory is most luxuriant, and the lofty ranges stretching towards the Pulnies have been less explored than any other part of the Malabar Ghát.

3. I have collected from my journal a few notes made during my tours upon the tea plants seen in different districts of the Presidency.

*Localities where Tea Plants are growing.*

100 feet.

I. *Shevaroy Hills*.—There are several well grown trees at Yercaud, introduced by G. Fischer, Esq.; these have not been picked or pruned, and, indeed, have been left to nature, but are growing vigorously nevertheless.

100 feet.

infall, 120

inches; mean temp. degrees.

II. *Coorg*.—A case of plants was brought from China by Colonel (Lieutenant General) Dyce in 1843; these (now trees) appear to me over luxuriant, producing a rapid growth of leaves, and not bearing seed with regularity.

100 feet.

III. *Nundidroog*.—A number of plants have lately been sent to this hill sanatorium; they were beginning to droop in the Lál Bâgh garden, Bangalore, but there is hope of their thriving in their new location. "The mean temperature of Bangalore is 75°, and the average rain-fall 35 inches." The climate being too dry and too hot, the plants necessarily become dwarfed.

100 feet.

infall and mean temp. not known.

IV. *Bababooden Hills*.—Four plants from General Dyce's stock were received from Mercara in 1847; these grew well without care. A packet of fresh China seeds was sent last year: Colonel Porter, Superintendent of Nuggur, raised 23 plants above ghât near the sircar bungalow; and a number of seedlings have been planted out about a thousand feet lower by Mr. Denton, coffee planter.

100 feet.

infall, 55 inches.

V. *Nilgiri Hills*.—*a.* Coonoor.—A full report of Captain Mann's plantation is recorded in Proceedings of Government, No. 1272, dated 21st September 1859.

Besides this, there are a few plants at the undermentioned places,—

100 feet.

infall, 60 inches;

mean temp. 58 degrees.

*b.* Ootacamund.—Introduced or raised by Mr. M'Ivor, Government gardens, from Saharunpoor seed, and by General F. C. Cotton at Woodcote.

*c.* Kaitiy.—Introduced or raised by Sir S. Lushington and Lord Elphinstone.

*d.* Kulhutti.—Introduced or raised by Mr. Rae.

100 feet.

VI. *Pulni Hills*.—Major Hamilton reported that a considerable number of tea plants at Kudaikarnal were an inch or two above ground, and appeared fresh and healthy.

100 feet.

VII. *Curtallam*.—I have received flowering specimens from the old spice garden, which corresponds with the standard figures of *Thea Chinensis*. The shrubs are 20 years old, 12 to 15 feet high, and where the seed came from is not known.

Idoorty

Vellymallay, near Udagiri

Vellymallay, near Udagiri

Athaboo, near Tinnevely

Altitude.

6,700 feet.

1,800 "

3,200 "

Rainfall.

150 to 200 inches.

80 "

40 "

VIII. *Travancore*.—Tea trees grow luxuriantly in Messrs.

Binny & Co.'s plantations, (formerly Mr. Huxham's), 40

miles east of Quilon on the road to Curtallam, and from

whence some plants were procured 10 or 12 years ago,

which were planted at Vellymallay near Udagiri, 1,800

feet; and at Athaboo, near Tinnevely frontier, 3,200. At both places they are growing luxuriantly.

These facts are taken from General Cullen's letter to the Madras Government, and I may state that some seeds received from him were planted and thrrove on the Nilgiris at an elevation of 5,500 feet.

4. In tea, as in all cultivated plants, there are variations, the discrimination of which is of the utmost importance commercially, and also in an economical point of view, but I have not materials for attempting a precise definition of these differences. This, however, is known that the seed having been obtained from different parts of China, the introduced plant varies in stature exceedingly, from a bushy shrub of 3½ feet to a ramous tree, 25 feet high.

5. There is a vast difference also between the narrow-leaved forms and broad-leaved specimens in some of the localities mentioned.

6. At present the leaves are taken indifferently from several sorts, which should not be done, when preparing tea for commercial purposes; and the means of manufacture are of the rudest description.

Java (under Equator), Siam and China, 10 degrees to 31 degrees, N.L. (Fortune).

Rio de Janeiro, 22½ degrees S.L. (Fortune).  
Canton, 36 degrees N.L. (Reeves).

Principal districts between 27 degrees and 31 degrees N.L. (Fortune).

Selections from the Records of the Government of India, No. XXIII., 357.

7. The tea shrub of commerce, though long confined to Eastern Asia, is now cultivated far beyond the limits of China, and Japan, in Java, (under the Equator) in Assam, the North West Provinces of Hindustan, on the banks of the Rio Janeiro, and recently in North America. From the published reports of Mr. Fortune and Dr. Jameson,\* it appears to prefer a climate probably of 67° to 73° mean temperature. Such is nearly the mean temperature of the hill slopes near Kúnúr, Kotagiri, and of many of the valleys in the eastern and northern slopes of the Pulni and Nilgiri Hills, and also of the Bababooden range in Mysore, and of Kudra Muka in South Canara.

8. It ought also to be observed, as illustrative of the hardiness of the tea shrub, that the cultivation extends over a great breadth of latitude (from the banks of the Rio Janeiro, 22½° south latitude, to the province of Shan-ting in China, 36½° north latitude,) and that as we recede from the equator, the lower latitude compensates for the difference of altitude. The Chinese cultivate on the lower slopes of the hills, whilst, in the North West Provinces, the culture is carried on between 2,000 and 6,000 feet.

9. This

9. This valuable plant has been found wild in Upper Assam and Cachar, whilst its congeners abound on the Nilgiri and other mountain ranges of this Presidency. Its cultivation, therefore, might be attempted with good prospect of success in any of the localities mentioned in para. 7. In the case of Captain Mann's plantation near Kúnúr, we have the opinion of four competent judges\* that the experiment had entirely succeeded as regards the growth of the plant.

It now only remains to prove the merchantable character of the leaf, and this I hope will soon be tested.

10. So far as I can judge, the aid of a few practised manipulators is all that is required to conduct the manufacturing processes. This I recommended in my † letter to Government, and I would beg again to solicit their attention to the proposal. Enclosed is a letter on this subject received by me from Dr. Jameson, at the time the question was broached; also extracts from Sir Emerson Tennant's erudite work on Ceylon, corroborative of the views expressed on this important point.

11. Much useful information will be obtained from Fortune's works, especially his "Visit to the Tea Districts of China," and "A short guide to Planters cultivating Teas in the Himalayas and Kohistan of the Punjab," by Dr. Jameson. ‡ Intending tea planters ought also to study carefully Mr. Ball's excellent work on the "Cultivation and Manufacture of Tea," and the "Theory of Horticulture," by Professor Lindley, a knowledge of the principles of culture being indispensable to success.

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Enclosure 2, in No. 5.

From *W. Jameson, Esq.*, Superintendent Botanical Gardens, North West Provinces, to *H. Cleghorn, Esq., M.D.*, Conservator of Forests, Madras; dated Kowlangiri, Deyra Dhoon, 5th September 1859, No. 431.

I HAVE the honour to acknowledge the receipt of your letter, No. 741, dated 6th ultimo, regarding tea-makers. I am glad to hear that tea cultivation is making steady progress in the Madras Presidency. I have no Chinese tea-makers available to send to the Nilgiris, but I can provide you with four excellent native tea manipulators, who have been for years working in the factories, and are nearly as expert at their work as the Chinese. To several private factories I have supplied natives brought up as tea-makers in the Government factories, and by them excellent teas have been prepared. Thus all the teas prepared at Hurbawallah, in the Deyra Dhoon, estimated at 10,000 lbs. this season, have been prepared by natives furnished by me, and these teas are much prized by the public, and fetch high prices.

Four (4) native tea-makers are willing to proceed to the Nilgiris, and serve for three years on the following conditions:—

- (1.) Their wages to be 12 rupees per mensem each, for the first year, and 16 rupees each per mensem for the second and third years.
- (2.) All their expenses to be paid to and from the Nilgiris.
- (3.) Their wages to be paid them from the date of leaving the plantation at Kowlangiri in the Deyra Dhoon.
- (4.) Their agreement to continue in force for three (3) years from the date of their arrival at the plantation in the Nilgiris.
- (5.) On discharge, their expenses to be paid and a free passage given to them to Kowlangiri in the Deyra Dhoon. Their wages to cease from the date of their discharge from the plantation on the Nilgiris.

With these men I am confident that you will be able to do all that you require towards ascertaining the quality of the leaf yielded by the tea plants growing on the Nilgiris. With the men I will send a series of baskets, &c. required in manipulating teas, and Dr. Thompson, of the Calcutta Botanical Gardens, can procure for you from Messrs. Thompson & Co., hardware merchants, such pans as you require. If I can assist you in any other way it will give me much pleasure.

*P. S.*—These four (4) men agree to work diligently in the plantations and make themselves generally useful when their services are not otherwise required in the factory. But in order that there may not be any dispute, I shall, if agreeable to you, write their agreement on stamped paper.

Enclosure 3, in No. 5.

Extracts from "Tennant's Ceylon."

"THE tea plant has been raised with entire success on the estate of Messrs. Worms, at Rothchild, in Pusilawa; but the want of any skilful manipulators to collect and prepare the dry leaves, renders it hopeless to attempt any experiment on a large scale until assistance can be procured from China, to conduct the preparation."—Volume I., page 90.

"The plants thrive surprisingly, and when I saw them they were covered with bloom. But the experiment was defeated by the impossibility of finding skilled labour to dry and manipulate the leaves. Should it ever be thought expedient to cultivate tea in addition to coffee in Ceylon, the adaptation of the soil and climate has thus been established, and it only remains to introduce artizans from China to conduct the subsequent processes."—Volume II., page 252.

(signed) *H. Cleghorn,*  
Conservator of Forests.

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ORDER thereon, 24th August 1860, No. 1425.

1. THE Governor in Council has perused this report with much interest. It contains much useful information on the subject treated of. It will be communicated to the Board of Revenue, to the Collector of Coimbatore, to the Commissioner of Mysore, and to the Literary Society for publication in their journal. A copy will also be laid on the editors' table, and a number of spare copies will be printed for sale or distribution.

2. The report will also be sent to the Secretary of State.

(True extract.)

(signed)

*J. D. Bourdillon,*  
Secretary to Government.

To the Board of Revenue.  
Collector of Coimbatore.  
Literary Society.

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— No. 6. —

REVENUE DESPATCH to *Madras*, dated 31st October (No. 73) 1860.

1. I HAVE perused with much interest the reports by Dr. Cleghorn, the conservator of forests, on the growth of the tea plant in the Neilgherries and other parts of the Madras Presidency, which accompany your letter of the 24th August last, No. 90.

2. It is satisfactorily established that tea plants will thrive in several different localities, but no attempt appears yet to have been made to convert the produce into a marketable article of commerce. I agree with you that, as a general rule, it is undesirable for Government to step out of its way to aid the efforts of private adventurers. Considering, however, the great success which has attended this branch of culture in Assam, and in the Himalayas, and which it can scarcely be expected would have been attained, at any rate to the same extent or in the same time, if the initiatory proceedings had not been taken by the Government, I shall not object, if it should appear that there is little chance of the matter being taken up by private enterprise, to your acting on the recommendation of Dr. Cleghorn, and obtaining the services for a limited period of a few skilled tea manufacturers from the North Western Provinces, which it appears from the information supplied by Dr. Jameson, might be procured at a very moderate cost.

3. I presume that under the rules now in force, the difficulties which were apparently experienced by Captain Mann in obtaining land in the Neilgherries suitable for his tea plantation, will no longer exist.

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## — No. 7. —

EXTRACT from the Report of the Conservator of Forests, *Madras*, for the year 1859-60, dated 31st August 1860.

36. *Tea*.—SOUTHERN INDIA promises well to afford favourable sites for the growth of tea.

Numerous experiments have been made, and attended in several instances with marked success, as regards the healthy growth of the plant. In order, however, to complete the experiment, and allow the tea grown in the Presidency to occupy its proper place in the market, it is necessary that the art of manufacturing it should be introduced either direct from China or from Government plantations in the North Western Provinces. Unless something of this kind be done, tea grown in Southern India cannot attain that commercial value which it might probably acquire, were it generously taken up. The tea shrub is remarkable for its hardiness, the cultivation extending over a great breadth of latitude. It prefers a climate where the mean temperature is from 67° to 73°. This valuable plant may be seen at several places on the Nilgiri and Pulni hills, in Coorg, on the hill sanatorium of Nundidroog, on the Shervaroy and Bababooden hills, at Curtallam, and in various parts of Travancore. Although tea plants have been introduced, and are growing at each of these localities, they are not all equally promising; and the place in the market which any of them is to occupy has not yet been ascertained, and cannot be so until the introduction of competent manipulation completes the experiment.

G. O., No. 1425,  
24th August 1860.

## — No. 8. —

EXTRACT REVENUE LETTER to *Madras*, dated 16th October (No. 66) 1861.

5. It is gratifying to learn that Dr. Cleghorn is sanguine as to the successful cultivation of tea in the Southern Provinces of India. With respect to the importance of the employment of skilled manufacturers, which the conservator dwells on so much, I must remark that I have received no acknowledgment of my Despatch of the 31st October last, No. 73, in which I sanctioned, as an exceptional case, the grant of aid for this purpose for a limited time, nor do I find that Despatch included in the quarterly statement of Despatches remaining unanswered up to the 30th of June 1861. It appears, however, from your proceedings of the 5th of January last, that you were of opinion that the grant of land made to Mr. Rae for tea plantations lessened the necessity for the grant of this assistance, though you sought further advice on the matter. I shall, doubtless, be furnished with the result of your deliberations on the opinions which you may receive on this point; but it seems to me that if the necessity for instruction in the manufacture of tea was as great as was represented to me last year, it would not be diminished by the circumstance of Mr. Rae's operations, from which no result can be obtained for several years to come, until the plants should be old enough to admit of the leaves being picked.

## — No. 9.—

GOVERNMENT TEA PLANTATIONS : the Yield of the Factories, and the Support given to Private Capitalists, with Suggestions for the Improvement of Irrigation in the Dehra Dhoon.

By Dr. *William Jameson*, Surgeon-Major, Superintendent Botanical Gardens, North Western Provinces.

From Superintendent Botanical Gardens to Secretary to Government, North Western Provinces (No. 285), dated Seharunpore, 12 May 1862.

Sir,

I HAVE the honour to lay before you, for the information of the Honourable the Lieutenant Governor, a detailed statement showing the manner in which the Government tea plantations have been worked, and the results obtained during the last season.

2. For some time during the season I was absent from my duties, bad health having compelled me to visit Europe on medical certificate. During my absence my work was actively and energetically conducted by Dr. J. L. Stewart. To him I made over charge on the 1st March, sailed from Calcutta on the 24th March, and returned again on the 1st November, and resumed my office on the 21st November.

3. The out-turn of tea during the last season shows a decrease on that of the former year, caused by the great drought during the cold weather and months of April and May. The grain crops throughout the upper part of the Doal were a failure. It ought not, therefore, to be a matter of surprise that the yield of tea shows a decrease, particularly as the chief or first crop of leaf almost entirely failed. Considering this, the decrease may be considered small, and showing how admirably the plant is fitted for the Kohistan of the North Western Provinces and Punjab.

4. The quantity of tea prepared in the factories was as follows:—

KOWLAGHIE FACTORY, DEHEA DHOON.			
	<i>Green Teas.</i>	<i>Lbs. oz.</i>	<i>Lbs. oz.</i>
Gunpowder	- - - - -	199 0	
Imperial Gunpowder	- - - - -	182 0	
Hyson	- - - - -	150 0	
Young Hyson	- - - - -	386 0	
Hyson Skin	- - - - -	817 0	
			1,734 0
Samples sent to Exhibition	- - - - -	- - -	21 0
<i>Black Teas.</i>			
Souchong	- - - - -	4,846 0	
Fine Souchong	- - - - -	1,853 0	
			6,699 0
Pouchong	- - - - -	3,244 0	
			3,244 0
Bohea	- - - - -	- - -	3,284 0
			14,982 0
<b>Total</b>			
PAOREE FACTORY IN GURHWAL.			
<i>Black Teas.</i>			
Souchong	- - - - -	2,697 0	
Pouchong	- - - - -	2,850 0	
Bohea	- - - - -	4,700 0	
			10,247 0
BHINTAL FACTORY IN KUMAON.			
<i>Black Teas.</i>			
Souchong	- - - - -	1,129 12	
Pouchong	- - - - -	64 12	
Bohea	- - - - -	75 0	
			1,269 8
			26,498 8
<b>Total</b>			
HAWUL BAUGH FACTORY IN KUMAON.			
<i>Green Teas.</i>			
Fine green tea	- - - - -	521 0	
Hyson skin	- - - - -	880 7	
			1,401 7
<i>Black Teas.</i>			
Souchong	- - - - -	2,707 8	
Bohea	- - - - -	2,952 8	
			5,660 0
AYAB TOLI FACTORY IN KUMAON.			
Souchong	- - - - -	7,103 8	
Bohea	- - - - -	856 8	
			7,960 0
			41,519 15
<b>Total</b>			
Showing a Grand Total of			<i>Lbs.</i> 41,519 15

5. But if there has been a small decrease in the quantity of tea, it has been met by an increase in the produce of seeds, the yield being 2,220 maunds, or 79 tons; thus:—

Kowlaghir Plantation	-	-	-	-	-	Mds.	860	0	
Paoree ditto	-	-	-	-	-	"	260	0	
Ayar Toli ditto	-	-	-	-	-	"	370	0	
Hawal Baugh ditto	-	-	-	-	-	"	480	0	
Bhimtal ditto	-	-	-	-	-	"	250	0	
							<hr/>		
							Mds.	2,220	0

6. Add to this the produce of the

Khangra Plantation	-	-	-	-	-	"	1,416	0	
							<hr/>		
							Mds.	3,636	0

and we have an out-turn of 3,636 maunds, or 130 tons.

7. This immense produce has enabled me to give great assistance to private planters throughout the Kohistan of Kumaon, Gurhwal, Dehra Dhoon, and Punjab, as will be perceived by the appended Table, which shows that the large quantity of 2,513 maunds, or 89 tons of seeds, have been distributed gratis to them.

8. In addition to this large quantity of seeds, large numbers of seedling tea plants, amounting to two millions four hundred thousand, have been, or are being distributed.—See Appendix B.

9. But, though the amount of seeds and plants at my disposal for distribution is immense, it comes far short of the indents received, new parties seeking other fields than those of the Kohistan of the North West Provinces and Punjab to carry on tea cultivation. Thus, last season a company established themselves at Hazareebaugh, and to them 15 maunds of seeds were given. To the Neilgherries, too, considerable quantities of seeds have been sent, through Dr. Clegghorn, superintendent of forests, and by him I have been informed that Her Majesty's Right Honourable Secretary of State for India has sanctioned the engagement of some skilled native tea-makers from the Government factories, North West Provinces, in order to assist tea planters in the Madras Presidency to prepare tea.

10. Financially, the tea plantations may be thus considered:—

	Rs.	a.	p.
To 41,519 lbs. 15 oz. at Rs. 1. 8. per lb. =	-	62,279	14 6
2,200 maunds of seeds, at 20 rupees per maund, =	-	44,000	- -
<hr/>			
Total - - -	Rs.	1,06,279	14 6
To expense of working the plantations - - -	-	48,000	- -
<hr/>			
Balance - - -	Rs.	58,279	14 6

11. To this must be added the value of tea seedlings distributed, viz.,

8,00,000 seedlings at 3 per 100 =	-	24,000	- -
<hr/>			
Total Balance - - -	Rs.	82,279	14 6

12. Of the teas prepared, 16,000 lbs. are being packed for transmission to London for sale in the London market, and the remainder will be sold by auction at Almorah and Dehra Dhoon, in compliance with the orders of Government. Some delay in packing the teas has occurred, owing to the limited establishment of carpenters, which, however, is being remedied.

13. By private planters the demand for skilled tea makers and native overseers to superintend their factories and plantation operations is great, and to many, such as Messrs. Dick, Berkeley, Troup, Smith, Knyvett, Mohur Singh, Ramnath, &c., skilled native workmen have been given.

14. *Chinese Tea Makers.*—Some of the Chinese tea makers, whose time of service had expired, have left Government employ, and entered that of private parties, being tempted by a much higher rate of pay, and it has been found necessary to give an increase to the remaining tea makers. This, however, has been done without any increase to the establishment, the increased pay being more than met by that of the men who have resigned.

15. *Apprentices.*—Owing to the small allowance granted to them, the number of apprentices sanctioned by Government has never been quite filled up, and the number now on the establishment is three, two having left for better paid appointments. Their services have been found highly useful in the plantations, and could not be dispensed without detriment to the works going on.

16. *Overseers.*—Owing to the numerous tea companies springing up throughout the Kohistan of the North West Provinces and Punjab, the demand for experienced European overseers is increasing. The overseer of the Kowlaghir plantation in the Dehra Dhoon has been induced by offer of higher pay to leave Government employ and enter that of a private company. The overseer, too, of Ayar Toli plantation has also left for a more lucrative appointment.

17. To conduct the duties at Kowlaghir in the Dehra Dhoon, I have deputed the assistant superintendent of tea plantations, Mr. James Thompson; and Mr. T. Mooney conducts the duties at Hawal Baugh and Ayar Toli. By both parties the works are carried on actively and efficiently.

18. The Paoree plantation has been made over to Mr. J. Henry from the 1st April, and will form the subject of another communication.

19. To all the tea planters throughout the Kohistan and valleys of the North West Provinces I have sent a circular, requesting information as to the quantity of land now brought under cultivation by them, &c., and as soon as I receive replies, I shall lay before you, for the information of the Honourable the Lieutenant Governor, a detailed statement, in order that his Honour may see how the cultivation is spreading.

20. From the Kallee in Kumaon to the Raveè in the Kohistan of the Punjab, the cultivation is being actively and energetically carried on both by European and native capitalists; and the day is not far distant when we may expect to see tea exported from the British Himalayas as its staple article of produce, and the hills made lucrative, instead of as at present a drag on the revenues of the country.

21. In a few years the Dehra Dhoon, the most attractive spot in the North West Provinces to the European settler, will become a great tea garden. In every direction in it tea plantations are springing up, and the two things wanted to make them there universal are, in the eastern Dhoon drainage, and the western Dhoon water for drinking purposes and irrigation. The latter might be made available by anicuts being formed near the base of the Himalayas, or at such places where the drainage of the outer Himalayas escapes. It is a fact, that at the very time when water is most wanted from the canals in the Dhoon, viz., in seasons of drought, or even in very dry weather, it can only be obtained in limited quantity. None of the canals have feeders, and depend entirely on the supply of the water in the rivers from whence they take their rise. In the Dehra Dhoon the want of water in a dry season is much felt. In the small canals the supply of water dwindles down to a few inches. Were a few reservoirs made, therefore, by forming anicuts at the places mentioned, the supply would always be kept up. Even to the great canals, anicuts made in the interior of the Himalayas on the courses of the great rivers would be of vast advantage, as by them the full supply of water could always be maintained. That natural anicuts existed on the great rivers Ganges, Jumna, &c., at a recent geological period, must be evident to every one who has followed for any distance the courses of these rivers in the interior of the Himalayas; and in our own time, or rather during the last 20 years, on the Indus two natural anicuts have been formed by the descent of glaciers into the bed of the river, and which has caused it at Attock to be easily fordable. This, however, only remained for a time, as the basis of the anicuts, being of a soluble nature, melted and gave way, and allowed the waters to escape, carrying with them vast destruction to life and property. The river swept through and over the Chuch valley, levelling every village. At Attock, where it contracts, it rose 50 feet above its usual level, and the towns of Hanshealghur and Kalabagh, though built on the banks high above the usual level, were nearly ruined. The river remained fordable at Attock for three months before the catastrophe occurred, pointing out the feasibility of the undertaking were it desirable. To the Dehra Dhoon it would be a great boon, and the one thing needful to enable parties to inhabit waterless tracts in both the western and eastern Dhoons. There, too, to form his anicuts, the engineer has everything that he requires in abundance of limestone, sandstone, and quartz rock to form his dams, and the best line available at a cheap rate to form his walls of any strength. There are no engineering difficulties to be experienced, as occur on the

## EXTENSION OF TEA PLANTATIONS IN INDIA.

19

the barren volcanic rock of Aden. But even there, and in a porous rock like lava, reservoirs of vast extent have been made, and in them a supply of water capable of supplying the town, with a population of 30,000, for three years, is kept.

I have, &c.  
(signed) *W. Jameson*, Surgeon Major,  
Superintendent Botanical Gardens,  
North Western Provinces.

## APPENDIX (A).

STATEMENT showing TEA SEEDS distributed from the Government Tea Plantations in Kumaon, Gurhwal, and Dehra Dhoon, during the Season 1861.

No.	NAME of PARTIES.	Quantity of Seeds distributed.	TOTAL.	REMARKS.
		<i>Maunds.</i>		
1	Major Ramsay - - - -	57 0		
2	Mr. Lyall - - - -	57 0		
3	Kundun Lall Shah - - - -	10 0		
4	Captain Dansey - - - -	40 0		
5	Major McPherson - - - -	50 0		
6	Captain Batt - - - -	50 0		
7	Colonel E. Money - - - -	75 0		
8	General Richards - - - -	50 0		
9	Colonel Drummond - - - -	15 0		
10	Captain R. G. Mayne - - - -	50 0		
11	Sealkote Tea Company - - - -	75 0		
12	Captain Ellis - - - -	40 0		
13	Captain Gwane - - - -	20 0		
14	Jai Sah - - - -	10 0		
15	Mr. McIver - - - -	40 0		
16	Mr. F. A. Warrand - - - -	30 0		
17	General Storey - - - -	50 0		
18	R. Rich, Esq. - - - -	75 0		
19	Lieutenant C. Troup - - - -	75 0		
20	Major Swetenham - - - -	15 0		
21	Captain Hutton - - - -	15 0		
22	Captain Murray - - - -	20 0		
23	Mrs. Dick - - - -	40 0		
24	Mr. Dick - - - -	40 0		
25	Colonel Knyvett - - - -	30 0		
26	Major Raikes - - - -	30 0		
27	Nassun Tea Company - - - -	50 0		
28	Captain Fitzgerald - - - -	20 0		
29	Major Rind - - - -	30 0		
30	Mr. Forrest - - - -	40 0		
31	Colonel Smyth - - - -	30 0		
32	West Hopetown Tea Company - - - -	45 0		
33	Captain Batinge - - - -	25 0		
34	C. B. Blair, Esq. - - - -	25 0		
35	Mr. Berkeley - - - -	50 0		
36	Colonel Campbell - - - -	10 0		
37	General Innes - - - -	40 0		
38	Mr. W. Greig - - - -	20 0		
39	Ramnauth - - - -	8 0		
40	Nund Lall - - - -	8 0		
41	Kuneyah Lall - - - -	8 0		
42	Rajah Lall Singh - - - -	8 0		
43	Fawkeer Dass - - - -	5 0		
44	Pretum Dass - - - -	5 0		
45	Maharajah of Pateallah	10 0		
	Seeds distributed to 20 Europeans } from Holta - - - - }	600 0	577 0	
	And 301 Natives - - - -	417 0	1,017 0	
	GRAND TOTAL - - - <i>Maunds</i>		2,513 0	

Office of Superintendent,  
Botanical Gardens, N. W. P.  
Saharunpore, 12 May 1862.

(signed) *W. Jameson*, Surgeon Major,  
Superintendent Botanical Gardens,  
North Western Provinces.

## APPENDIX (B).

STATEMENT showing TEA SEEDLINGS distributed from the Government Tea Plantations in Kumaon, Gurhwal, and Dehra Dhoon, during the Season 1861-62.

No.	NAME OF PARTIES.	Number of Plants.	TOTAL.	REMARKS.
1	Lalla Ramnath - - - -	50,000		
2	Kuneyah Lall - - - -	30,000		
3	Thakoor Dass - - - -	25,000		
4	Buctawur Singh - - - -	25,000		
5	Nund Lall - - - -	25,000		
6	Mrs. General Dick - - - -	25,000		
7	J. McKinnon, Esq. - - - -	25,000		
8	Rev. L. Herron - - - -	25,000		
9	Colonel Knyvett - - - -	35,000		
10	Major McPherson - - - -	35,000		
11	R. Rich, Esq. - - - -	100,000		
12	Lieutenant Troup - - - -	100,000		
13	Colonel Money - - - -	100,000		
14	Mr. Meakin - - - -	100,000		
15	Captain Ellis - - - -	100,000		
	Distributed from the Kangra Plan- tation to 11 European Planters - }	1,100,000	800,000	
	10 Native Planters - - - -	500,000		
			1,600,000	
	TOTAL - - - -		2,400,000	

(signed) W. Jameson, Surgeon Major,  
Superintendent Botanical Gardens,  
North Western Provinces.

Office of Superintendent,  
Botanical Gardens, N. W. P.,  
Saharunpore, 12 May 1862.

— No. 10. —

REVENUE LETTER from Madras, dated 26th May, No. 37 of 1852.

Proceedings of  
Government, 26th  
May 1862, No.  
1166.

1. WITH reference to paragraph 5 of your Despatch, No. 66, dated 16th October 861, we have the honour to forward herewith a copy of a report from our Board of Revenue on the subject of procuring from Bengal persons skilled in the manufacture of tea, for the purpose of teaching the art to those engaged in the culture of the plant on the Neilgherries, and of testing the marketable value of the leaf produced in this Presidency. A copy of our orders on the Board's report is also enclosed.

2. You will observe that we have concurred with the Board in their conclusion, that it would be premature now to procure skilled manipulators from Bengal. There are but two tea plantations on the hills, the owner of one of these, Captain Mann, has not responded to the Board's request for his opinion on the subject; the owner of the other, Mr. Rae, deprecates any attempt "to test the leaf as at present existing in this Presidency." It is generally admitted that though the tea shrub grows luxuriantly on the Neilgherries, and on some other of our hill ranges, there are few plants in a fit state to produce leaves from which superior tea could be manufactured. There is thus no opening at present for the employment of the skilled manufacturers proposed to be procured from Bengal, and the most probable result of testing the tea now grown on the hills, would be to bring it into discredit in the English market.

3. Under these circumstances, we trust that you will approve of the decision at which we have arrived on the subject.

4. We

4. We have been informed by Mr. Rae that tea made by him from leaves produced on the Neilgherries has been highly approved by a competent judge in Bombay.

5. We beg to explain that your Despatch, No. 73, dated 31st October 1860, did not appear to us to require any reply, and was consequently not included in our list of unanswered despatches.

Enclosure 1, in No. 10.

(No. 2215.)

No. 476.—PROCEEDINGS of the Board of Revenue, dated 4th April 1862.

READ Government Proceedings, Revenue Department, No. 541, dated 12th March 1862, calling the early attention of the Board to paragraph 2 of the Government order, dated 5th January 1861, requiring a report on the subject of any assistance being rendered by Government in procuring persons skilled in the manufacture of tea to teach the art to those engaged or wishing to engage in the culture of the plant, and to decide whether tea of a marketable quality could be made from plants grown on the hills.

Read also the following abstract of the replies to the Board's Proceedings, No. 329, dated 18th January 1861, communicating the G. O. of 5th January 1861 to the collector of Coimbatore and other gentlemen on the hills, for their opinion on the question mooted in it.

1. Captain H. R. Morgan, acting conservator of forests, states that it is of the utmost importance to test the value of the tea-leaf grown on Captain Mann's and Mr. Rae's plantations on the Nilgiris as further private enterprise depends on the successful issue of the experiment. He is of opinion that tea equal, if not superior to that of Assam, which sells for two rupees per lb. in the market, can be produced on the Nilgiris, but that the soil and climate of the Shervaroys are unfit for the culture; a few tea plants seen by him in January 1861, in Mr. Richardson's coffee plantation, were quite unfit for the experiment.

From Acting Conservator of Forests, No. 352, dated 1st, in Cons. 6th Feb. 1861, No. 772.

2. The Ootacamund Improvement Committee and Colonel Woodfall are in favour of the proposition that a few skilled manufacturers should be obtained from the North West Provinces in order to test the merchantable character of the tea grown on the hills. Colonel Woodfall adds, "The leaves on the plants in the small experimental plantation belonging to Captain Mann will, I believe, be in a fit stage for picking within the ensuing two or three months, so that if it be practicable to have the manufacturers here during the present season, the question might be shortly settled; and, if favourably, many may be encouraged to enter upon the cultivation. Whilst on the other hand, it will be three or four years at least before the plants on Mr. Rae's estate can have attained sufficient maturity for the experiment; and as Captain Mann has devoted the whole of his capital and energies to the cultivation of coffee to a large extent in Coorg, it is not probable that he will now carry out his original intention of procuring skilled manufacturers either from China or the North West Provinces at his own expense."

From Secretary Ootacamund Improvement Committee, dated 1st, in Cons. 5th Feb. 1861, No. 749. Colonel Woodfall, 12th February in Cons. 14th March 1861, No. 1616. Ditto 14th, in Cons. 18th March 1861, No. 1682.

3. Mr. Ouchterlony observes that the experiments hitherto tried have fully established the fact, that tea will grow fairly and bear seed in various parts of the Presidency, and more especially on the Nilgiris, and that the only thing remaining to give local private enterprise an impetus in this branch of agriculture, is to establish the market value of the article as there produced, about which there is some doubt, which can only be cleared by subjecting the leaf to skilful manipulation for which there has been no opportunity hitherto, nor will there be any unless Government undertake to afford it, as there are no plantations properly so called, and no cultivation of an extent that would make it worth the owner's while, presently or prospectively, to incur the heavy expense. There are, Mr. Ouchterlony states, very probably no plants at present of the age (from three to five years) believed to yield the best tea, yet an experiment with such as are of a more advanced age and now available, will still decide whether the leaf, when taken at the proper time, and prepared as it ought to be, will be a merchantable article or not.

J. Ouchterlony, Esq., dated 19th, in Cons. 25th March 1861, No. 1881.

4. Mr. Rae has entered somewhat fully into the subject of tea cultivation, in his reply; but it appears sufficient for the present purpose to make only such quotations from it as bear upon the question of sending for manipulators from the North West Provinces, and they are accordingly as follows:

F. H. D. Rae, Esq., dated 9th, in Cons. 14th February 1861, No. 931.

Paragraph 2. "His Excellency the late Governor Sir Charles Trevelyan sent me a message through the conservator of forests, that if I would take up the cultivation of tea he would procure manufacturers for me and bear half the entire cost (1) of their coming to and returning from this; and (2) of their pay during the period of their contract service, as proposed by Dr. Jameson. Though intending to do so, I have not yet brought this matter to the notice of the present Government."

Paragraph 4. \* \* \* \* \*  
"I beg to state my firm conviction, that not a single plant now exists within this Presidency fit to pick. Without a study of our subject, and a knowledge of all that is required of us, I must say, I view the proposition to procure 'native tea-makers,' to 'test the leaf

as at present existing in this Presidency,' with feelings of great alarm, and would rather that my efforts on grass land be left to my own resources than that the aid of Government should, by any unwitting misdirection, tend to retard the extension of this cultivation. Bengal was years in shaking off its bad name, which, but for the acts and great liberality of the Government of India, would now have clung to it even as it still does to Paraguay. The failure by this Government on forest soil, would be a dire blow to private enterprise on grass land, but a successful issue here would lead to similar attempts being made by the Bombay, Ceylon, and Cape Governments."

Paragraph 6. \* \* \* \* \*

"We require (1) the appliances of the art of manufacture from Calcutta, as suggested by Dr. Jameson; (2) skilled manipulators of a stamp not proposed by Dr. Jameson; (3) we require to be taught how to make the plant 'flush'; (4) we require gatherers to be instructed in the art of picking, on the mode of conducting which Mr. Fortune and others declare depend both the health of the plant and quality of the tea; (5) we require intelligent Madrasses to be instructed in the manufacture to render us permanently independent of Bengal, for 'the nicety of the art is not to be acquired by description, many Chinese do not possess it, and some never'; and, finally, in our untried soil, altitude, latitude and climate, we require (6) manipulators competent to overcome any unfavourable, or to them new circumstances, for tea 'produced under any unfavourable circumstances of soil, climate, state of the weather, or leaf, cannot by any manipulation be rendered of superior quality.'"

Paragraph 10. \* \* \* \* \*

"I have a large number of plants including some of the Assam variety, which date their age from last monsoon; also a considerable number, ageing from 1859, were contributed towards my experiment by Dr. Cleghorn. These latter were mostly planted out permanently on a piece of rich grass land at Kulhatty, and they are now in such vigorous growth, that I almost fear the altitude of Kulhatty (some 5,000 feet) may possibly be too low to produce the very finest leaf: while, however, tea can be successfully produced in Assam at extremely low elevations, and bearing in mind the great range of the tea plant, I think we have strong grounds to go on in Kulhatty, having already given as the first essential, viz. unbounded high health, much more vigorous than Coonoor. Well-formed plants speedily produced are a great desideratum, and I can only reach the results attained at Kulhatty by a resort to glass and bottom heat. Major Thelwall, of Bengal, has lately produced, under high culture, plants fit to pick that were only 17 months old; and, as I am pursuing a strictly garden culture in a few acres of the grass land at Sholor (more humid than Coonoor, but elevation the same), I of course hope for the best. The manipulators will take a long time to reach this, as proposed, from the Deyrah Dhoon; and at Kulhatty if not also at Sholor, there will be a few thousands of plants at the perfection of age for quality, and otherwise, I trust, fit to pick, in the spring of 1862; about 12 months hence."

Paragraph 11. "I would further remark on the nature of Dr. Jameson's proposal as bearing on the essential nature of the aid I now beg to seek through the Board from Government. His proposal is to send us 'four native tea-makers for two years.' These men are now producing many thousands of pounds of tea annually, an amount utterly beyond the attainment of this Presidency, certainly within the period mentioned. Mr. Fortune sets down four men as sufficient for an area under full and mature bearing of 1,800 picking acres! I would beg, therefore, to propose that two men for four years, or even longer, would better suit the requirements of this Presidency. A factory is not essential to every estate. The practice of selling raw leaves too, or having them manufactured at central factories, obtains in Bengal, and largely so in China, Japan and Java; but it is clear that the first estate fairly started requires a factory as a *sine qua non*. I would be glad if one of the two manipulators I have proposed were to be permanently made over to my plantation from the outset, while the other might, if thought desirable, be sent to all parts of the Presidency to 'test' as proposed, and be finally made over to any one, other than myself, who may need him, failing which I shall be happy to receive him also; for in paragraph 6, I have detailed three requirements which will afford abundant occupation, even though I have but few plants ready from which to manufacture. I have finally to remark on Dr. Jameson's proposal that natives of Bengal are offered us."

Paragraph 12. "The first essay at tea-making by Chinamen imported by Mr. Fortune in the Himalayas was a dead failure, having 'the objectionable Ankoy flavour.' No tea is exactly unmerchantable in the presence of a market, for the worst is still good for adulterating purposes; but the Ankoy from near Amoy is merely the worst known variety, the worst among bad, for the tea we Englishmen drink is astringency itself, and little better than the adulterated refuse of China. 'All the most exquisite kinds are kept for the epicures of the province,' says a late writer; 'the pick of Japan is the property of its king.' There, and in China, this beverage is served up frothing, and without milk or sugar; with the teas we consume, we could neither behold it thus nor drink it thus. On the above failure in Bengal, Mr. Fortune was thereupon sent out again to China at immense cost, and after some years' patient waiting, a few of the next Chinamen imported produced a tea 'equal to the kind generally sent in presents, and better for the most part than the black teas of commerce.' Darjeeling tea is now selling in London 9*d.* in advance of the very best China. Indian teas (not Assam) are now bought up at home by private contract to mix with and improve the China product, which is the reason why these imports do not appear in the English price lists. The contiguous Chinese dominions are now largely importing tea from India! The high



high character of the teas of the Himalayas is now fully established, but can a private individual afford to risk such a mishap as the one, the Government of India so bravely and fairly surmounted? Dr. Jameson, however, offers us natives, and says that 'no Chinese tea-makers are available for the Nilgiris.' I, however, desire most ardently to benefit from the very experience of Bengal. I need not recount our untried circumstances of altitude, latitude, climate and grass land, but simply trust I have now shown sufficient cause to be excused asking through the Board for the aid of Government in order to procure manipulators who shall be, if not two of the very men who removed the objectionable Ankooy flavour, at least two who shall be the very pick of that Presidency, be they Chinese or native, available or 'not available'; and this, without the aid of Government, is wholly without my reach. My personal request I limit to one of these two men."

Mr. Lascelles is of opinion that as a very considerable capital of about 400 rupees per acre is required for tea cultivation, and a much longer period must elapse in the speculation than in coffee or any other before it becomes remunerative, some indulgence should be shown by a relaxation of the terms usually granted for occupation of waste land, and that any interference of Government beyond this is undesirable. It appears that if every tea-leaf on Captain Mann's and Mr. Rae's plantations were picked, it would not employ two manipulators for six months at the rate at which manipulation is practised in Assam, viz., 2 lbs. per diem per man; and Mr. Lascelles, therefore, doubts the expediency of bringing such artisans so great a distance at the present stage of the experiment.

Mr. Fischer is in favour of the proposition, and suggests that the persons to be obtained should be qualified to determine whether the localities in this Presidency in which the cultivation has been tried, are such as are best adapted for the successful growth of the plant. He has about 300 plants on the Shervaroys, which were sent to him by Dr. Wallich at two different times about 25 years ago. "They appear," Mr. Fischer states, "to have succeeded remarkably well, inasmuch as they have attained the height of upwards of 20 feet, and have regularly fructified every year after the first five years. The seeds as they fall grow up under the trees, and are rooted up and thrown away every year with the weeds: but this year I have collected them and given them to two or three parties who had written for them, and I shall be glad to supply the remainder to any one who may want it."

"If the people to be obtained from the North-west report favourably of the Shevaroys for the growth of tea, I would give it a trial on an extensive scale, if Government were to give me lands on the same terms as they have done to Mr. Rae."

Mr. Richardson is in favour of the proposition as, from ignorance in the preparation of the leaf, the plants have hitherto been allowed to grow up into large trees on the Shevaroys.

He is not sure that the climate and soil of every part of Wynad are suited for tea cultivation, but he was about to try the experiment in a locality nearly 1,500 feet lower than the Shervaroys, and Colonel Wooldridge (a coffee planter) was also disposed to try it on the Bramagheri range, which is about 5,800 feet above the level of the sea, comprising an area of about 10 square miles, if Government would give him 500 kanis on the same terms as they did to Mr. Rae on the Nilgiris.

Mr. Thomas is of opinion that it would be premature to send out for any manufacturers now, as there is as yet no tea to manipulate, except a little on Captain Mann's plantation, and that gentleman has not, he believes, asked for such assistance, and probably from his connexion with China, knows the process well himself. Mr. Thomas adds, "I have tasted fair tea from Captain Mann's plantation three years ago. Mr. Rae can have no tea fit to manipulate for at least five years, his plants being now seedlings."

*Resolved*, That as Captain Mann does not appear inclined to favour the Board with a reply to their application to him on this subject, the above papers be forwarded for the consideration and orders of Government, with reference to their Proceedings in the Revenue Department, No. 17, dated 5th January 1861.

#### Enclosure 2, in No. 10.

From the above abstract, it appears that there is but very little, if any, tea plants at the present time in this Presidency sufficiently advanced, or not too much neglected to produce leaves fit for manipulating with any prospect of favourable results; and, as that little could only be obtained from Captain Mann, who has not yet replied to the Board's reference on the subject, which will account for the delay in submitting this report, the Board consider that it would be premature to send for any skilled manufacturers yet at the Government expense, but that the subject may be again taken into consideration at some future date. The recent resolution of the Supreme Government on the subject of waste lands has removed all difficulties in that direction.

(A true extract.)

(signed) R. A. Dalzell, Sub-Secretary.

To J. D. Sim, Esq.,  
Secretary to Government, R. D.

Copy to E. B. Thomas, Esq., Collector of Coimbatore.

„ to Captain H. R. Morgan, Officiating Conservator of Forests.

„ to Rev. J. R. Macfarlane, M.A., Secretary Agri-Horticultural Society.

A. R. Lascelles, Esq.,  
26th February, in  
Cons. 1st March  
1861, No. 1326.

W. Fischer, Esq.,  
dated 16th, in Cons.  
18th May 1861,  
No. 3044.

Mr. H. Richardson,  
Deputy Collector  
Wynad, dated 4th,  
in Cons. 9th April  
1861, No. 2195.

E. B. Thomas, Esq.,  
Collector of Coimbatore,  
No. 77, dated  
19th, in Cons. 23d  
April 1861,  
No. 2525.

Enclosure 3, in No. 10.

REVENUE DEPARTMENT.

PROCEEDINGS of the Madras Government.

READ the following Proceedings of the Board of Revenue:—

Forwarding for orders papers regarding the subject of Government pro- (Here enter 4th April 1862,  
curing persons skilled in the manufacture of tea to teach the art to those No. 2215).  
engaged in the culture of the plant, with the Board's observations thereon.

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No. 477.—ORDER thereon, 26th May 1862, No. 1166.

1. THE Governor in Council observes, that there are only two tea plantations on the Neilgherries, viz., those of Mr. Rae and Captain Mann. The latter gentleman has not responded to the Board's communication regarding the advisability of procuring skilled manipulators from Bengal to test the tea grown on the hills, and the former objects very strongly to any attempt to "test the leaf as at present existing in this Presidency."

2. There can be no doubt that the tea shrub grows well on the Neilgherries, but it seems generally admitted that there are few plants in a fit state to furnish leaves suited for the manufacture of superior tea. The quality of tea of course depends greatly on manipulation, but no manipulation, however skilful, can be expected to produce good tea from inferior leaves, and the most probable result of now testing the tea grown on the hills would be, as Mr. Rae evidently fears, to bring it into discredit in the English market.

3. For these reasons the Government agree with the Board of Revenue that it would be premature at present to procure any skilled manufacturers from Bengal.

(True extract.)

(signed)

J. D. Sim,

Secretary to Government.

To the Board of Revenue.

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— No. 11. —

EXTRACT REVENUE LETTER to Madras, dated 14 August (No. 31) 1862.

\* From Conservator of Forests for 1860-61.

7. THE accounts of the cultivation of tea on the hill ranges of your Presidency in this report,\* as well as in the letter and enclosures from your Government of the 26th of May last, No. 37, which I received on the 5th ultimo, are gratifying from their favourable character. Nevertheless, as the plantations are not in that state to require the assistance of the skilled manufacturers whom Dr Cleghorn two years ago suggested for them, I approve of your decision not to obtain the services of any such persons from Bengal.

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— No. 12. —

REVENUE LETTER from Madras, dated 12 September, No. 62 of 1862.

1. You will have learnt from our Despatch of 26th May 1862, No. 37, on the subject of procuring tea manipulators from Bengal for employment on the tea plantations on the Neilgherry Hills, that we concurred with the Board of Revenue in their conclusion that it would be premature to send for any workmen of this description yet at the Government expense.

2. The Board's reason for declining to support the proposal, as you have been informed, was, that there was little or no produce fit for the manipulators to work on.

3. We now forward the accompanying proceedings of the Board, dated 23d June, submitting a letter from Dr. McPherson, the inspector general of hospitals, as also a memorandum by Mr J. Ouchterlony, dated 29th July, from which it will be seen that the opinion formed by the Board is not applicable to all the tea plantations on the hills, and that work could be found there for the manipulators. Dr. McPherson, who has paid much attention to tea planting and manufacturing in

Proceedings of Government, 29th August 1862, Nos. 404—407.

in different parts of the country, states that he is acquainted with Mr. Mann's and Mr. Fischer's plantations on the Neilgherries and the Shevaroy's respectively, and that a correct system of manufacture is alone necessary to render the produce of the former equal, if not superior, to the tea grown in the lower ranges of the Himalayas. The memorandum of Mr. Ouchterlony, who has been managing Captain Mann's plantations after his departure for England in the beginning of the year, supports the view taken by Dr. McPherson of the character of those plantations.

4. On a careful consideration of these papers, we were convinced of the necessity of our assisting the tea planters in ascertaining the merchantable quality of the tea produced in this Presidency, and were of opinion that the time had arrived for doing so. We have, therefore, in supersession of our former Order of 26th May 1862,\* applied to the Government of India for two qualified manipulators from the North Western Provinces, who we desired should, for the present, be bound by agreement to serve in this Presidency for three years. The services of these men will, as soon as they arrive, be placed at the disposal of Mr. Mann.

\* Forwarded with Despatch, 26th May 1862, No. 37.

5. Our proceedings on the subject are enclosed.

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Enclosure 1, in No 12.

PROCEEDINGS of the Madras Government, Revenue Department, 29 August 1862.

No. 404.—Read the following Proceedings of the Board of Revenue, dated 23d June 1862, No. 4028.

READ the following from Dr. D. McPherson, Inspector General of Hospitals, to W. Hudleston, Esq., Secretary to the Board of Revenue, Madras, dated 13th June 1862:—

“Sir,

“1. I TAKE the liberty to address you for the information of the Board of Revenue, relative to their published proceedings on the introduction of tea into the higher ranges of southern India.

“2. I have gone over extensive fields of tea in the Dutch colony of Java, and witnessed its manufacture there on a large scale, and in company with Dr. Jamieson, the Government Superintendent in Upper India, I have gone over the Government tea plantations and others, in the Deyra Doon, paying much attention to the manufacture of the leaf, and I am persuaded that it is worse than useless for inexperienced hands to attempt to produce a marketable article from tea grown on the Neilgherries and Shevaroy Hills.

“3. I am acquainted with Mr Mann's and Mr. Fischer's plantations at these places, and am persuaded that a correct system of manufacture is alone necessary to render the former equal, if not superior, to that grown on the lower ranges of the Himalayas.

“4. I send specimens of both, from which the Board will observe the imperfect manufacture of the one, compared with the other. The leaf of Mr. Mann's tea has evidently not passed through that essential early process, without which, every other part of its delicate manipulations, before it becomes a marketable article, is futile, and the acidity perceptible in its infusion, is another proof that the first process of triturating and rolling the leaf, after its first scorching has been neglected.

“5. The tea otherwise excels either Himalaya or Assam, and judging from what I have observed elsewhere, on both the ranges mentioned above in Coorg, on the Pulneys, and on Gallikonda also, there are vast spaces where the plant may be propagated successfully.

“6. A tea plantation is a far more certain return to the planter than any coffee concern can be; for with tea, grass lands on slopes shaded by fruit trees, or capable of irrigation, are available for its cultivation, whereby the destruction and expense of removing forest as in coffee is avoided, and the leaf, which is alone consumed in tea, is a much more certain return than the coffee berry.

“7. It is utterly impossible, however, satisfactorily to carry out the several parts of the process of preparing the tea for market, by description alone. Everything relating to it is simple when acquired. The character of our hills for the growth of the plant will be injured, if an article such as Mr. Mann has manufactured be sent to market in Europe. Permit me, therefore, to urge a re-consideration of the decision arrived at by the Board, and again to go up to Government with their recommendation that the small cost of introducing skilled labourers be incurred, who would speedily impart their knowledge to others, and render us independent.”

1. Ordered to be submitted for the consideration of Government, with reference to their proceedings, dated 4th April 1862, No. 2215.

2. The Board's reason for declining to support the proposal to procure skilled manipulators from Bengal was that, so far as they are aware, there is little or no produce fit for them to work on at present. Dr. M'Pherson speaks of Mr. Mann's manufacture, but the Board are not aware that that gentleman has ever manufactured the leaf for the market, or done more than prepare very partially, small samples for individual trial.

3. But apart from these considerations, the Board do not see why Government should provide manipulators for the tea growers of this Presidency, who are perfectly well able to meet this requirement without Government aid.

(A True copy and extract.)

(signed) C. G. Master,  
Acting Sub-Secretary.

Enclosure 2, in No. 12.

No. 405.—MEMORANDUM.

1. MR. MANN'S tea plantation at Coonoor was commenced about 11 or 12 years ago. It was formed from seedlings brought in Wardian cases from China, and seeds from the same, all these having been selected (I believe) by Mr. Fortune in some of the best tea districts of the country.

2. The present state of the plantation, as far as I can ascertain, is this:—

2,400	plants,	age	about	11	years.
4,000	"	"	"	8	"
2,000	"	"	"	2	"
12,000	"	"	"	1	"

20,400 say at 1,200 per acre, 17 acres.

The later cultivation has been from seeds produced by the early trees.

3. From February to June (the crop season) of this year, tea has been prepared from the crop of leaves picked, to the amount of 2,000 lbs. weight.

4. It has thus been established, that the real tea plant of commerce will grow fruit, mature seed, and supply a crop of leaves, at Coonoor. At Ootacamund the shrub also grows, and seeds; and, thus succeeding in these two climates of the hills, their general surface, in suitable soil and situation, may be deemed equally adapted to the favourable growth of the plant. I may observe that I believe Mr Mann was induced to select Coonoor for his experimental cultivation, because it had been pointed out by the late Dr. Turnbull Christie, an eminent naturalist, as the most likely climate for its success.

5. With all the conditions of its favourable growth as a plant established, there has still remained to be determined, whether its produce was really a merchantable article; whether in fact, the climate of the Neilgherries admitted of the tea leaf carrying the flavour of good consumable tea. Repeated rough trials seemed to speak unfavourably on this point. About 25 years ago, Mr. Sullivan, then collector of Coimbatore, sent some prepared tea leaves, taken from a shrub at Ootacamund to Madras, but the infusion from them was pronounced execrable. Subsequent trials had pretty much the same result, and even when the leaves were taken from the better plants of Mr. Mann's plantation, and prepared with more care and a little more knowledge, the least unfavourable opinion that could be pronounced upon the tea by Dr. Cleghorn was, that it was "not palatable." Such results have sufficed to deter others from embarking in the adventure, Mr. H. Rae alone having had sufficient confidence in his own judgment to engage (last year) in tea cultivation at Sholoor. Mr. H. Mann had left Coonoor to settle in Coorg almost immediately after the outset of his tea plantation, he considering that what he met with from local authority was the reverse of encouragement to his costly experiment.

6. But there seems much reason to believe, that the tea prepared from plants growing on the Neilgherries has been thus unpalatable because of its defective manipulation; that the acrid taste so constantly complained of, even when the proper leaves have been selected for the manufacture, has resulted from the want of a right manufacturing apparatus, and from an ignorance of the necessity of every particle of moisture being removed from the leaves, and of how to effect it. Mr. Mann's native overseer, Ponnambalum, though he has shown a good deal of skill in his mode of treatment, has been unavoidably ignorant of the correct style of manipulation, and generally his tea has had a musty smell and an acrid flavour. But, on the other hand, when accident (perhaps) has caused one picking to be better prepared than another, tasters have found this passable; his tea, moreover, has for the past two years, found a ready sale at a fair price in the bazar, and partially in a shop at Ootacamund; it has shown decided improvement by being kept; and last year (of which I can speak from personal knowledge, my friend Mr. Mann having asked me to direct matters at his tea garden for him, on his departure for England at the beginning of the year), the result of partial experiments, made in pursuance of instruction gathered from books was, that some parcels

parcels of tea were so good in flavour and perfume, that I found a pinch added to the ordinary China tea sold in the Ootacamund market, impart to the latter a most agreeable flavour. This apparent strength in the tea, if found to be really present, would give it a similarity to those of Assam, whose value consists in their imparting a flavour to, and improving other and ordinary teas. There is in all this, great encouragement to expect that tea cultivation on the Neilgherries may yet prove an extended and profitable industry.

7. To settle the one doubt that remained to impede a confidence in the enterprise, Dr Cleghorn had been in correspondence with Dr. Jamieson, the Government superintendent of tea plantations in Bengal, to send down a number of tea manipulators, trained practically under his own eye, and skilled in the work. All, in fact, was arranged; the men selected who were both to manufacture the tea and teach the process to others, and their engagement and dispatch to the hills only awaited the Government sanction. The matter however, at that time fell to the ground. But it remains still the one thing needful.

8. From what I have said at the outset, it will be seen that the fruit-bearing trees of Mr. Mann's plantation at Coonoor leave it more the character of a "nursery garden" than a "plantation." The extent barely exceeds five acres. If then it be proved, by scientific manipulation of the leaf, that his costly experiment has proved that the tea of commerce can be successfully cultivated on the Neilgherry Hills, the profit therein resulting to himself must be wholly insignificant. The real and extended advantage must accrue to the Government, directly, in the value imparted to the numerous tracts of waste land adapted to the cultivation, and indirectly in the impetus that is sure to be given to a new and most important industry. It is under this consideration that I venture to submit, that it is both fair and politic, that the whole expenses of bringing down and employing Dr. Jamieson's skilled men, both in preparing tea from Mr. Mann's plants and from any others there may be any where, should be borne by the Government.

9. I have observed, in extracts given from Dr. Jamieson's last annual report, that the parties trained in tea manipulation on the Government plantations are being eagerly and quickly snapped up by private cultivators and tea companies. I would, therefore, humbly suggest if the Government should determine to bring a party of such men down, that advantage might be taken of Dr. Cleghorn's presence in Upper India to request his personally arranging the matter with Dr. Jamieson, and thus ensuring the acquisition of thoroughly skilled manipulators. The very great interest which both gentlemen take in the introduction of this industry, will be the guarantee of a careful selection. The picking of crop on Mr. Mann's garden lasted in the present year from February to June. Perhaps the men had better arrive at the beginning of January next.

10. I may, in conclusion, draw attention to the fact that the 2,000 lbs. of tea picked this year from Mr. Mann's garden, were so from scarcely over five acres of cultivation, and that there would probably have been much more, but for the failure of rain at a particular time. The quantity actually picked, however, averages 400 lbs. per acre, which is a very favourable return if the tea prove of the quality that there seems some show of reason in anticipating. And I may mention that I know visitors from Bengal in late years, civilians, military officers, and merchants, officially connected with tea cultivation or directly interested in it to have expressed strong and decided opinions as to various parts of the Neilgherry hills being well adapted and very promising for the same cultivation.

(signed) *J. Ouchterlony.*

Kotagery, 29 July 1862.

### Enclosure 3, in No. 12.

No. 406.—ORDER THEREON, 29th August 1862, No. 1841.

1. THE Secretary of State in noticing in his Despatch, dated 31st October 1860, No. 73, the reports of Dr. Cleghorn on the growth of the tea plant on the Neilgherries and other parts of the Madras Presidency, authorised this Government to obtain the services for a limited period of a few skilled tea manufacturers from the North Western Provinces, should it appear that there is little chance of the matter being taken up by private enterprise. The Board of Revenue were requested by Government to consult the collector of Coimbatore and some of the residents of the hills on the subject. The Secretary of State again drew the attention of this Government to the subject in his Despatch dated 16th October 1861, No. 66.

2. The Board of Revenue, after consulting the collector of Coimbatore and other gentlemen on the hills, reported, in their proceedings dated 4th April 1862, No. 2215, that there are but very few if any tea plants at the present time in this Presidency sufficiently advanced, or not too much neglected, to produce leaves fit for manipulating, and as those few could only be obtained from Mr. Mann, who has not replied to their reference on the subject, they considered it would be premature to send for any skilled manufacturers at the Government expense, and the Government resolved accordingly.—(Proceedings, dated 26th May 1862, No. 1166.)

3. But the papers above recorded show that the opinion formed by the Board is not applicable to all the tea plantations on the hills, and that work can be found there for tea manipulators, and that they can be usefully employed. The first of these papers is an

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4. Dr. Cleghorn, at present temporarily employed under the orders of the Government of India, has paid much attention to tea plantations in this Presidency, and has therefore been requested to submit to the Government of India any suggestions he may wish to offer on the subject of the selection of persons to be employed on the Neilgherry Hills as tea manipulators.

(True copies).

(signed) *P. W. Hutchins,*  
Acting Deputy Secretary to Government.

— No. 13. —

DESPATCH (REVENUE) to *Madras*, dated 8 November (No. 47), 1862.

I HAVE considered in Council the letter from your Government, numbered 62, and dated the 12th September last, on the employment of skilled manufacturers on the tea plantations on the Neilgherry Hills.

2. The information supplied by the letter of Dr. M'Pherson and the memorandum by Mr. Ouchterlony fully justified your recurring to the authority granted in my Despatch, No. 73, of the 31st October 1860; and I approve of the application which you made to the Government of India for the services of two qualified tea manipulators from the North Western Provinces, for three years.

3. You will not fail to keep me informed of the result of this experiment.

(signed) *C. Wood.*

— No. 14. —

REVENUE LETTER from *India*, dated 7 January (No. 1), 1863.

WE have the honour to forward the special narrative of the proceedings of the Government of Bengal, noted on the margin,\* transmitting reports on the capabilities of the district of Chittagong for the growth of tea and coffee, together with a register of the waste lands available for grants in the surveyed part of the district.

\* No. 8, dated the  
31st December 1862.

We have, &c.

(signed) *Elgin and Kincardine.*  
*R. Napier.*  
*H. B. Harrington.*  
*H. S. Maine.*

Enclosure 1, in No. 14.

SPECIAL NARRATIVE, 31 December (No. 8), 1862.

ENCLOSED is forwarded for the information of the Right Honourable the Secretary of State for India, a copy of a letter from the officiating Commissioner of the Chittagong Division, No. 292, dated the 26th November 1862, together with its enclosures, being letters from Dr. Beatson and Mr. James Bruce, on the capabilities of the Chittagong district for the growth of tea and coffee, and a register of the waste lands available for grants in the surveyed part of the district, as furnished by the collector; all which papers have been published for general information in the supplement to the Government Gazette of the 20th instant.

(signed) *John Geoghegan,*  
Under Secretary to the Government of Bengal.



## Enclosure 2, in No. 14.

From *W. G. Young, Esq.*, Officiating Commissioner of the Chittagong Division, to the Officiating Secretary to the Government of Bengal (No. 392), dated 26th November 1862

Sir,

I HAVE the honour to forward, for the Lieutenant Governor's perusal, two letters addressed to me by Dr. Beatson and Mr. James Bruce, on the capabilities of this district for the growth of tea and coffee. The former gentleman has been a resident in the district for eight years, and the latter for more than 20 years. I also forward a statement furnished by the collector, showing the waste lands available for grants in the surveyed part of the district as distinguished from the unsurveyed hill tracts in which there is any amount of jungle and waste.

2. Perhaps the Lieutenant Governor will think that these papers are sufficiently interesting to be published in the Supplement to the Calcutta Gazette.

P.S.—I shall be obliged by your returning me the enclosed papers when no longer required.

## Enclosure 3, in No. 14.

From *Dr. W. B. Beatson*, Civil Assistant Surgeon of Chittagong, to *W. G. Young, Esq.*, Officiating Commissioner of the Chittagong Division (No. 30), dated 29th October 1862.

Sir,

I HAVE the honour to acknowledge the receipt of your letter, No. 350, dated 18th instant, requesting me to furnish you with a report on the cultivation of tea and coffee in this district, showing if such cultivation might be made a profitable branch of industry, and what causes have hitherto stood in the way of its being carried on.

In reply, I beg to state that I have no doubt that both tea and coffee of excellent quality can be produced in Chittagong, and that the only causes which have hitherto stood in the way thereof have been general ignorance of the fact, and want of capital on the part of the few acquainted with it, who could have given their attention to the manufacture.

Both tea and coffee grow luxuriantly with little cultivation, and are very probably indigenous. The latter seems to have been common at an earlier period, as Sir William Jones speaks of Chittagong, in his letters, as a place "where the hills are covered with pepper vines, and sparkle with the blossoms of the coffee plant." Tea is said to have been found wild lately among the more distant hills, and plants have been sent to Calcutta for examination, but I have never myself met with it.

The cultivation of tea was first introduced by Mr. Sconce, late of the civil service, who imported seed from China, and established an experimental garden about 15 years ago. When I first arrived at Chittagong in the year 1854, the garden had passed into other hands, but was still in good order, and contained not only tea and coffee, but various kinds of spices, cinnamon, pepper, allspice, &c.

Soon after it became neglected, and the fences being destroyed, overrun with cattle, which of course did much damage. Nevertheless the tea plants survived, and many of those originally planted remain to the present day.

The garden is now in the hands of Mr. Fuller, who has about 22 acres under cultivation, and the produce, of which he has sent me a sample, is, in my opinion, superior to any Indian tea I have met with. A sample moreover was forwarded to England last year, and examined by Messrs. Twining & Company, a copy of whose certificate of its good quality is annexed. This sample consisted of leaves coarsely and unskilfully prepared, and it is therefore probable that, when cultivated and manufactured with greater care, Chittagong tea will obtain a high value in the market.

I have not seen any of the coffee produced in Mr. Fuller's garden; other specimens I have met with have been good, though cultivated with little care. The coffee plant requires three years to bring it to maturity, and will not flourish without shade.

With reference to the expense of cultivation, I am informed that coolies can be obtained for 5 rupees per mensem, and boys for 3 rupees. Any amount of labour is probably procurable as large numbers of coolies constantly emigrate to Akyab, who would doubtless prefer remaining in their own district could they find remunerative occupation. At present the cost of clearing an acre of land is 90 rupees.

The cost of watering would be small, as the rains are very heavy and often last from April to November, so that, for a large portion of the year, there would be no outlay on that score. The soil is generally light and sandy, mixed with clay, and would probably require manuring.

With the cultivation of tea and coffee the manufacture of starch might, I think, be advantageously combined.

The common jungle of the district is a species of ginger commonly known as "wild arrowroot." The leaves of this plant die off at the end of the rains, and its tubers are found during the cold weather abounding in starch which they yield to slicing and maceration in water.

water. Starch is largely used in manufactures in England, and I believe a large quantity of the rice exported from Arracan is converted into it. I think, therefore, that starch imported in large quantities would find a ready sale.

The supply of the wild arrowroot is inexhaustible, and if removed at the proper time of year would furnish material for a simple and valuable manufacture, while at the same time the growth of a noxious jungle would be checked.

The dead leaves and refuse of the manufacture would also serve to manure the ground devoted to tea planting. I would strongly recommend that the manufacture of starch from this plant should be made the subject of careful experiment during the ensuing cold weather.

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Enclosure 4, in No. 14.

CERTIFICATE.

"WE tested your sample of tea, and found it A 1; such a tea, if properly packed and brought over here as an article of merchandise, would command a high price, and especially if it were rather better manipulated and not quite so high dried. The flavour, however, is excellent, and the infusion is very bright and clear.

" R. Twining & Co."

"No. 215, Strand, 1 July 1861.

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Enclosure 5, in No. 14.

From *J. E. Bruce, Esq.*, Assistant Salt Agent, Chittagong, to *W. G. Young, Esq.*,  
 Officiating Commissioner of the Chittagong Division, dated October 1862.

Sir,

IN reply to your letter, No. 350, of the 18th current, I have the honour to furnish you with all the information that I possess regarding tea and coffee at this station.

2. From coffee plants which I have seen in private gardens and in the coffee company's garden at this station, which was formed in 1842, I am quite satisfied that coffee will grow well here if planted in suitable soil.

3. The plants in private gardens grow luxuriantly and produce large crops. Those in the company's garden grow also, but not near so large. They also produce well according to their size, but the land on which they were planted was little else than sand, consequently considerable expense was incurred for watering, and large quantities of manure trees were grown for shelter. Under these trees only did the coffee plants continue to grow and produce coffee. Mr. Sconce and myself were the only persons of the Company who took any interest in the garden. He could not always look after it, and for four and a half months I was out of the station at the manufacture of salt. I have no doubt that coffee planted on lower ground would prove a profitable undertaking, provided the revenue is not too high.

4. The company's garden was given up by all the members but Mr. Freitas and myself; but as neither of us could give our attention to it, it was at last abandoned altogether, for the rent was very high, being 14 rupees a year for a very small piece, and no remission could be obtained, though not a fifth part of the original grant was under cultivation, and watering, manuring, weeding, and fencing were very expensive.

5. One Mr. Hogg commenced up this river at Rangoneah on a large scale, but he died, I believe, within the year, so that no conclusion could be drawn from his experiments.

6. Some 30 years ago or more a Dr. Chapman planted coffee on a spot at the back of the lines, and this I learned by having myself gathered the coffee berries in the jungle about 15 years ago.

7. They were very small, and were not ripe when I got them. I have never been again to look after the plants, though I think I can easily find the spot.

8. I forgot to state that a maund of one coffee was sent to England and pronounced good, but not properly picked, and carelessly packed.

9. Mr. Sconce planted a garden of his own entirely at his own expense, in which he put many tea plants also; in our garden then were only three tea trees. Mr. Sconce's garden is now known as Elson's garden, and is in Mrs. Fuller's possession. From this garden Mrs. Fuller has for some years past produced tea, which she manufactures at this place (with untaught natives), some of which taken home by Mr. Radcliffe (lately judge of this station) was pronounced by Twining & Company to be excellent tea, as good as China, but made very badly. I am unable to state what is the produce per acre. In my opinion Mrs. Fuller's plants are planted too close, being so close as to intertwine their branches.

10. As a proof of the hardness of the tea plant I will state two cases; first, the three plants, which were in the company's garden, were excluded from the fenced portion, and left entirely unprotected for four years; the cattle constantly eat them down; still they did not die till the fifth year.

11. Second, the late Mr. Ince planted a garden with tea and coffee, from which, after the third year, he made some tea, but whether good or bad I cannot tell. These tea plants were planted on low land fit for paddy. After Mr. Ince left this, the garden fell into native hands, and some years ago the holder of the garden cut the tea plants down to the ground and sowed paddy. I happened by chance to go to this garden that year, and I saw large green leaves coming up amongst the paddy. On looking closely at them I could not recognise them as any kind of the to me known jungle, though they were at least six times as large as any tea leaves I had ever seen; in all else they were exactly tea leaves; they were growing out of water a span deep, and on personally examining them I felt the old stump and root, and convinced myself that these leaves were growing from these stumps; they grew up, and last year they were healthy plants with plenty of the usual sized leaves and some seeds.

12. I have a plant in my garden that has been broken down, barked by goats, and left utterly uncared for for 15 years at least, and it is still alive, but has few leaves, and the flowers never come to seed. I have tried to restore it, but failed; however, it is still alive.

13. The causes which stand in the way of the cultivation are, first, the want of enterprise in the inhabitants generally; second, the monied men of this district are either merchants, zemindars, or shipowners. The former never think of cultivation at all; the second never encourage experiments of any kind, but grind down their ryots for their rents, and the shipowners look to the water, not the land, for their profits. The ryot thinks rice the most profitable, and he can at least live on it, and has as little means as inclination to try experiments. One great curse to this station is the immense number of cattle kept mostly by people who have not a yard of land to graze them on; they are allowed to feed any where and everywhere. I have had my new fences cut and cattle let in, but to prove who did it was impossible.

14. In conclusion, I think that the experiments which have been made have been in unfavourable places, and have tended to deter rather than encourage further experiment.

15. I reared tea plants from seed last year in gumlows, but on being transplanted at the beginning of the rains they lived, some a month, others more, and the last of them died last month, from which I conclude it is better to sow the seed where the plants are to grow. Two years ago the same thing happened, though I took care of them both years.

16. I sent some tea and coffee plants by sea to one Mr. Portious at Akyab, and he acknowledged receipt of them; the former in fine healthy condition, but the latter several dead and drooping. I never heard what became of them.

17. In all cases the coffee seems to require shade, and the best is a fast growing tree called the chuckwah; it is not too thick in its foliage, and very quickly arrives at a size to shade 30 feet diameter, and ultimately 60 to 64 feet diameter.

18. In our coffee garden, 28 coffee plants would grow under the shelter of one of these trees, the greater part to the north of the trunk. The coffee plants grow to about seven or eight feet in height; those planted eight feet apart did not meet; those at six feet apart did meet.

19. Will you allow me to add that teak and mahogany trees grow well here. The difficulty of getting teak seeds to germinate is easily got over. I have produced thousands of seedlings at the Sudder Ghaut, by simply spreading soil from the bottom of a creek under the trees, and allowing the seeds to remain till they spring up themselves. They fall in November and December, and spring up about the middle of the rains.

20. I planted the teak (four trees which produced the seed) in 1841 or 1842; they were then about three inches high; seedlings obtained from the botanical garden, Calcutta. The three now average 37 feet high to the very top, and five feet eight and a quarter inches circumference at two feet from the ground.

21. I planted six seedlings, one died, one was broken off at the ground by a cow, the others grew up. Three years ago, one was blown entirely down by a heavy north-wester; it has not died, but is growing in that position.

22. If the native landholders could be induced to grow these, instead of the vile useless madder and other trees, they would become very valuable after a number of years; but I fear they will continue to grow firewood, rather than look ahead to the benefit of posterity.

23. I will, with the hope of its being acceptable, make some remarks about cotton which I have grown in my garden on the top of my hill.

24. I received some seed from the collector (Mr. Ward) in November last, with instructions to sow in March. As that was a long time to wait, I thought the seed might spoil, so I at once sowed some on the 4th of November last, and in four days the seed had vegetated. They were allowed to grow in the seed bed till the middle of December, when some were transplanted. Of those transplanted, 12 per cent. died, the rest lived. It is to be remarked that the soil is light soil, and no manure was applied before sowing, but some rotten horse dung was used when the plants were transplanted. Not the least care was taken of them, either those transplanted, or left in the seed bed. They were not weeded nor dug round, nor even watered once for four and a half months, as I was away in the Mofussil.

25. In March last one of the seedlings in the bed produced two pods, but after that none of them looked healthy. However, the first rains in the end of March evidently put new life into them, and in the end of July they began to yield cotton. The plants shot up long  
and

and thin, and had from two to four stems each. I carefully collected the cotton, and I now send you a sample of it with the seed.

26. By examining the seed you will see that there are three different kinds; one kind is covered entirely with a coat of green velvet down, another is partially covered with the same, but having a clean belt round the middle, and none are quite without the green down.

27. I have observed the clean seeds had the longest fibre, that entirely covered with the green down the shortest, and that partly clean and partly covered had fibre of intermediate length. This leads me to suppose that this last is a hybrid betwixt the other two.

28. I have no knowledge of the original cotton of which I received the seeds (it was stated to be New Orleans), therefore cannot say to what extent it has deteriorated; but as the sample was left entirely to nature, grown in high dry land without watering during the whole of the dry season, perhaps some conclusion may be drawn by experienced persons of the probable results of careful cultivation on suitable soil in this district.

29. I may further remark that there was a garden established in Chittagong; so far as I can recollect, betwixt 1836 and 1840, it was on the ground near Mr. Ward's dwelling, on the left hand side of the road, where the old brick building is in ruins, and where rice is now growing.\* This used to be called the Company's garden. I saw cotton plants growing in it, and I know it produced very large purple sugar-cane. These obtained great favour with the natives, and several applied for and obtained cuttings. These produced good cane, and I have seen them sold in the Buxee's Haut.

\* Known as Budnauth's garden.

30. I was in no way connected with the above garden, and cannot give the slightest information regarding the experiments made on their results; but, as it was said to be a Government experiment, probably the collector's office will be able to produce some information on the subject.

31. A gentleman of the name of Price, generally known as Captain J. Price, tried hemp here many years ago, when Mr. Skipwith was judge at the station, and the produce was good, but rather short in fibre. However, Captain Price was a sailor, knew nothing of cultivation, and went the most expensive way about what he did on light sandy land; the loss was considerable in comparison to the small experiment made by him.

32. Linseed is grown in this district to a small extent for the seed only. The seed is well scattered, that the plants may branch and produce seed. It is sown in the cold season, and seldom rises to more than a foot high. It is never cultivated for the fibres. A considerable quantity used to be produced on the islands of Halteah and Duckin Shabazpore.

33. I have tried to induce some of the zemindars in Nezampore to sow it thick, and towards the end of the rains, or in some moist spot, showing them cloth produced from the plant; but I doubt whether they really believed that the cloth they were looking at was the produce of the "Teese" as they call it. However, none of them ever tried it that I know of.

34. There is a wild semi-creeper grows abundantly here, called by the natives Taree, the pods of which are used by the native shoemakers for tanning leather. It is somewhat like the South American sumach. This last plant, which is so much valued for the fine soft light coloured leather which is tanned by it, grows well here. I have several large shrubs of it in my ground. I send a little of the taree pods, but they are three or four years old.

35. Cocoa and nutmegs have been produced on the ground where I live. They were grown by my late father-in-law, Captain Marquard. The May gale of 1849 destroyed all the nutmeg trees but one, which is still growing, but unfortunately a male tree. The cocoa trees died, after bearing fruit for four or five years, I believe from a want of knowledge how to take care of them.

36. The clove tree, the black pepper vine, both produced fruit here. A tree of the former used to grow at the Rev. Mr. Johannes', and may be alive still; I have gathered cloves from it, and Mr. Sconce had the latter in his garden producing fruit. Cinnamon also grows here as a tree, but has never been tried by cutting down to produce shoots, from which the cinnamon of commerce is taken; I have a tree in my garden which produces seed; Mrs. Fuller's garden has also one or two of these trees in it; it grows wild in the hills here of an inferior kind; I send a piece of the wood; the natives call it tezpât.

## Enclosure 6, in No. 14.

EXTRACT from the Register of WASTE LANDS, absolutely the Property of Government, which are available for Grants.

No. of the Plot or Tract.	Pergunnah, Thannah, or other Sub-Divisions in which situated.	Boundaries of the Plot.	Estimated Area of the Plot in Acres.	Actual Area.	Distance from Sudder Station of District and means of Communication with it.	Remarks giving a full description of the Land, its features, Soil, &c. for which it applied, Advantages and disadvantages as regards supply of Labour, Communications, and other Information available.
1	Thannah Ramoo	The boundaries cannot be given, as the lands do not form one block.	A. R. P. Y. 10,617 0 23 26 $\frac{1}{4}$	A. R. P. Y. 10,617 0 23 26 $\frac{1}{4}$	Three days.—There is communication with the Sudder Station, and other important parts of the district, both by sea and land.	The greater part is hilly and the remainder is low land, the soil is "Doahs" sand mixed with silt and possibly fit for cultivation of coffee. Labour plentiful on the coolies can be had in the town if or months, wages advanced.
2	" Tek-naaf	ditto	3,323 0 1 18 $\frac{3}{4}$	3,323 0 1 18 $\frac{3}{4}$	Six days.—Ditto - ditto.	
3	" Chuckeriah	ditto	4,554 1 18 6 $\frac{1}{2}$	4,554 1 18 6 $\frac{1}{2}$	Two days.—Ditto - ditto.	
4	Chittagong, Town Thannah	ditto	2,239 1 7 2 $\frac{1}{4}$	2,239 1 7 2 $\frac{1}{4}$	About two hours.—There is communication with the town by land.	
5	Pharee Rangoneeah	ditto	867 3 29 5 $\frac{1}{2}$	867 3 29 5 $\frac{1}{2}$	One day.—There is communication with the Sudder Station, and other important parts of the district both by water and land.	

The above are the surveyed waste lands. Besides these there is a vast tract of unsurveyed hills available for grants.

Chittagong Collectorate, 22 November 1862.

T. D. Ward,  
Collector