

(1) Number of pages 50(2) Date of repair 8.8.38.

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.**Government of Madras.***Revenue* **DEPARTMENT.**G.O. No. 25-28

Press
~~Mis.~~

Dated 6-1- 1882.Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

6th January 1882, Nos. 25—28.

READ THE FOLLOWING PAPER:—

No. 88. From Colonel R. H. BEDDOME, Conservator of Forests, Madras, to the Secretary to Government, Revenue Department, dated Bombay, 12th December 1881.

I HAVE the honor to inform you that I have paid a visit to the Darjeeling Chinchona Plantations.

2. I met Dr. King, the Superintendent, at Sureil, on a spur of Senchal, about 14 miles from Darjeeling, and about 1,200 feet above the plantations, where he resides whilst on duty in Sikkim, and I spent six days in going over all the different planting and the factory with him and Mr. Gammie, the officer in charge.

3. The planting hitherto has all been carried on in the valleys of the Rungjo and Ryang rivers, tributaries of the Teesta, at elevations between 2,000 and 3,800 feet; all virgin forest at these elevations had been cleared for hill cultivation (called here joom) prior to the commencement of the Chinchona plantations, so they have all been opened out on what we call secondary forest, or kumeri land; and I was rather disappointed to find that there had nowhere been any attempt at the high cultivation pursued on the Nilgiris, and that weeding was only attended to for the first two or three years: the planting, with the exception of some 200 acres of young "Ledgeriana" lately put down, is in patches over a considerable area (about 2,400 acres); the number of trees is as follows:—

Succirubra	...	...	...	...	...	...	...	...	4,320,000
Officinalis	...	...	...	...	...	...	...	...	25,000
Magnifolia (of Naduvatam)	...	...	...	...	...	...	...	...	200,000
Calisaya and Ledgeriana	...	...	...	...	...	...	...	...	400,000
Carthagena	...	...	...	...	...	...	...	...	150
Micrantha	...	...	...	...	...	...	...	...	500

4. The soil where planted is in all cases a friable surface soil with a gritty subsoil of either gneiss or mica-schist, and the planting is in patches, because clay-like subsoils have been avoided; also localities where the mica-schist crops up to the surface, and places where a certain rank grass (*Saccharum cylindricum*) grows which have by experience been found quite unadapted to Chinchonas.

5. The growth of the Succirubra is certainly more rapid than with us at Naduvatam on the Nilgiris, and is quite similar to that on the Tinnevely hills at 3,000 feet elevation. In one portion of the planted area—the slopes below Rungbee bungalow—I saw many trees about 50 feet in height, and one was measured 55 feet high and 29 inches in circumference breast high; they, however, are deficient in leaf and branches and want the fine heads that our Nilgiri trees possess, besides being of less girth and will probably be short-lived in comparison. The system of harvesting the bark is almost entirely that of uprooting; and as this is generally carried out by thinnings in the different areas, not a clean sweep, most of the older plantations have a thin bare appearance which would be ruination in our wind-blown localities, but in these protected valleys in Sikkim there is little or no wind. Coppicing has been carried out over some 50 acres, and the trees in all cases seem to have reproduced splendidly. Mr. McIvor's system of stripping has, however, been a complete failure, not, Dr. King informs me, from the trees not being able to renew their bark, but owing to the ravages of ants, who eat off all the young growth directly it begins to renew; this system is therefore never now attempted. The Java scraping method has been tried on a few

* Succirubra.

scraping method has been tried on a few trees* and with success.

6. The most interesting feature of my visit was the discovery that Dr. King's "Sp. ignota," called "hybrid" in some of the reports and generally known by this latter appellation to the subordinates, is exactly the same as the *Magnifolia* of Naduvatam (Mr. Cross's *pātā de gallinazo*). It grows here with a strong healthy habit and its value has been* fully recognised, and it is now intended to discontinue growing "Succirubra" and plant only this "Pātā" and "Ledgeriana"; the former at the higher elevations, the latter at the lower. This *pātā* is being grown almost entirely from cuttings, as it is not supposed to come true from seed. I saw many seed-beds of it in which about half the plants appeared to be this broad-leaved form and the other half were said to be "Officinalis"; typical "Officinalis," however, in these Sikkim plantations is of very poor growth and very spindly in habit, and it has been acknowledged that the climate does not suit it and it is scarcely at all propagated now, whereas the narrow-leaved forms, like "Officinalis," from "Pātā" seed, appear to be of much stronger and better growth as they mature; I suspect therefore that there is some mistake and that analysis and further experience will prove them to be varieties of the "Pātā" and not really "Crown barks." Mr. Gammie recognises two different forms among the broad leaved glabrous "Pātā" trees; these, to me, were quite undistinguishable. There is also a sprinkling of the downy variety which we call "Pubescens." I would again urge upon your Government the importance of a most careful investigation into the chemical value of this species, both as to the glabrous and the downy varieties ("Magnifolia" and "Pubescens" of the Nilgiris); many individual trees of each should be analyzed to find its largest and smallest percentage of quinine, and both natural and renewed bark should be analyzed. In my first report on the Nilgiri plantations I have stated that it will be far more profitable in every way than "Succirubra," and I have since found that this is the opinion of nearly every one in Ceylon and in Sikkim, and it will probably in time oust *Succirubra* entirely from all localities except very low elevations, but it is necessary to be cautious and have very complete analysis; it will probably be best to grow it entirely from cuttings when we have ascertained our best individuals or varieties by analysis, but I should recommend also very careful experiments with seed.

7. Dr. King has been most successful with "Ledgeriana"; his original trees were all from a pinch of Nilgiri seed, sent by Mr. Badcock from the packet which Mr. McIvor received from Mr. Money. Last year and this year a continuous block of 200 acres with a southern aspect has been planted out with the seedlings from some of the original trees and the plants appear the picture of health; there are four well-marked varieties, the best of which, called by Dr. King No. 1, is not, I think, now represented on the Nilgiris. Dr. King has promised to send seed of all to our plantations, and I trust that we may succeed with them better than hitherto, if ground is opened out at a lower elevation as contemplated and sanctioned.

8. *Ledgeriana* is grown from seed as cuttings are not found to root well; but bottom heat has not been tried.

9. The uprooting system may be all very well in Sikkim as there is a very large area available for planting and fresh land can be taken up each year, and uprooted areas lie fallow for a good many years before they are replanted; it should never be advocated for our limited areas, as I am convinced any attempt to replant the same ground just after uprooting would always be more or less a failure.

10. None of the Sikkim bark is sent to England; it is all made into a febrifuge in a factory on the estates; this febrifuge appears quite similar to what is now sent out by Whiffen as *Quinetum*, and is said to be quite as efficacious as quinine, and it is much cheaper and very easily made. It is prepared entirely from "Succirubra"; the bark is first dried in sheds open at the sides, then by artificial heat, after which it is ground in a bark-mill or pounded, and then steeped in Commissariat barrels for three weeks, three supplies of water being given acidulated with muriatic acid, and run off into tubs where it is precipitated by the addition of caustic soda, then filtered, the liquor running to waste, and the precipitate remaining on the filter; this

is then dried in a drying house (heat about 100°) and pounded, again dissolved in water with sulphuric acid, animal charcoal being added for decoloration, then again filtered, and to this solution a dilute solution of caustic soda is added, the precipitate being collected as before in a filter and again dried and pounded, when it is ready for use, and costs Rs. 9-3-10½ per pound, which calculates for the cost of the bark and the establishment, &c.

11. The whole process appears to be very easy and simple and does not really require any special knowledge of Chemistry, so that if there is the objection, I believe, to our red barks being thrown into the English market, I think Government should consider whether a similar febrifuge should not be made on our plantations. Mr. Gammie has also made very pure quinine from "Officinalis," "Pātā" and "Ledgeriana" barks, and there appears also to be no difficulty or secret about this, though it is only an experiment as yet; it costs much more and the bark has to be boiled, but it cannot cost more than Rs. 30 per pound. It is now to be made on a large scale.

12. It is very sad to see how all these grand Sikkim valleys have been denuded of all virgin forest between an elevation of about 1,000 feet from the foot up to nearly 6,000 feet. In 1848, when this portion of Sikkim became British territory, these valleys were nearly all one continuous forest; the Nepalese then were allowed in and they cleared in every direction for maize, murwah (*ragi*) and other hill cultivation; they stopped their destruction at about 6,000 feet in elevation as the climate there is too cold and bleak, and a belt at the foot of the mountains was left as unhealthy and too hot. Reserves are now formed by Government in the forests above 6,000 feet, very cold situations, where the growth is very slow, and also in the unhealthy forests at the foot; but Government did not recognise the necessity of reserves until it was too late to form them where they were of greatest value and most required; all the country now between 1,200 feet and 6,000 feet has been turned into poor secondary forest with such trees as *Mallotus*, *Macaranga* and *Eurya* (the same genera which appear with us in similar places although different species) or poor scrub, or in many places grass lands with very rank large species of grass.

13. Similar destruction has gone on in British Bhootan until within the last year or two, that country having been one sheet of splendid virgin forests about eight years ago.

14. There was no grass land proper on these hills prior to the clearings for hill cultivation; the country was all one continuous forest.

15. No one could now possibly visit any of the valleys in British Sikkim without at once acknowledging how important it is that the State should form Forest Reserves.

16. The annual rainfall at the Sikkim Chinchona Plantation is about 120 inches.

No. 89. ORDER THEREON, 6th January 1882, No. 25.

Miscellaneous.

THIS interesting account of his visit to the Chinchona Plantations at Darjeeling completes Colonel Beddome's inspection reports on the Chinchona enterprise as carried out in this Presidency, in Ceylon and in Bengal, and the paper will be forwarded to the Secretary of State and communicated to the Government of India, the Ceylon and Bengal Governments, and to the public, in continuation of the previous reports.

2. Colonel Beddome's renewed proposal in paragraph 6 for a special analysis of the "Magnifolia" and "Pubescens" varieties, formerly dealt with in paragraph 11 of G.O., 29th August 1881, No. 1280, will now be attended to by the Conservator under the terms of G.O., 13th December 1881, No. 1927, passed upon the despatch from the Secretary of State replying to the first-quoted Proceedings.

3. The suggestion in paragraph 11 of Colonel Beddome's report regarding local manufacture was negatived on the Chinchona Committee's report (paragraph 18 *et seq.* of G.O., No. 463, dated 24th February 1879,) and is not compatible with the new arrangements made by the Secretary of State for manufacture at home.

4. The Government take this opportunity on Colonel Beddome's resignation of his office to thank him for the very valuable services he has rendered for many years both to the Forest Department and to Botanical science generally.

(True Extract.)

(Signed) C. G. MASTER,
Secretary to Government.

To the Conservator of Forests.
„ the Board of Revenue.
„ the Surgeon-General with the Government of Madras.
„ the Superintendent, Government Central Museum.
„ the Nilgiri Planters' Association.
„ the Kotagiri do. do.
„ the Wynaad do. do.

No. 90. To the Secretary to the Government of Bengal, dated 6th January 1882, No. 26.

Miscellaneous.

SIR,—I am directed to forward, for the information of His Honor the Lieutenant-Governor of Bengal, copy of the Proceedings of this Government under date the 6th January 1882, No. 25, embodying Colonel Beddome's account of his late visit to the Chinchona Plantations at Darjeeling and to convey the acknowledgments of the Right Honorable the Governor in Council for the general assistance rendered to Colonel Beddome in his enquiries.

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

(Signed) C. G. MASTER,
Secretary to Government.

No. 91. To the Honorable the Colonial Secretary, Colombo, dated 6th January 1882, No. 27.

Miscellaneous.

SIR,—I am directed to forward, for the information of His Excellency the Governor of Ceylon, copy of the Proceedings of this Government under date the 6th January 1882, No. 25, embodying the account of the visit paid by Colonel Beddome to the Chinchona Plantations at Darjeeling, Bengal, after his visit to those in Ceylon.

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

(Signed) C. G. MASTER,
Secretary to Government.

No. 92. To the Secretary to the Government of India, Home Department; dated 6th January 1882, No. 28.

Miscellaneous.

SIR,—I am directed to forward, for the information of His Excellency the Governor-General in Council, copy of the Proceedings of this Government under date the 6th January 1882, No. 25, embodying the account of the visit paid by Colonel Beddome to the Chinchona Plantations at Darjeeling, Bengal.

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

(Signed) C. G. MASTER,
Secretary to Government.

Exd. W. J. Lewis.

100 Copies.

J. Original
Govt. of (1882) Madras.
REVENUE.

To
THE CONSERVATOR OF FORESTS,
&c. &c. &c.

Dated January 6th.

Printed 19th.

Recd.

Encl.

G.O., 6th January 1882, Nos. 25-28.

JANUARY.
Nos. 88-92.

SUBJECT.
Cinchona Plantations at Darjeeling, Bengal.—
Colonel Beddome's report on his visit to the —.
Passing orders on —.



From

Bombay
12th Dec^r 81.
Col. R. H. Beddome
Conservator of Forests
Madras

To

C. G. Master Esquire
Secretary to Government
Revenue Department
Madras

Sir,

I have the honor to inform
you that I have paid a visit to the
Darjeeling Cinchona plantations.

2. I met Dr. King the Super-
intendent at Sureil, on a spur of land
about 14 miles from Darjeeling, and at
1200 feet above the plantations, where
he resides whilst on duty in Sikkim.

and I spent 6 days in going over
all the different planting and the
Factory with him, and Mr. Gammie,
the officer in charge.

3. The planting hitherto has all
been carried on in the valleys of
the Runggo and Pyang rivers, tributaries
of the Iceda at elevations between 2000
and 3800 feet; all virgin forest at
these elevations had been cleared for
hill cultivation (called here joom)
prior to the commencement of the
Cinchona plantations; so they have
all been opened out on what we call
secondary forest, or Kumi land; and
I was rather disappointed to find that
there had nowhere been any attempt
at the high cultivation pursued
on the Kilgiris, and that weeding
was only attended to for the first
or three years: the planting with
the exception of some 200 acres of
young

young "Ledgeriana" lately put down, is
 in patches over a considerable area
 (about 2400 acres) the number of trees
 is as follows

4. 320.000	<i>Succinbra</i>
25.000	<i>officinalis</i>
200.000	<i>Magnifolia</i> (of Choddiw)
400.000	<i>Calisaya</i> + <i>Ledgeriana</i>
150	<i>Carthagea</i>
500	<i>micrantha</i>

4. The soil where planted is in
 all cases a friable surface soil with
 a gritty subsoil of either gneiss or
 mica-schist, and the planting is
 in patches, because clay-like
 subsoils have been avoided, also
 localities where the mica schist crops
 up to the surface, and places where
 a certain rank grass (*Saccharum*
cylindricum) grows which have by
 experience been found quite unadapted
 to

to Cinchonas.

13

5. The growth of the succirubra is certainly more rapid than with us at Neddikulam on the Kilgiris, and is quite similar to that on the Tinnevely hills at 3000 feet elevation. In one portion of the planted area, the slopes below Ringbee bungalow, I saw many trees about 50 feet in height, and one was measured 55 feet high and 29 inches in circumference breast high, they however are deficient in leaf and branches and want the fine heads that our Kilgiri trees possess besides being of less girth, and will probably be short-lived in comparison. The system of harvesting the bark is almost entirely that of uprooting and this is generally carried out by thinnings in the different areas, not a clean sweep, most of the older plantations.

to Cinchonas.

13

5. The growth of the succirubra is certainly more rapid than with us at Neddiwuttam on the Nilgiris, and is quite similar to that on the Tinnevely hills at 3000 feet elevation. In one portion of the planted area, the slopes below Ringbee bungalow, I saw many trees about 50 feet in height, and one was measured 55 feet high and 29 inches in circumference breast high, they however are deficient in leaf and branches and want the fine heads that our Nilgiri trees possess, besides being of less girth, and will probably be short-lived in comparison. The system of harvesting the bark is almost entirely that of uprooting and this is generally carried out by thinnings in the different areas, not a clean sweep, most of the older plantations.

plantations have a thin bare appearance which would be ruinous in our wind-blown localities, but in these protected vallies in Sikkim there is little or no wind: coppicing has been carried out over some 50 acres and the trees in all cases seem to have reproduced splendidly: Mr. McIvor's system of stripping has however been a complete failure, not, Dr. King informs me, from the trees not being able to renew their bark, but owing to the ravages of ants who eat off all the young growth directly it begins to renew, this system is therefore never now attempted: the Java scraping method has been tried on a few *Succirubra* trees^x and with success.

6. The most interesting feature of my visit was, the discovery that Dr. King's, "Sp. ignota" called "hybrid" in some of the reports and generally known

known by this latter appellation to
the subordinates, is exactly the same
as the magnifolia of Maddisouther
(Mr Cross's *pita de gallinazo*). It grows
here with a strong healthy habit and
its value has been *fully recognized
and it is now intended to discontinue
growing "succinbrai" and plant only
this "pita" and "Ledgeriana" the former
at the higher elevations, the latter at
the lower. This pita is being grown
almost entirely from cuttings, as it
is not supposed to come true from
seed, I saw many seed beds of it
in which about $\frac{1}{2}$ the plants appeared
to be this broad leaved form and
the other $\frac{1}{2}$ were said to be "officinalis"
typical "officinalis" however in these
Sikkim plantations is of very poor
growth and very spindly in habit
and it has been acknowledged
the climate does not suit it and

* Dr. King and
Mr. Gamble
recognizing
it as a very
distinct form
some 8 years
ago & it has
been largely
propagated
since.

it is scarcely at all propagated now,
whereas the narrow leaved form¹⁹,
like "officinalis", from "pātā" seed,
appear to be of much stronger and
better growth as they mature; I suspect
therefore that there is some mistake
and that analysis and further
experience will prove them to be varieties
of the "pātā" and not really "crown
barks". Mr. Gamble recognizes two
different forms among the broad-leaved
glabrous "pātā" trees, these to me were
quite undistinguishable, there is also
a sprinkling of the downy variety
which we call "pubescens". I would
again urge upon your Government the
importance of a most careful in-
vestigation into the chemical value
of this species, both as to the glabrous
and the downy varieties ("magnifolia"
and "pubescens" of the Nilgiris) many
individual trees of each should be
analyzed.

21
analyzed to find its largest and
smallest percentage of quinine, and
both natural and removed bark
should be analyzed. In my first
report on the Kilgiri plantations I
have stated that it will be far
more profitable in every way than
"succumbra" and I have since
found that this is the opinion
of nearly every one in Ceylon and
in Sikkim, and it will probably
in time oust succumbra entirely
from all localities except very low
elevations but it is necessary to be
cautious and have very complete
analysis; it will probably be best
to grow it entirely from cuttings, when
we have ascertained our best in-
dividuals or varieties, by analysis,
but I should recommend also very
careful experiments with seed.

7. Dr King has been most
successful

successful with "Ledgeriana",⁷² his original trees were all from a pinch of Kilgiri seed, sent by Mr. Badcock from the packet which Mr. McIvor received from Mr. Money. Last year and this year a continuous block of 200 acres with a southern aspect, has been planted out with the seedlings from some of the original trees and the plants appear the picture of health, there are 4 well marked varieties, the best of which called by Dr. King N^o 1 is not I think now represented on the Kilgiri. Dr. King has promised to send seed of all to our plantations and I trust that we may succeed with them better than hitherto, if ground is opened out at a lower elevation as contemplated and sanctioned.

8. Ledgeriana is grown from seed

seed, as cuttings are not found to root well, but bottom heat has not been tried.

9. The uprooting system may be all very well in Sikkim as there is a very large area available for planting and fresh land can be taken up each year, and uprooted areas lie fallow for a good many years before they are replanted; it should never be advocated for our limited areas as I am convinced any attempt to replant the same ground just after uprooting would always be more or less a failure.

10. None of the Sikkim bark is sent to England it is all made into a febrifuge in a factory on the estates, this febrifuge appears quite similar to what is now sent out by Whiffen as Quinetum and is said to be quite as efficacious as quinine

24
quinine, and it is much cheaper and
very easily made. It is prepared entirely
from "succirubra"; the bark is first
dried in sheds open at the sides,
then by artificial heat, after which
it is ground in a bark-mill, or
pounded, and then steeped in com-
missariat barrels for 3 weeks, three
supplies of water being given, acidi-
fied with muriatic acid, and
run off into tubs where it is pre-
cipitated by the addition of Caustic
soda, then filtered, the liquor running
to waste, and the precipitate remaining
on the filter, this is then dried in
a drying house (heat about 100°) and
pounded, again dissolved in water
with sulphuric acid, animal charcoal
being added for decoloration, then
again filtered, and to this solution
a dilute solution of Caustic soda
is added, the precipitate being
collected

collected as before in a filter and
again dried and powdered, when
it is ready for use, and costs ²⁰ £3. 10/-
per pound which calculates for the
cost of the bark and the establish-
ment &c.

11. The whole process appears
to be very easy and simple and
does not really require any special
knowledge of Chemistry, so that if
there is the objection I believe to
our red barks being thrown into
the English market I think Govern-
ment should consider whether a
similar febrifuge should not be
made on our plantations. Mr.
Gammie has also made very pure
Quinine from "officinalis", "Pata" and
"Ledgeriana" barks and there appears
also to be no difficulty or secret
about this, though it is only an
experiment as yet, it costs much
more

more and the bark has to be boiled,
but it cannot cost more than (30) thirty
rupees per pound. It is now to be raised
on a large scale.

31

12. It is very sad to see how
all these grand Sikkim valleys have
been denuded of all virgin forest
between an elevation of about 1000'
from the foot, up to nearly 6000'. In
1848 when this portion of Sikkim
became British territory these valleys
were nearly all one continuous forest,
the Nepalese then were allowed in
and they cleared in every direction
for maize, ^(zaggib) murwah and other
hill cultivation; they stopped their
destruction at about 6000 feet in
elevation as the climate there ^{is} was
too cold and bleak, and a belt
at the foot of the mountains was left
as unhealthy and too hot. Reserves
are now formed by Government in
the

35.

The forests above 6000 feet, very cold situations, where the growth is very slow, and also in the unhealthy forests at the foot; but Government did not recognize the necessity of Reserves until it was too late to form them where they were of greatest value and most required, all the country now between 1200 feet and 6000 has been turned into poor secondary forest with such trees as *Mallotus*, *macaranga*, and *Eurya*, (the same genera which appear with us in similar places although different species) or poor scrub, or in many places grass lands with very rank large species of grass.

13. Similar destruction has gone on in British Bhutan until within the last year or two; that country having been one sheet of splendid virgin forests about 8 years ago.

14. There was no grass land proper on these hills prior to the clearings

80.

for Hill cultivation, the country was
all one continuous forest. 25

15. No one could now possibly
visit any of the valleys in British
Sikkim without at once acknowledging
how important it is that the State
should form Forest Reserves.

16. The annual rainfall
at the Sikkim Cinchona plantation
is about 120 inches.

I have the honor to be
Sir

Your most Obedt Servant

~~W. A. D. Jones~~ Colonel

Conservator of Forests, Madras

On Special duty

18 November/87 No 332
 16 - " - " 3273
 16 - " - " 3269
 12 October - " - 164/6
 29 September - " - 375/9
 29 August - " - 418-424

Proc

Reports on
 visit to Darjeeling
 Chinchona Plantations

Subject

Noted 12 Dec 87.
 No. 144-4

Chinchona
 No. 10012/10/87
 No. 6959
 to C. A. R. H. H. H.
 C. A. R. H. H. H.
 To the Secy to Govt. 120
 Section.

14/12

Revenue Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT

under date the

(Current No. 6959) Col. Beddome's Report on his visit to
 Darjeeling the Darjeeling Chinchona Plantations.

Order

This interesting account of his visit to the Chinchona Plantations at Darjeeling completes Col. Beddome's inspection reports on the Chinchona enterprise as carried out in this Presidency in Ceylon & in Bengal, and the paper will be communicated to the Ceylon & Bengal Governments, and to the public, in continuation of the previous reports.

Col. Beddome's report to Govt.
 This is the last report to be submitted to Govt. by Col. Beddome in his 50th year. He is retiring from the service on 1st Dec 87. His report on the Chinchona Plantations is a valuable contribution to the knowledge of the subject. It is a pity that he is leaving the service so soon. He has been a most valuable member of the Government for many years.

report (para 18) of S.O. No 463 dated 24th February 1879 & is not incompatible with the new arrangements made by the Secretary of State for home manufactures at home.

2. Col. Beddome's proposal in para 6 for a special analysis of the "magnifolia" & "pubescens" varieties, formerly dealt with in para 11 of S.O. 29th August 1877 No 1280 will now be attended to by the Conservator under the terms of S.O. 13th Dec 1877 for No 1927 passed upon the despatch of the Secretary of State replying to the Secretary of State's letter of the 10th Dec 1877.
3. The suggestion in para 11 of Col. Beddome's report, regarding local manufacture was negatived on the Chinchona Committee's

In. H. the
To the S. of S. for India
My Lord Marquis,

In continuation of
our despatch, no. 14, dated
12th October last, we have
the honor to forward copy of
our Proceedings marginally
noted, embodying Col. Reddome
account of the visit which
he has recently paid to the
Chinichma Plantations at
Dargeling in Bengal,
for
C. W.

To the Secy. to the
Govt. of Bengal

Sir,
I am directed to forward
for the information of His Honor
the Lt. Gov. of Bengal, copy of
the Proceeds of this Govt. under
date the ...
embodying the account of Col.
Reddome's late visit to the
Chinichma plantations at Dargeling
& to convey the acknowledgments
of their Govt. Right Honble the

General 41
Govt. in Council for the assistance
rendered to Col. Reddome in his
enquiries.

for
C. W.

To the Honble the Colonial Secretary
Colombo.

Sir,
I am directed to forward for
the information of His Excellency
the Governor of Ceylon, copy of
the Proceedings of this Govt. under
date the ...
embodying the acc. of Col. Reddome
the visit recently paid by Col.
Reddome to the Chinichma Plantations
at Dargeling, Bengal, after
completion of his visit to
those in Ceylon.

for
C. W.

To the ...
in view for a ...
to be ...

Darjeeling Chinlone
C. L. Beddome
went to report of.

Recd 6 Jan 1882

W. H. Beddome

C. 22-12-81 R. 24-12-81

43.

REVENUE DEPARTMENT.

No. 25

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 6 January 1882

READ letter from Col.

R. H. Beddome Conservator
of Forests, dated 12th December
1881, reporting on his visit
to the Darjeeling Chinlone
Plantations.

C. No 6959.

This interesting account
of his visit to the Chinlone
Plantations at Darjeeling
completes Col. Beddome's
inspection reports on the
Chinlone enterprise as
carried out in this Presi-
dency in Ceylon and in
Bengal and the paper
will be forwarded to the
Secretary of State and
communicated to the
Government of India the
Ceylon and Bengal Govts
and to the public, in
continuation

continuation of the previous reports.

2. Col. Beddome's renewal proposal in para 6 for a special analysis of the "Magnifolia" and "pubescens" varieties, formerly dealt with in para 11 of G.O., 29th August 1881, No 1280, will now be attended to by the Conservator under the terms of G.O., 13th December 1881, No 1927, passed upon the despatch from the Secretary of State replying to the first quoted Proceedings.

3. The suggestion in para 11 of Col. Beddome's report regarding local manufacture was negatived on the Cinchona Committee's report (para 13 et seq of G.O., No 463, dated

To the Conservator of Forests, Bangalore
14. The Board of Directors
1. The Director General of Forests
2. The Deputy General (Cinchona) Conservator
3. The Chief Clerk, Bangalore
4. The Chief Clerk, Bangalore
5. The Chief Clerk, Bangalore
6. The Chief Clerk, Bangalore
7. The Chief Clerk, Bangalore
8. The Chief Clerk, Bangalore
9. The Chief Clerk, Bangalore
10. The Chief Clerk, Bangalore
11. The Chief Clerk, Bangalore
12. The Chief Clerk, Bangalore
13. The Chief Clerk, Bangalore
14. The Chief Clerk, Bangalore
15. The Chief Clerk, Bangalore
16. The Chief Clerk, Bangalore
17. The Chief Clerk, Bangalore
18. The Chief Clerk, Bangalore
19. The Chief Clerk, Bangalore
20. The Chief Clerk, Bangalore
21. The Chief Clerk, Bangalore
22. The Chief Clerk, Bangalore
23. The Chief Clerk, Bangalore
24. The Chief Clerk, Bangalore
25. The Chief Clerk, Bangalore
26. The Chief Clerk, Bangalore
27. The Chief Clerk, Bangalore
28. The Chief Clerk, Bangalore
29. The Chief Clerk, Bangalore
30. The Chief Clerk, Bangalore
31. The Chief Clerk, Bangalore
32. The Chief Clerk, Bangalore
33. The Chief Clerk, Bangalore
34. The Chief Clerk, Bangalore
35. The Chief Clerk, Bangalore
36. The Chief Clerk, Bangalore
37. The Chief Clerk, Bangalore
38. The Chief Clerk, Bangalore
39. The Chief Clerk, Bangalore
40. The Chief Clerk, Bangalore
41. The Chief Clerk, Bangalore
42. The Chief Clerk, Bangalore
43. The Chief Clerk, Bangalore
44. The Chief Clerk, Bangalore
45. The Chief Clerk, Bangalore
46. The Chief Clerk, Bangalore
47. The Chief Clerk, Bangalore
48. The Chief Clerk, Bangalore
49. The Chief Clerk, Bangalore
50. The Chief Clerk, Bangalore
51. The Chief Clerk, Bangalore
52. The Chief Clerk, Bangalore
53. The Chief Clerk, Bangalore
54. The Chief Clerk, Bangalore
55. The Chief Clerk, Bangalore
56. The Chief Clerk, Bangalore
57. The Chief Clerk, Bangalore
58. The Chief Clerk, Bangalore
59. The Chief Clerk, Bangalore
60. The Chief Clerk, Bangalore
61. The Chief Clerk, Bangalore
62. The Chief Clerk, Bangalore
63. The Chief Clerk, Bangalore
64. The Chief Clerk, Bangalore
65. The Chief Clerk, Bangalore
66. The Chief Clerk, Bangalore
67. The Chief Clerk, Bangalore
68. The Chief Clerk, Bangalore
69. The Chief Clerk, Bangalore
70. The Chief Clerk, Bangalore
71. The Chief Clerk, Bangalore
72. The Chief Clerk, Bangalore
73. The Chief Clerk, Bangalore
74. The Chief Clerk, Bangalore
75. The Chief Clerk, Bangalore
76. The Chief Clerk, Bangalore
77. The Chief Clerk, Bangalore
78. The Chief Clerk, Bangalore
79. The Chief Clerk, Bangalore
80. The Chief Clerk, Bangalore
81. The Chief Clerk, Bangalore
82. The Chief Clerk, Bangalore
83. The Chief Clerk, Bangalore
84. The Chief Clerk, Bangalore
85. The Chief Clerk, Bangalore
86. The Chief Clerk, Bangalore
87. The Chief Clerk, Bangalore
88. The Chief Clerk, Bangalore
89. The Chief Clerk, Bangalore
90. The Chief Clerk, Bangalore
91. The Chief Clerk, Bangalore
92. The Chief Clerk, Bangalore
93. The Chief Clerk, Bangalore
94. The Chief Clerk, Bangalore
95. The Chief Clerk, Bangalore
96. The Chief Clerk, Bangalore
97. The Chief Clerk, Bangalore
98. The Chief Clerk, Bangalore
99. The Chief Clerk, Bangalore
100. The Chief Clerk, Bangalore

dated 24th February 1879) and is not compatible with the new arrangements made by the Secretary of State for manufacture at home.

4. The Government take this opportunity on Col. Beddome's resignation of his office to thank him for the very valuable services he has rendered for many years both to the Forest Department and to botanical science generally.

To
The Most Hon^{ble} the Secretary of State for India
My Lord Marquis,
In continuation of our despatch No 14 dated 12th October last,

we have the honor to
forward copy of our
Proceedings marginally
noted, embodying Col.
Beddome's account of
a visit which he recent-
ly paid to the Chinchona
Plantations at Darjeeling
in Bengal and recording
our appreciation of his
services in the office
from which he is now
retiring.

recd 27/1/28
D. 26
J. 26

To
The Secretary to the Govt
of Bengal.

Sir
I am directed to
forward, for the informa-
-tion of His Honour
the Lieut Governor of
Bengal, copy of the Procs
of this Government under
date

147
date the 6 Jan, 1882 No 26
embodying Col. Beddome's
account of his late visit
to the Chinchona Planta-
-tions at Darjeeling and
to convey the acknowledg-
-ments of the Right Hon^{ble}
the Governor in Council
for the general assistance
rendered to Col. Beddome
in his enquiries.

6 January, 1882

To
The Hon^{ble} the Colonial
Secretary Colombo.

Sir
I am directed to
forward, for the informa-
-tion of His Excellency
the Governor of Ceylon,
copy of the Proceedings
of this Govt under date
the 6 January, 1882 No 26
embodying

1 copy sent Jan 7 1882

Done

embodying the account
of the visit paid by Col.
Beddome to the Chinchona
-na Plantations at
Darjeeling, Bengal, after
his visit to those in Szechwan

10/1/82
10/1/82

for
W

To
228 6 January,

The Secretary to the
Govt of India, Home
Department.

Sir

I am directed to
forward, for the information
of His Excellency the
Governor-General in
Council, copy of the
Proceedings of this
Government under
date the 6 Jan, 1882 No 25
embodying the account
of the visit paid by
Col.

49
Col. Beddome to the
Chinchona Plantations
at Darjeeling, Bengal.

for
9/1/82
W

6 January 1882

Draft G. O. and letter
to the Secretary of State
on the Report of Colonel
Beddowes's visit to
Sargelung Chinchona
Plantations.

Print
671.

88.89,
90, 91, 92