

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No. 468

Press
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Dated 21-2-1866.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
21st February 1866.*

No. 405. Read the following letter from the Conservator of Forests, to the Secretary to Government, Revenue Department, Fort Saint George, dated Madras, 6th February 1866, No. 1,579 :—

1. I beg to submit, for the information of His Excellency in Council, copy of a Memorandum on the Government Garden at Peermade, Travancore, which was drawn up at the request of Mr. Newill, the Resident.

2. Mr. Newill informs me that His Highness the Rajah has approved of the recommendations generally, and steps are being taken to secure the services of a skilled Superintendent from Europe.

MEMORANDUM ON THE GOVERNMENT GARDEN AT PEERMADE.

1. The proposal to establish a Government Garden upon the Travancore Ghâts, for the introduction generally into that mountainous tract, of useful and ornamental plants, as Tea, Coffee, Vanilla, &c., but more especially for the naturalization of the Chinchona tree, originated with Mr. F. N. Maltby, the late Resident, and was in every respect an admirable one.

2. Mr. Maltby in his Memorandum dated 23rd December 1861, considered that Peermade, or rather the new station called "Mary Ville," on the proposed line of road from Alleppey to Madura, and forty-seven miles distant from Kotiam, afforded suitable advantages. It is healthy, open to the sea breeze, with an elevation of 3,300 feet above the sea, and enjoys a temperate climate; the adjoining district presents a remarkable variety of soil and scenery. Between it and the Perryâr river is an undulating plateau, where forests alternate with grass lands, affording fine pasture for cattle.

3. Near Peermade, on the same range of mountains, appropriate sites may be found, up to a elevation of near 6,000 feet, where subsidiary plantations might be formed to suit the different species of Chinchona.

4. The rain-fall, according to the observations of General Cullen, who kept a register for a long series of years, varies from 40 inches on the eastern Ghâts to 125 inches in the western slopes, diminishing towards Cape Comorin; while the thermometric register of Mr. Maltby at Peermade in December 1861, shews that the mercury fell to 58° Fah. in the early morning, and rose to 74° Fah. at 2 p. m. in the shade. Farther observations with *maximum* and *minimum* Thermometers would be very valuable.

5. To carry out Mr. Maltby's project His Highness the Rajah of Travancore sanctioned the following sums :—

1,000 Rupees for the Garden and glass house.
300 „ for plants and seeds from the Neilgherries.
40 „ monthly for Gardeners and Coolies, with the promise of a suitable grant for seeds and plants as required. These sums were applied to the preliminary works in 1862. In March 1863 about 500 Chinchona plants, two months old, and from one to two inches high, were brought from Ootacamund by Mr. Hannay, the Superintendent of the Garden, but more than half were lost, some in transit, and others soon after arrival from the effects of exposure to drought, damp or cutting winds, as the glass house was not ready for their reception.

6. I visited Peermade in company with Mr. Markham in December 1865, and remained two days. Although Mr. Maltby's scheme has not been followed out in detail, it is satisfactory to record that the Travancore Sircar has well seconded the efforts of the British Government, and that the result of the Chinchona experiment is more successful here than any where else in Southern India,

excepting on the Neilgherries. The accompanying table gives the age and height of the plants at the date of our visit.

Peermade Chinchona Nursery, December 1865.

Names of plants.	No.	Height.	Age.	Height of tallest tree.
Chinchona Succirubra	79	5 feet	Ys. M. 2 10	8 feet 6 inches.
Do. Micrantha	45	3 feet 6 inches.	do.	6 feet
Do. Peruviana	27	3 feet	do.	6 feet
Do. Nitida	7	2 feet 6 inches.	do.	3 feet
Do. Officinalis	60	2 feet 6 inches.	do.	4 feet 7 inches.
Do. Unknown	6		do.	3 feet 6 inches.
	225			About 200 were also raised from layers and cuttings

7. The girth of several of the largest of the *C. Succirubra* was nine inches close to the ground, and their height for their age was generally satisfactory; some of the plants had been broken by the violence of the wind, but were in a healthy state, throwing out strong shoots from the seat of injury. The Chinchonas planted in the shola behind the Sircar bungalow had suffered comparatively little from the wind.*

8. The species that thrive best are *C. Succirubra* and *U. Micrantha*, but *C. Clisaya* should be tried. The *U. Condaminia* (or *Officinalis*) is evidently planted at too low an elevation, being weak and delicate, with a tendency to throw out branches along the ground.

9. The Peermade garden has a southern exposure, and receives the full burst of the south-west monsoon, from the violence of which all the plants above the size of dwarf shrubs, have suffered in some degree; but as the Government have in view the dissemination of seeds and seedlings rather than the formation of a large plantation, it does not seem advisable to change the site, particularly as a glass house and Superintendent's cottage have been already built; the present nursery, however, might be sheltered by planting screens of Australian Acacias,† or other quick growing trees, and the garden might be extended in the shola behind, which is sheltered from the prevailing winds.

10. The experiment of Chinchona introduction having been thus far successful, it is now desirable that the Travancore Sircar should furnish the means of extended culture to the planters of this rising settlement, and to the neighbouring ranges of hills, as opportunities may arise; I therefore beg to suggest that twelve grown plants of *C. Succirubra* be at once given to each of the planters, who are ready and desirous of commencing Chinchona culture; and thereafter, as many young plants of this, and other species as may be available, to applicants at the old Neilgherry rate, viz., four annas per single plant.

11. I would also suggest that a certain number, say 200, of each of the following species:—

Chinchona Succirubra,

Do. Clisaya,

Do. Micrantha,

should be carefully planted in the shola behind "Mary Ville," or other sheltered slope, and a careful record of their growth be registered.

* NOTE.—It should be remembered that though shelter is highly advantageous, the plants should not be overshaded or exposed to the drip of other trees.—(See Mr. Melvor's Reports)

† NOTE.—Acacia leupathia, a fast grower, and not affected by drought, is most useful for protecting plantations. Seeds of this species and of *A. Melanoxylon* and *Mollissima* have been despatched to Mr. Hannay.

The *Cassia florida*, which flourishes so well at Bangalore, is hardy and a fast grower. It should also be tried, as a thick sheltered screen might quickly be formed; directions will be given for the transmission of seed.

12. The Superintendent, Mr. Hannay, is an energetic man, accustomed to an Australian life, and skilled in mechanical appliances, but without special horticultural knowledge; his attention has been sometimes diverted to forest operations, and other works, to the prejudice of his duties in the garden; the importance of propagating extensively, by layers and cuttings, should be kept in view, and for this purpose, the small experimental plantation, mentioned in paragraph 11, should be formed with great care and attention.

13. There does not appear to be any fixed establishment, the monthly expenditure at present is—

	RS.	A.	P.
Pay of the Superintendent	120	0	0
Do. Garden Maistry	10	0	0
Do. six Gardeners at Rupees 7-8-0 each	45	0	0
Do. six Coolies at Rupees 6-8-0 each	39	0	0
Do. two Peons at Rupees 5 each	10	0	0
Do. Cooly Maistry	15	0	0
Do. Blacksmith	9	0	0
Do. Carpenter	14	0	0
Do. Malayalam writer	8	0	0
Do. Bullock driver	14	0	0

Total... 284 0 0

—Rupees 3,408, or £340-16-0 a year, and with the objects in view, perhaps the expenditure might be raised to £500 a year, which is the sum set aside in Ceylon. If a like sum could be sanctioned in Travancore, the services of a skilled and practical Horticulturist could be secured.

14. *Tea*.—The Neilgherry seed received in 1861 germinated freely, and there are now about seventy well formed bushes from two to four feet high in flower and fruit, 400 seedlings are available, and a large seed-bed has been prepared, and when the garden stock is sufficient, the seeds and seedlings should be distributed gratuitously, or sold at a moderate rate, such as would afford a fair profit to intending speculators, who would establish nurseries on their own account; the primary object being to disseminate selected seeds from the best grown varieties to all desirous of cultivating Tea. The Neilgherry rates of one Rupee per pound of seed, and 10 Rupees per 1,000 seedlings might be adopted.

15. With regard to the quality of Travancore Tea, nothing definite can be said until the leaf has been subjected to skilful manipulation; but it may be mentioned that Mr. Liddell of Binny & Co. has shown me reports from professional brokers of London and Calcutta valuing Tea, grown at Charter's Hope, in the Ariangole Pass (elevation 1,200 feet), at four shillings per pound.

16. It appears to be highly probable that this part of Travancore is well suited for Tea culture, and therefore at least four acres of the Government garden should be planted with Tea, to furnish seed of the best quality, as much disappointment has been experienced by Mr. Hannay and several of the planters in attempting to raise seed imported from Assam and the North West Provinces, the vitality of which had been lost in transit.

17. *Coffee Nurseries* have been prepared on all the estates, so that unless it be for the convenience of planters, or for the self-maintenance of the garden, the Coffee shrub need not be propagated.

18. *Vanilla*.—It seems doubtful whether this plant will thrive at Peermade, it has been grown, but has not flowered. Further experiments in sheltered sites are required, as the commercial value of the pod is great, with an increasing trade in Ceylon.

19. *The Tulloo tree of China and Mauritius (Stillingia Sibefera)* which is cultivated in China and in the northern Provinces of India along with Tea, might also be tried, for which

purpose a few fresh seeds have been sent to Mr. Hannay. The varnish tree of China (*Elaeococcus vernicifera*) might also be tried.

20. *Vegetables*.—Potatoes, Onions, and other kitchen vegetables, and Rhubarb might be grown to any extent for the supply of Quilon, Alleppey, Cochin, and Trevandrum. Potatoes are sold at Ootacamund at 1½ Rupees per maund, but are not delivered at Trevandrum for less than 3 Rupees, and the supply is irregular.

21. *Fruits*.—Apples, Pears, and Grapes have been tried, but do not thrive on the crest of the Ghâts. In some of the valleys, Oranges would do well; Raspberries and Strawberries were in fruit at the time of my visit. The Mangosteen has ripened at Courtallum, and might succeed here in a well selected site.

22. *SUMMARY*.—To recapitulate, it seems desirable that attention should be specially given to the careful cultivation of Chinchona and Tea; extensive seed-beds should be formed, and ten acres of the former and four of the latter might be planted out. This would probably be sufficient to keep the Chinchona nurseries amply supplied, and to furnish fresh Tea seeds and seedlings for a fair extent of cultivation. Vanilla, Potatoes, and other products mentioned, should receive due care from the Superintendent. Cotton does not appear to thrive, and might be excluded for the present.

23. *Superintendent*.—Having been requested to suggest the means best calculated to increase the utility of the garden, I have no hesitation in recommending that a skilled Superintendent be procured from one of the best gardens in Europe, on a salary of (say) 150 Rupees a month with a residence. The object in view is to improve the culture of indigenous productions, at the same time to naturalize Chinchona, Tea, and other useful exotics, and to prepare both for distribution to the other settlements in these beautiful hills and plains. For this, horticultural skill and ability are essential requirements, meanwhile Mr. Hannay (whose services might be transferred to another department) should with a trained native gardener propagate Chinchona and Tea to the best of his ability.

The following are the principal trees found in the Sholas adjoining Peermade, observed during a hasty excursion.

No.	English names.	Native names.	Botanical names.
1	.....	Palmaram...	<i>Bassia elliptica</i> (Dalzell) or <i>Isonandra accum-</i> <i>niata</i> .
2	Iron wood...	Nauga ...	<i>Mesua ferrea</i> .
3	Anjeli ...	Angill, Ayence	<i>Artocarpus hirsuta</i> .
4	Sack tree ...	Arava Anjelly ..	<i>Antiaris saccidosa</i> .
5	Gamboge ...	Mukki ...	<i>Garrinia pictoria</i> .
6	.....	.....	<i>Kydlü</i> .
7	Rose apple ...	.....	<i>Jambosa Munronii</i> .
8	Indian Plum ...	Narvelli ...	<i>Syzygium</i> .
9	Wild Cinnamon ..	Darchini ...	<i>Cinnamomum iners</i> .
10	.....	.....	<i>Litsea Zeylanica</i> .
11	.....	.....	<i>Machilus macrantha</i> .
12	Black dammer...	Congiliam maram.	<i>Canarium strictum</i> .
13	.....	Vellay naga ...	<i>Conocarpus latifolius</i> (known as Dinduca in Mysore.)
14	.....	.....	<i>Elacarpus serratus</i> .
15	Blackwood ...	Eti maram ...	<i>Dalbergia latifolia</i> .
16	Ben-teak ...	Ben-teak ...	<i>Lagerstræmia microcarpa</i> .

Nos. 2, 3, 11, 13, 14, 15, and 16 yield excellent timber, Black-wood is found sparingly in the western but abundantly on the eastern slopes.

Among the shrubs and herbaceous plants which especially attracted notice were the following:—

Melastoma.	<i>Torenia Cordifolia</i> (Sispara creeper.)
Osbeckia.	<i>Cæsilpinia</i> (two species.)
Urena.	<i>Crotalaria</i> (two kinds.)
Solannun giganteum.	<i>Eracum ticolox</i> (Chiretta.)
Erigeron (Coffee weed.)	<i>Ophelia</i> (vary) do.
Blumea.	<i>Andrographis paniculata</i> (Creyat.)
Smithia.	
Impatiens (several species) and of the Seitamineous tribe, there are wild Cardamom,	
Ginger, Zedoary.	
Hedychium and Phrynum dichotomum.	

(True Copies.)

(Signed) H. CLEGHORN, M. D.,
Conservator of Forests.

No. 406.

ORDER THEREON, 21st February 1866, No. 468.

Miscellaneous.

1. Transferred to the Political Department.

2. Mr. McIvor will afford every assistance sought by the Resident in the way of furnishing His Highness the Maha Rajah with seeds and plants, and giving His Highness' employes facilities for becoming acquainted with the propagation and culture of the Chinchona.

(True Extract.)

(Signed) J. D. SIM,
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To the Political Department.
,, the Conservator of Forests.
To W. G. McIvor, Esq.

Exd. S. T. Augustin.

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To W. G. McIvor, Esq.

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No. 1579.

Office of Conservator of Forests

Madras 6th February 1866

From.

Mr. Colclough Esq. M. D.
Conservator of Forests.

To.

J. D. Bann Esq.
Secretary to Government P. &
Fort Saint George.

Sir,

I beg to submit for the information of His
Excellency in Council, copy of a Memorandum on the
Government gardens at Permade, Travancore, which was
drawn up at the request of Mr. Swell, the Resident.

2. Mr. Swell informs me that His Highness the
Raja has approved of the recommendations generally,
and steps are being taken to secure the services of a
skilled Superintendent from Europe.

I have the honor to be

Sir

Your Most Obedient Servant.

H. Claghorn
Conservator of Forests.

212 2nd St. 1800