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MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

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Not to be folded or roughly handled

P 3
Conclusion

Proceedings of the Madras Government, Revenue Department,
8th July 1865.

No. 135. Read the following letter from H. CLEGHORN, Esq., M. D., Conservator of Forests, to J. D. SIM, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated Madras, 28th April 1865 :—

SIR,

1. After my return to Madras, on the 1st ultimo, I made myself acquainted with the Forest Proceedings recorded during my absence in the Punjab and North-West Provinces, and from March 16th to April 4th, I made a rapid visit of inspection to the various plantations in Coimbatore and Malabar. I herewith submit my Notes on the progress of these works, with a few remarks on the condition of the Forest Department generally.

2. *Nellumbur Teak Plantation.*—I inspected the whole of these plantations in company with Mr. Ferguson, the Assistant Conservator in charge, and I was much pleased with the results of his systematic management, during the past three years. The trees are healthy, thinning operations have been judiciously carried out, and the plantations are remarkably clear of creepers and parasites.

3. *Necessity for a Foresty.*—As the plantations became older and more extensive, the necessity was evident for obtaining the services of a man experienced in planting and pruning trees, and felling timber. Mr. Ferguson, a Scotch Forester, is well suited for the charge entrusted to him. The rude instruments formerly used have been abandoned, and others substituted which were supplied by the Secretary of State. The natives have learned to use the pruning knife and chisel, and have not been slow to perceive that Mr. Ferguson is master of his business. He occupies a small house in the middle of the plantation, and has overcome many of the difficulties attendant upon his isolated position among the Nairs, who have hitherto persevered in excluding settlers from the valley.

4. *Extending Plantation.*—The plantations have been considerably extended during my absence, and a large piece of ground on the river bank is cleared and prepared for this year's planting. A block is also marked off for next season, after which the most of the remaining Government ground, near Nellumbur, is either rocky or swampy, or contains a considerable quantity of natural Teak, not yet ready for the axe. I visited the Nelicota forest in 1858, and consider the soil and situation peculiarly suited for the growth of Teak and Blackwood. Mr. Ferguson suggests that the prospective operations should be half at Nellumbur, and half in the Nelicota tract of Government land. By this arrangement the plantation would be compact shape* and easy of supervision, while the division of labor between these two places would diminish the pressure upon the scanty laboring population of the neighbourhood.

*See Mr. McGregor's Report, recorded in Proceedings of Government 1862.

5. *Rates of labor.*—The question of raising the wages of daily labor was referred to me, and I came to the conclusion, that four Annas *per diem* would suffice at present. Mr. Ferguson may be trusted to arrange the wages of laborers as may be suitable from time to time, provided the total amount sanctioned be not exceeded in any month.

6. *Improvement of road.*—The road through the valley, connecting Mambat and Calicut with the Karkur Ghát is much improved. There is now considerable traffic with the Wynad and Mysore, by this route and better bazaars are established.

7. *Calicut Depot.*—The Calicut Depôt is absolutely required, as the Teak-wood can only be sold with advantage on the sea coast. From what I have seen, a large supply of this most valuable timber, so important to the State, is being raised and will be available in quantity as required. Mr. Cabral who has been long in the Bombay Timber Depôt is well fitted for the post.

8. *Chatoo Menon.*—Chatoo Menon Nair, originally appointed by Mr. Conolly, as Sub-Conservator, carried on this great work, from the beginning in 1841 to 1862, and appears to have been rather abruptly pensioned though at his own request. He has done good service, and should not receive less retiring allowance

than an Amildar or Peishkar. He considers himself insufficiently pensioned on two-thirds of his salary, *i. e.*, 35 Rupees per mensem, and earnestly solicits that the full amount, or 50 Rupees, be granted. I did not encourage him to expect this, though it does not seem an unreasonable request, considering his long and valuable services. When Lord Harris visited the Plantations, he awarded to Chatoo Menon, a Forester's silver mounted knife, with embroidered belt, as an acknowledgment of his care and skill; Chatoo Menon, being a man of substance and local influence, perhaps an honorary title, or other token of approval might be conferred upon him, and he might be requested to continue to give every assistance in his power to Mr. Ferguson.

9. *Teak Plantation a school of Forestry.*—The Nellumbur plantation is a remarkable proof of the foresight and sagacity of the late Mr. Conolly, the system adopted has been followed in North and South Canara; the reports have been forwarded for the information of Forest Officers in Burmah, &c., and the Chief Commissioner Central Provinces has lately proposed to commence similar plantations upon the banks of the Tapti and Nerbudda. Visitors from Bombay and elsewhere come to see the progress of the work, and it seems to me that Nellumbur might be made a school of forestry, where Overseers and others may be trained and see technical operations conducted in a proper manner. An Assistant would strengthen Mr. Ferguson's hand while learning forestry at the same time.

10. *Mr. Ferguson's services.*—For this purpose it would be of consequence to retain the services of Mr. Ferguson, and considering the special character of his duty and the insalubrity of the climate, I think that an increase of Rupees 50 per mensem, *i.e.*, =200,* has been earned, and without this he can scarcely be expected to remain.

* With travelling allowance as at present.

I annex three tables compiled by Mr. Ferguson, which convey his opinion as to the money value of the plantations as they stood in 1863; it should be remembered that he is a practical Surveyor, accustomed to value standing timber; the first table has been checked with some care, and shews the number of acres planted, trees standing, the average size of each year's growth, and the prospective value of the whole forest. I was disposed to think the aggregate value estimated too high, but have not found any mistake in the calculation which are made at the existing rates of labor and price of wood, but supposing that 20 per cent. was deducted for casualty among the trees, and unexpected contingencies, the receipt to be realized would still be very large.

11. *Australian Plantation.*—The extent of land purchased near Wellington in 1856 for Australian Plantations was about 600 acres; a small portion of this tract was disposed of by permission of Government, and about 125 acres are now planted.

I was much pleased by seeing the remarkable growth of the trees after five years' absence. There are only one or two bare spaces, and the number of suckers is so great that without clearing it is difficult to pass through.

It is admitted that part of the open grass land selected for this plantation was unsuitable, but on the whole it may be considered a successful experiment. A large quantity of fuel is taken to Wellington and Coonoor as originally proposed. Many straight poles 30 feet in length are available for house-building, though these split if exposed to the sun when green. Superior charcoal is prepared from the bark of the Australian Acacia.

Above 100 Eucalypti six or seven years old, and from 40 to 50 feet high are scattered through the plantation; about 20 trees of *Pinus longifolia* are also growing well, as rapidly as on their native hill.

The natural woods at the Coonoor Ghát have to a great extent given place to Coffee cultivation, and as the present size of the plantation is not equal to the fuel demands of Coonoor and Wellington, it seems desirable to extend it gradually. It is proposed to plant annually about eight acres of that portion which has a northern aspect, and which lies convenient to the Barracks and Coonoor.

As some of the Australian trees flourish in a remarkable manner, and promise to become an important addition to our timber trees on the Neilgherry and Pulney ranges, I may mention that when proceeding to England in 1860, I obtained from Mr. McIvor, Superintendent Government Gardens, Ootacamund, a series of the flowering specimens of the more robust species of Australian *Acacia* and *Encalyptus*, growing in the garden, and which have been so extensively introduced, as to alter in some measure the scenery of the Neilgherry plateau. The seeds of the different species having been received at different times, and from various districts of Australia, the nomenclature was naturally perplexing in some cases. I submitted these botanical specimens to Dr. J. D. Hooker, Assistant Director at the Royal Gardens, Kew, who compared them with the standard specimens in the Herbarium, and favored me with the result of his examination. "Below you will find an accurate list of the Australian plants naturalized on the Neilgherries, which you were good enough to bring me."

Albizzia lophantha, Benth.
Acacia decipiens, Br.
,, *Stricta, Willd.*
,, *verticillata var ruscifolia.*
,, *marginata, By.,*
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,, *melanoxylon,* ,, *A. robusta*
,, *dealbata,* ,, *A. melanoxylon*
,, *pulchella.*
Encalyptus glanca.
,, *pulvernlenta,* named *perfoliata*
,, *amygdulina,* ,, *pendula*

It is an interesting and encouraging fact that packets of seeds of Australian trees naturalized in the Neilgherries and in Mysore have been found to grow well in the plains of the Punjab, and are now being supplied to the canal plantations on an extended scale. It may be added that the supply of seeds from Sydney and Melbourne (now easily procured) thrive well upon the Neilgherries, while those from Moreton Bay and Queen's Land succeed admirably at Bangalore.

Encalyptus.
Acacia.
Grenillea.

12. *Cinchona Plantation.*—I visited the Cinchona plantations at Dodabetta, Neddivattam and Pykara in company with Mr. McIvor, and found them in a most prosperous condition. Though March is the driest season, the plants exhibited no evil effects from the drought.

The whole system of propagation by slips and eyes, transplanting to nursery beds, manner of planting out, shading, staking, &c., is admirably managed, and it has been well illustrated and described in the Notes of Cultivation, a useful hand-book to all interested in the culture of Cinchona.

The culture under trees has been abandoned with satisfactory results. Mr. McIvor specially directed my attention to the vigorous appearance of the plants in the open ground, and it certainly is remarkable how well they look even on exposed situation.

It is evident, as mentioned by Mr. McIvor in his last report, that *C. Succirubra*, and *C. Calisaya*, thrive best at Neddivattam, while *C. Officinalis* and *C. Condaminea* succeed better at Dodabetta.

The *C. Succirubra* especially promises to be a very handsome tree. The fallen leaves are of a blood red color, and as Mr. Spruce remarked in his visit to the Cinchona forests, are similar in look and feel to a piece of morocco leather.

The taste of the fresh bark of *C. Succirubra* indicated abundance of a pure bitter, and the increase of alkaloid reported in Mr. Howard's analysis of the third remittance of bark made upon 15th June 1864, is highly satisfactory, and if the increase continues will be very encouraging to intending cultivators.

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Mr. McIvor proposes to plant the adjacent ridges with *Encalyptus*, which will be attended with the two-fold advantage of affording shelter to the plantation from the high winds which often prevail, while the trees will yield valuable house-building material.

I do not think that Government could have found any where a Superintendent better qualified than Mr. McIvor to conduct the experiment, which has been pushed on with great vigor, and the results are very surprising. The amount of work accomplished is indeed far beyond my expectations. Under good management, the culture of Cinchona does not seem to be attended with greater difficulty than that of Tea or Coffee. Dr. DeVrij, late Superintendent of Chemical Researches in Netherlands India, has given candid and disinterested testimony to the superiority of the method of cultivation adopted by Mr. McIvor, over that which was pursued in Java.

The success of the experiment so far has stimulated private enterprize, and Cinchona planted out on private lands may be seen on various parts of the hills.

13. The Government Gardens at Ootacamund are in a flourishing condition, many interesting exotic trees and shrubs are now established, and not a few recent novelties have been introduced, chiefly from Australia, which has been favored by the increased facilities of communication.

14. *Tea planting.*—Since I visited Mr. Mann's Tea plantation at Coonoor in 1859, it has been much extended and a skilful Superintendent has arrived from Kew. In September 1860, Mr. H. D. Rae received a grant of land on liberal terms at Sholoor, north-west of Ootacamund, at an elevation of about 6,000 feet, and he at once commenced a Tea plantation, which has made remarkable progress. I went over it with Mr. Rae; much of it was grass land, and I was struck with the resemblance of the shrubby flora with that of the tea districts of the outer Western Himalaya comprising *Rubus, Rosa, Do Dovea, Colebrookia, Ixora, Clematis, &c.* In both this and Mr. Mann's plantation much care and skill is evinced, and there is now a good crop of seed. Other Tea gardens are likewise springing up, and Tea Companies have been formed, and there is no reason to doubt that great success will attend this branch of culture on the Neilgherries. Of the four tea-makers who were brought in 1863 from the North-Western Provinces, two were allotted by Government to Mr. Mann's and two to Mr. Rae's plantation from the outset. Their agreement for two years having expired, and the object of their coming being accomplished, they returned in March last to Dehra Doon.

Since their services were obtained a great improvement has taken place in the manufacture of the local teas, and many families consume local teas alone; when kept for a year the flavor can scarcely be distinguished from that of some of the varieties of Himalayan Tea, so largely used in Upper India. After seeing many of the plantations in the North-Western Provinces and the Punjab, I consider the progress of Tea cultivation on the Neilgherries as highly satisfactory.

In consequence of the numerous applications for tea seed, fifty Maunds were lately distributed by Government to the planters on the various hill ranges of the Presidency; these were procured from the Government plantations of the North-Western Provinces and Punjab. Plants raised from Assam seed may be seen in various plantations. Government last year resolved to establish a small Tea plantation in connection with the Neilgherry gardens for the distribution of seed and seedlings. I am informed by Mr. Clarke of the Board of Revenue that the Tea plants thrives well in the Pulney hills from seeds sown by me in 1859, favorable accounts of its growth are also received from Coorg and the Shevaroy hills.*

15. SANDALWOOD.—This valuable tree grows to perfection in Mysore, and yields a large and steady revenue to the State. It also thrives in certain Talooks of Coimbatore, Salem, North Canara, in one Talook of Dharwar and one of Kurnool. Beyond these circumscribed limits it does not yield much aroma. Great efforts have been made to introduce the tree into Hyderabad and the Central Provinces.

* NOTE.—Several plants of *Chamærops, Fortunii*, the Hemp palm of China, were imported at the same time as the tea seed from Shangai, and are growing vigorously in the plantation.

On two occasions the King of Ava applied through Colonel Phayre to the Commissioner of Mysore, that seeds of this prized tree might be despatched to him, the request was complied with, but the climate of Ava did not prove suitable.

In Mysore and in some small Jaghires the tree is a royalty. In British territory it has always been a reserved wood, not sold except upon pass. This has been the rule hitherto, and I should deprecate any alteration as it would entail the risk of extirpation of the tree and loss of revenue.

When Sandalwood occurs in land taken up by a Ryot, he asks for its removal, and the same course is, or should be adopted, as when Teak and Blackwood occur on Government land made over for Coffee cultivation, and the rocky ravines where Sandalwood flourishes should not be given up to cultivation.

It is remarkable that so few attempts have been made to plant Sandalwood, which is reared in certain situations without difficulty. Mr. New tried it in trenches at the Government gardens, Bangalore, and Major Morgan at Sigur; the former was very successful, the latter experienced much difficulty, but discovered a better way of treating the plants latterly.

The natives declare that birds are the great propagators of Sandalwood, and consider that the cultivated trees have less aroma, which is to a certain extent correct, as the tree prefers a dry poor soil.

16. *Red Sanders Plantation.*—Plantations of this tree, which is in great demand both as a dye-wood and a building timber, have been sanctioned on a small scale in the Cuddapah District. These are at present only commenced, but Mr. Yarde, whom I have seen, expects to report favorably of them this season.

17. *Black-wood Plantation.*—About 30,000 Blackwood trees have been planted in South Canara by Mr. Thompson, and if this tree grows as luxuriantly as Teak in the Nellumbur plantations it will be a great work. Good expectations of success may be entertained.

18. *Annamallay Forests.*—These forests were leased from the Colungode Numbidi at the suggestion of General F. C. Cotton. The lease for 12 years being arranged by the Collector of Malabar; the term expires, I believe, in 1866, and it is most desirable that the lease should be renewed for as long a term as possible. The present stump fee of 5 Rupees per tree is liberal, and will probably be accepted, but the proprietor may seek for a sum to be paid. Major Michael, in consultation with Captain Beddome, would give good advice regarding the amount which ought to be paid. Major Michael, whose resignation has been received, is a great loss to the Department, he was the first officer employed on the Anamallais, and has always done good service.

19. *Improved felling.*—In the forests visited, I have been pleased to observe that there is less waste of material in cutting up for Railway sleepers, and refuse timber is every where being turned to more profitable account. I observed Teak thinnings used for fencing the Railway, refuse slabs for furniture, and small fragments for firewood. It is desirable to consider every plan for working up waste timber.

20. *Licence system.*—The license and voucher system has been introduced into several Collectorates for working the 2nd class forests, and possesses some advantages over the contract system. The money is paid to the Revenue Department, while permission is given by the forest officer, so that there is a double check. Again the Tannah Police are directed to mark off the bandy loads upon the back of the voucher, and it is thus known what is taken out of the forest. In both license and contract system it is the duty of the forest officer to study well the yield of forest by making frequent inspections, and counting the number of trees of different classes. By attention to this and allowing compartments of the forest to rest; the operations are conducted upon a sound system; on the other hand, if all mature trees are taken at first, and then others of a smaller girth afterwards, the capital is consumed and not the interest only. I desire to impress this caution

especially upon the younger officers, who are apt to yield to every demand, and denude the forests unduly. The license and voucher system with the *trees marked*, as ordered by Government is, upon the whole, the best system for the 2nd class forests, which cannot afford a working establishment.

21. *Forest Revenue profits.*—I agree, with the remarks which I have noted *passim* in the Board of Revenue Proceedings, that it would be expedient to apply the small amount of net revenue derived from the forests of certain Districts to the extension and re-production of the routes in these or other Districts.

22. *Captain Beddome.*—Captain Beddome has added to our knowledge by describing many new and interesting plants. During the past nine years all the more important forests have been explored. One great want of the Department is an additional Assistant, who, while learning his duty with the Conservator, could afford useful aid and afterwards be competent to fill any vacancy. Of these Assistants who have practical knowledge, I may mention Messrs. Hall and Ferguson who were brought up to forestry and are valuable Assistants. Mr. Thompson in Canara has also been very useful. Condasawmy Moodelly, in charge of the office at the Presidency, is a good Accountant, and compiles the returns with care; the work is much increased.

23. *Forest Map.*—The large map shewing the distribution of forests over the whole Presidency is a new and useful work of reference, and with the accompanying notes will be useful both to the timber dealers of Europe and Asia.

24. *Forest Manual.*—The difficulty of obtaining skilled Assistants continues and young forest officers who know nothing of botany would benefit from a short manual, giving a precis of vegetable physiology and characterestic outlines of the principal timber producing families, with more detailed description of forest trees and their products with figures. Such a work would be most useful, and when Captain Beddome has completed his Synopsis of Indian Ferns, the publication of forest trees might next engage his attention.

Note.—His Highness the Rajah of Travancore is desirous of aiding in the publication of an illustrated work on the timber trees of the Western Coast, and would aid in a pecuniary way.

Years.	No. of trees planted.	Acres in each year's plantation.	No. of trees remaining in 1862.	No. of trees remaining per acre.	Average height of trees in feet from the ground.	Average girth of six largest, six middle, and six smallest trees in each plantation, measured at 6 feet from the ground.			Estimated value of the crop in 1863.		Estimated average value of one tree in 1863.			Remarks.
						1st Class.	2nd Class.	3rd Class.	Rs.	A. P.	Rs.	A. P.		
1843-44	53,797	50	15,344	310	80	37"	27"	17"	1,86,202	0 0	12	8 0		On good soil, distance from tree to tree about 22 feet.
1845	72,964	73	33,326	456	80	39"	26"	16"	2,21,013	0 0	6	10 0		Soil very good, distance from tree to tree about 18 feet.
1846	101,703	102	50,506	495	75	27"	18"	13"	2,76,700	0 0	5	7 0		Soil good, distance about 18 feet.
1847	107,000	107	54,314	507	70	25"	20"	13"	2,53,157	0 0	4	10 0		Soil generally good, distance about 14 feet.
1848	140,800	141	69,365	491	68	25"	19"	12"	2,81,182	8 0	4	0 0		Soil not very good, stony in places, distance 10 feet.
1849	103,880	104	59,276	569	65	24"	15"	12"	1,79,738	0 0	3	0 0		Soil very good, distance 10 feet.
1850	107,500	108	63,437	587	50	24"	15"	11"	1,47,909	4 0	2	5 0		Soil not good, some parts stony, distance 12 feet.
1851	123,900	124	95,270	768	50	25"	15"	12"	1,78,667	8 0	1	14 0		Soil part good, part bad, distance 9 feet.
1852	37,201	37	16,900	457	50	19"	14"	10"	43,538	13 0	2	9 0		Soil generally good, distance 10 feet.
1853	50,900	51	33,130	649	40	17"	12"	9"	54,936	14 0	1	10 0		Soil generally good, distance 9 feet.
1854	85,200	85	51,700	608	50	18"	14"	10"	76,568	12 0	1	7 0		Soil very good, distance 9 feet.
1855	104,314	104	68,874	662	45	16"	11"	8"	63,876	6 0	0	14 0		Soil generally good, distance 9 feet.

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1856	93,000	93	.....	.....	.....	...	...	...	40,331 0 0	.....	
1857	38,000	38	.....	.....	.....	...	...	...	15,325 0 0	.....	
1858	43,460	43	.....	.....	.....	...	...	...	12,237 0 0	.....	
1859	38,800	39	.....	.....	.....	...	...	...	8,750 0 0	.....	
1860	41,680	42	.....	.....	.....	...	...	...	6,983 0 0	.....	
1861	83,700	84	.....	.....	.....	...	...	...	9,425 0 0	.....	
1862	45,900	46	.....	.. ...	.....	...	...	...	2,586 0 0	.....	
.....	1,473,699	1,471	611,442	.....	.....	...	...	...	20,59,127 1 0	.....	

(Signed) J. FERGUSON,
Assistant Conservator of Forests, Nelumboor Plantation.

(A true Copy.)

(Signed) A. CUNDASAWMY MUDALIAR,
Deputy Conservator of Forests.

Valuation of one Acre in Plantation 1844 and 1845 in the Nellumbur Range.

Year planted.	No per acre.	Classes.	Number in each class.	Cubic feet.	Value per foot.	Value per sapling.	Amount.	Total.
					Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1844	310	1	90	13	2 0 0	26 0 0	2,340 0 0	
		2	124	8	1 2 0	9 0 0	1,116 0 0	
		3	60	.....	.....	4 0 0	240 0 0	
		4	20	.....	.....	1 0 0	20 0 0	
		5	16	.....	.....	0 8 0	8 0 0	3,724 0 0
1845	456	1	82	11	2 0 0	22 0 0	1,804 0 0	
		2	118	7	1 2 0	8 0 0	944 0 0	
		3	69	.....	.....	3 8 0	241 8 0	
		4	54	.....	.....	1 0 0	54 0 0	
		5	133	.....	.....	0 8 0	66 8 0	3,110 0 0

(Signed) J. FERGUSON,
Assistant Conservator of Forests, Nelumboor Plantation.

(True Copy.)

(Signed) A. CUNDASAWMY MUDALIAR,
Deputy Conservator of Forests.

Memorandum shewing valuation of Plantations 1844 and 1845 in the Nellumboor Range.

Year planted.	Probable number of acres.	No. planted.	Number remaining.	Classes.	Number in each class.	Contents in cubic feet.	Value per foot.	Value per tree.	Annual.	Total.
							Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1844	50	53,797	15,544	1	4,500	13	2 0 0	26 0 0	1,17,000 0 0	
				2	6,200	8	1 2 0	9 0 0	55,800 0 0	
				3	3,000	...	.....	4 0 0	12,000 0 0	
				4	1,000	...	.....	1 0 0	1,000 0 0	
				5	804	...	.....	0 8 0	402 0 0	1,86,202 0 0
1845	73	72,964	33,326	1	6,000	11	2 0 0	22 0 0	1,32,000 0 0	
				2	8,600	7	1 2 0	8 0 0	68,800 0 0	
				3	5,000	...	.....	3 8 0	17,500 0 0	
				4	3,700	...	.....	1 0 0	3,700 0 0	
				5	10,026	...	.....	0 8 0	5,013 0 0	2,27,013 0 0

(Signed) J. FERGUSON,
Assistant Conservator of Forests, Nelumboor Plantation.

(True Copy.)

(Signed) A. CUNDASAWMY MUDALIAR,
Deputy Conservator of Forests.

No. 136. ORDER THEREON, 7th July 1865, No. 1,566.

Forests, No. 5.

1. In this letter Dr. Cleghorn, the Conservator of Forests, reports upon the several plantations in Coimbatore and Malabar which he recently inspected.

2. *Nullumboor Teak Plantation.*—The Nullumboor Teak Plantation is reported to be in a very satisfactory condition in every respect, and Dr. Cleghorn's remarks are highly creditable to Mr. Ferguson, the Assistant Conservator in charge of it.

3. Mr. Ferguson's proposal that half his future planting operations should be carried on in Nullumboor, and half in the Nelicota tract of Government land is approved.

4. The Government will not object to Mr. Ferguson's making such alterations as may appear necessary in the rates of daily wages, so long as he does so with the sanction of the Collector, who has the immediate supervision of the operations, and keeps within the total amount sanctioned for each month's expenditure.

5. The case of Chatoo Menon, alluded to in paragraph 8 of Dr. Cleghorn's letter, has already received the special consideration of Government, and the arrangements then made have been sanctioned by the Supreme Government, and confirmed by the Secretary of State. The pension awarded is Rupees 37-8-0 and not Rupees 35 as stated by Dr. Cleghorn, and Government see no reason for re-considering the subject.

Revenue Proceedings, dated 21st August 1862, No. 1,776.
To Government of India from Pension Department, dated 13th December 1862, No. 396.
From do. do. dated 22nd January 1863, No. 268 G.
From Secretary of State to Government of India, dated 24th April 1863, No. 69.

6. The Acting Conservator of Forests will report as to the feasibility of carrying out the suggestion offered by Dr. Cleghorn in paragraph 9, that Nullumboor should be made a school of forestry for Conservators and others, and will state what additional expenditure would be caused by its adoption.

7. Dr. Cleghorn recommends in paragraph 10 that the pay of Mr. Ferguson be raised from 150 to 200 Rupees per mensem exclusive of the travelling allowance of Rupees 30. The Government are not prepared to increase the present expenditure of the Forest Department, but they will give favorable consideration to any proposed distribution of the available provision for Establishments which may, without entailing additional cost, allow of Mr. Ferguson's emoluments being increased to the desired extent.

8. *Australian Plantation.*—The remarks made by Dr. Cleghorn on the Australian Plantation at Wellington are more encouraging than could have been anticipated from previous reports. He proposes to increase its extent by planting out eight acres annually. The Acting Conservator will be requested to report if this annual expenditure can be met from the profits on the sale of poles and firewood off the plantation and, if not, whether the provision made in the Budget for the current year is sufficient to meet it.

* Order dated 9th February 1865, No. 273.

9. *Chinchona Plantation.*—The Government have recently reviewed* the report on the Chinchona plantations for 1863-64, and the result of Dr. Cleghorn's inspection strongly supports the view taken by them, of the success of the experiment and the efficiency of Mr. McIvor's supervision.

10. Dr. Cleghorn brings forward a proposition made by Mr. McIvor to plant the ridges adjacent to the plantations with *eucalyptus*, and observes that the undertaking would be attended with the two-fold advantage of affording shelter to the

plantations from the high winds which often prevail and of providing a supply of valuable house-building material. The proposal is approved, and Mr. McIvor will carry it out, regulating his expenditure so as not to exceed the provision made in the current year's Budget.

11. *Tea Plantations.*—Dr. Cleghorn's remarks with respect to private Tea plantations shew clearly that the successful culture of tea not only on the Neilgherries but also on the Pulney and Shervaroy ranges and in Coorg, is no longer a matter of doubt. The Tea-makers from the North-Western Provinces rendered good service on the Neilgherries, and Dr. Cleghorn notes that since their employment a great improvement has taken place in the manufacture of the local teas, and that many families use these teas exclusively.

12. *Sandal-wood.*—Dr. Cleghorn deprecates any alteration in the rule hitherto followed in this Presidency in regard to Sandal-wood, viz., to reserve it always and not to sell it except upon pass. The Government are not aware that any alteration is contemplated. They have prohibited, by a recent Order dated 10th May 1865, No. 966, any interference with Sandalwood growing on lands in the occupation of Ryots, and the equity of this prohibition is too evident to be disputed. The existing practice will be followed strictly in regard to Sandalwood trees growing on Government land, and the attention of the Board of Revenue will be called to Dr. Cleghorn's remark that the rocky ravines where Sandalwood flourishes should not be given up for cultivation or on Puttah.

13. *Red Sanders and Blackwood Plantations.*—The Government are glad to hear that favorable results are expected from the Red Sanders Plantation in Cuddapah, and the Blackwood Plantation in South Canara.

14. *Annamallay Forests.*—The lease of the forests belonging to the Colungode Numbidi; alluded to in paragraph 18 of Dr. Cleghorn's report, and which he suggests should be renewed, was taken for 16 years from the 1st March 1851, and expires on the 1st January 1867. The agreement was executed between the Collector of Coimbatore and the Numbidi. The subject will be referred to the Collector of Malabar, in which District the tract is situated, for report as to the terms on which the Numbidi may be willing to renew the lease.

15. Captain Beddome will also be requested to submit a brief but clear statement shewing the actual financial result of the lease about to expire.

16. *License system.*—The hints given by Dr. Cleghorn in paragraph 20 as to how the license system should be worked are deserving of attention, and if not already carried out Captain Beddome will circulate them among the officers of his Department.

17. In paragraph 22 Dr. Cleghorn states that an additional Assistant who, while learning his duty with the Conservator, can afford him useful aid and be competent to fill any vacancy, is much wanted. Captain Beddome will report on this proposal, stating at the same time how far the sanctioned establishment will allow of its being carried out.

18. The remaining paragraphs of the report under review require no particular remarks. The preparation of a work on the timber trees of this Presidency, alluded to in the last paragraph, formed the subject of the Orders noted in the margin. The undertaking was ordered to be kept in abeyance in consequence of Dr. Balfour being engaged in the preparation of a similar

9th November 1863, No. 2,018.
24th December ,, ,, 2,374.
4th February 1864, ,, 212.
13th ,, ,, ,, 271.

work. That gentleman will now be requested to inform Government what progress he has made with the work.

(True Extract.)

(Signed) W. HUDLESTON,
Acting Secretary to Government.

To the Acting Conservator of Forests.
,, the Superintendent Chinchona Plantations.
,, the Board of Revenue.
,, the Collector of Malabar.
"E J C Walfourd Esqr.

Fxd. S. T. Augustin.

the railway, refuse slabs for furniture, and small fragments for firewood. It is desirable to consider every plan for working up waste timber.

20 Licence Systems.

The License and Voucher System has been introduced in to several Collectorates for working the 2nd class Forests and possess some advantages over the Contract System. The money is paid to the Revenue Department, while permits is given by the Forest Officer, so that there is a double check. Again the tannah police are directed to mark off the handy load (upon the back of the voucher) and it is thus known what is taken out of the Forest. In both License and Contract System it is the duty of the Forest officer to study well the yield of Forest by making frequent inspections, and counting the number of trees of different classes. By attention to this and allowing Compartments of the Forest to rest: the operations are conducted upon a sound system on the other hand, if all mature trees are taken at first, and then others of a smaller girth, afterwards the Capital is consumed and not the interest. I desire to impress this caution especially upon the younger officers, who are apt to yield to every demand and decide the forests unduly. The Licence and Voucher System with the trees marked as ordered by Government is upon the whole the best system for the 2nd class Forests which cannot afford a working Establishment

Forest Revenue Profits

I agree with the remarks which I have noted passim in the Board of Revenue Proceedings that it would be expedient to apply the small Net Amount of Revenue derived from the forests, of certain districts to the extension and reproduction of the Forests in these or other districts

22. Capt. Beddome.

Captain Beddome has added to our knowledge by describing many new and interesting plants. During the past nine years all the more important Forests have been explored. One Sub Assistant of the Department is, an additional Assistant, who, while learning his duty with the Conservator, could afford useful aid, and afterwards be competent to fill any vacancy. Of these Assistants who have practical knowledge, I may mention Messrs Hall, and Ferguson who were brought up to Forestry and are valuable Assistants. Mr. Thompson in Canara has also been very useful Condas an my Moodelly in charge of the office at the Presidency - is a good Accountant and compiles the returns with care, which work is much increased.

23. Forest Maps.

The large maps showing the distribution of forests over the whole Presidency is a very useful work of reference, and with the accompanying notes will be useful both to the timber dealers of Europe and Asia.

24. Forest Manual.

The difficulty of obtaining skilled Assistants

Note. [illegible]

continues, and young forest officers who know nothing of botany would benefit from a short manual, giving a precis of Vegetable Physiology and characteristic outlines of the principal timber-producing families with more detailed descriptions of Forest trees and their products with figures. Such a work would be most useful, and when Captain Beddome has completed his Synopsis of Indian Ferns, the publication of Forest trees might next engage his attention.

H. Cleghorn

Conservator of Forests.

Rev.

~~Forest~~ Department.

Rec.d 29th July
No. 1134.

From.

The Conservator of Forests

To.

The Secretary to Govt

Rd.

Dated 28th
Rec.d 1st Augt 1865

S. Acpt 1566. 8 July

Submits his notes with remarks on the progress and condition of the Forest Deptt generally.

No. 135.

Revenue Department

No. 1566.

Proceedings of the Madras Government under, date the 8th July 1865.

Read the following letter from the Conservator of Forests.

Submitting his notes, with remarks, on the progress and condition of the Forest Deptt generally.

(Here enter 28th Apl 1865.

In this letter Dr Cleghorn, the Conservator of Forests, reports upon the several plantations in Coimbatore and Malabar which he inspected recently.

Nallumboor Teak Plantation.

2. The Nallumboor Teak plantation is reported to be in a very satisfactory condition in every respect, and Dr Cleghorn's remarks are highly creditable to Mr Ferguson the Asstt Conservator in charge of it.

3. Mr Ferguson's proposal that half his future plantin

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Australian Plantations

9. The Govt have recently reviewed the report on the Chinchona plantations for 1863/4, and the result of Dr. Gleghorn's inspection strongly supports the view taken by them, of the success of the experiment and the efficiency of Mr. Mc Ivor's supervision. Dr.

Chinchona Plantations.

*Order 9th Feby 1865, No 273.

10. Dr. Gleghorn brings forward a proposition made by Mr. Mc Ivor to plant the ridges adjacent to the plantations with Eucalyptus, & observes that the undertaking would be attended with the two-fold advantage of affording shelter to the plantations from the high winds which often prevail, and of providing a supply of valuable house-building material. The proposal is approved, and Mr. Mc Ivor will carry it

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not to exceed the pro-
vision made in the
current years Budget -

11. Dr Cleghorn's Tea plantations.
remarks with respect
to private Tea planta-
tions shew clearly as
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on the Neilgherries but
also on the Pulney &
Shevaroy ranges and
in Coorg, is no longer a
matter

matter of doubt. The Tea-
makers from North Western
Provinces have rendered good
service on the Neilgherries,
and Dr Cleghorn notes that
since their employment a
great improvement has taken
place in the manufacture of
the local teas, and that
many families use
of the these Teas exclusively.

12. Dr Cleghorn deprecates Sandal wood.
any alteration in the rules
hitherto followed in this
Presidency in regard to
Sandalwood, viz to reserve
it always and not to sell it
except upon pass - The Gov
are not aware that any al-
teration is proposed - They
have prohibited by a recent
order dated 10th May 1865,
No 966 any interference with

Sandal

Sandal-wood growing on lands in the occupation of ryots, and the equity of this prohibition is too evident to be disputed. The existing practice will be followed strictly in regard to sandal wood trees growing on Government land, and the attention of the Board of Revenue will be called to Dr Cleghorn's remarks that the rocky ravines where sandalwood flourishes should not be given up to cultivation or to Patta.

13. Government are glad to hear that favourable results are expected from the Red Sandars plantations in Cuddapah, and the Blackwood plantations in S. Canara.

Red Sandars Plantation.

Blackwood Plantations.

The

Arrumallay Forests.

14. The leases of the Forests belonging to Coimbatore Tumtidi Nunbadey alluded to in paragraph 18 of Dr Cleghorn's report, and which he suggests should be renewed was taken for 16 years from the 1st March 1851, and expires on the 1st January 1867. The agreement was executed between the Collector of Coimbatore and the Nunbadey Tidi. — The paragraph will therefore be referred to the Board of Customs in which Dr Cleghorn's report as to the terms on which the Nunbadey may be willing to renew the lease.

15. Captain Beddome will also be requested to submit a brief but clear statement showing the

the actual Financial result of the leases about to expire.

16. The hints given by Dr Cleghorn in para 20 as to how the License system should be worked are deserving of attention, and if not already carried out Captain Beddome will circulate them among the officers of his Department.

License System

17. In para 22 Dr Cleghorn states that an additional assistant who, while learning his duty with the Conservator, can afford him useful aid and be competent to fill any vacancy is much

much wanted - Captain Beddome will report on this proposal bearing at the same time on the question established with a view of its being carried

18. The remaining paragraphs of the report under review require no particular remarks. The preparation of a mark on the timber trees of this Presidency alluded to in the last para forms the subject of the orders noted in the margin. The mode of taking was ordered to be kept in abeyance in consequence of Dr Balfour being engaged in the preparation of a similar mark. [illegible]

1st Nov. 1863 No. 2018
21st Dec. — " — " 2374
14th Feb. 1864 — " — 212
13th — " — " — 271.

3. to Conservators of Forests - Depts of Govt
Dept. Chinchona Plantations
Board of Revenue. —
Govt. Botanist
Dr Balfour dept.

1865 Dec 15

Pa 135 & 136

1866.

Proceedings of the Madras Government

18th July 65

From the Collector of Malabar dated 14th July 65 No. - Con: 18 July 1865 c 8315 - 318.

From the offg Conservator of Forests dy 20 July 65 b/c No. 2026 -

From C. P. Ffawcett Esq. dy 10th Sept 65 No. 2551 -

From offg Consy of Forests dy 4th Octr. 65 C No. 2820

Receiving Dr. Colyhoun's Reports upon the General plantations in the Forests of Canitatore and Malabar