M.R.O. 14—10,000—21-4-22

MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

G.O. No. 115	Press ~~Mis.~~
31-32	
Dated 23 — 1 — 1860.	

Not to be folded or roughly handled

No. 31. Read the following letters.

From H. CLEGHORN, Esq., M. D., Conservator of Forests; to J. D. BOURDILLON, Esq., Secretary to Government, Revenue Department, dated Madras, 31st December 1859, No. 890.

I have the honor to report for the information of the Honorable the Governor in Council that during the official year 1858-59, I proceeded on my second tour of inspection through the Government forests and visited the Chittari, Yellagiri and Jawadhi ranges of the Salem district, and afterwards travelled through great part of Canara, north and south, [both above and below the ghâts,] and the principality of Cúrg. Subsequently, I had the honor of accompanying Lord Harris over the Shevari hills and through Malabar and Travancúr. After a few weeks stay at the Presidency, I proceeded to the Northern Division, and visited the mouths of the rivers from Masulipatam to Ganjam: on this occasion I took the opportunity of visiting the saul forests of Gumsúr.

2. During the year I have, in accordance with the instructions of Government, submitted my views on several subjects, such as:—

Railway requirements in Salem.
Do. Do. Ballári.
Utakamund gardens.
Canara forests.
Higher ranges of Anamallai.
Wynád boundary.
Report on fuel and firewood.

3. PUBLIC DEPARTMENTS.—There has been a constant and heavy pressure upon all the district establishments and local depôts, which has been met with difficulty. The requirements of the Indian Navy were not so large as in previous years, but the requisitions of the different Railway Companies were much greater. The Public Works and Telegraph Departments have continued to press for supplies, and the erection or enlargement of barracks at Belgam, Ballári, Bangalúr and Jackatalla have in a special manner taxed our resources.

4. MILITARY AND NAVAL.—The requirements of the different arsenals have been numerous and miscellaneous, but, except in the case of the Gun Carriage Manufactory, not individually very large. The various items mentioned in the margin will give some idea of army and navy demands.

Gun Carriages.
,, *Boats.*
,, *Stocks.*
Scaling Ladders.
Saddle Trees.
Plugs for minie Rifle Balls.
Ropes for Arsenals.

5. RAILWAYS.—The establishment of railways causes an immense demand for timber; and thus, as I remarked last year, entirely changes the features of the districts through which they pass. Each sleeper measures three cubic feet, and as one mile of single rails requires 1,760 sleepers, and these will not, on an average, last above eight years at the most, we have an annual demand of at least 220 sleepers per mile, or 22,000 for every hundred miles. The total length of lines within the Presidency, either sanctioned or contemplated, is, I believe, about 1,150 miles, so that if the above estimate as to duration be correct, at least 2,53,000* sleepers will be required annually. A portion of these will, no doubt, be procured from England, Ceylon, Burmah, the Andamans, and perhaps Australia, but there will still be a regular and heavy drain on the forests of this Presidency. To meet this prospective demand, it seems most desirable that immediate steps should be taken to raise large numbers of hard-wood trees suitable for sleepers, especially as sleepers of indigenous woods may be estimated at one half the cost of those obtained from England. I have already suggested that railway companies, irrigation companies, sugar factory proprietors and others, who consume large quantities of fuel, charcoal and timber, should plant to some extent for their own use in station compounds, along railway embankments, on the banks of channels, &c.

* *Say* 35,000 *trees annually.*

6. SOUTH WEST LINE.—400 *miles.* The supply along the south west line has been better managed than at first, when a multitude of contractors appeared, who engaged to contract for wood which was not their own. In August 1858, the Salem establishment was sanctioned, and Mr. Blenkinsop appointed. The Resident Railway Engineer reports that the supply of sleepers comes in much faster, and that they are in general of better quality than those received at first.

7. BANGALUR BRANCH.—80 *miles.* The country near the line selected for this branch is remarkably wanting in useful timber, which, so far as I can learn, must be supplied in great

part from the Denkinacottah táluq of Salem and the Concanhully táluq of Mysúr. A special establishment will be required, and this is now engaging my attention. Seasoned teak for the Bangalúr workshop can be obtained at a moderate rate from the depôt at Mysúr.

8. North West Line.—300 *miles.* The first part of this line, viz. that which runs through the North Arcot and Kádápa districts, traverses a moderately wooded country, where there is a good deal of excellent timber. I do not anticipate any deficiency of supply in Kádápa and Karnúl; the chief points to be attended to are the opening up of the country with roads on either side of the line, and the selection of people who will not cut wastefully. An establishment, to mark suitable trees, will probably be required in the Kádápa and Karnúl districts. The Ballári district is absolutely destitute of timber suited for railway requirements, and the price even of firewood is excessive. In anticipation of the railway demands, an establishment has been organised in Mysúr, and large quantities of timber have been floated down the Tunga, Bhádra and Wurda rivers, to a point near where the railway crosses the Túmbaddra. At this spot a depôt has been established. Piles of faggots for making charcoal, and large rafts of bamboos have also been floated down.

9. Great Southern.—300 *miles.* No timber resources are available for that portion of this line which runs from Negapatam to Trichinopoli. It is understood that the Directors propose to send sleepers from England for about thirty miles, and it is probable that part of the remainder of the line may be supplied from Ceylon. For the proposed extension to Carúr and Errode, and southwards to Tuticorin, we must look to the forests at the sources of the Ambrawatti and Bhowani rivers, along the banks of the Caveri and those on the Pulni hills, especially in the Cambam valley. Sleepers and fuel can probably be rafted down the above mentioned rivers.

10. Preserving Timber.—*Boucherie's process.* The process of Boucherie, which impregnates timber with metallic oxides, rendering the softer woods durable under ground, and thus saving much valuable timber would be of great importance to Indian railways, and should, therefore, be patronised. A prize medal was awarded for this process at the Great Exhibition of 1851, and a "Grande Medaille d' Honneur" at the Paris Exhibition of 1855.

11. Telegraph.—The wire is supported on posts of sawn teak wood and not on young trees as formerly. In some places, as near Darwar, Mutti (*Terminalia glabra*) is now used, and many of the posts are excellent. In the Northern Division, the posts are of sáulwood (*vatica robusta,*) from the Gumsúr forests. Two hundred poles belonging to different species of trees indigenous to the Nílgiri hills were lately supplied by this department for the experimental line from Utakamund to Kunúr.

12. Auctions.—I have endeavoured to impress on all in the department that no wasteage of timber (which will bear the cost of removal) can be permitted; and every effort is now being made to turn to account all fragments of sound timber. My Assistants have been enjoined to collect all outlying timber and convey it to the depôts, where it is sold by public auction, a full months' notice of sale being given in all the local as well as the Fort Saint George Gazettes.

No auction was held at Anamallai last year, the demand for timber being so great that offers were immediately made for all that could be brought down. Logs, planks, &c., unsuited for public purposes are being collected at the foot of the ghát for sale by auction.

One auction was held at the depôts in Canara during the present year. On the whole, the proceeds were remunerative, and more than covered the expense of dragging the timber out of the jungles, while the lots being small, the poorer classes were able to suit their wants.

Much of the refused timber which was not required for the Jackatalla barracks, or which would not bear the carriage to Utakamund is being sold below the ghát at Gúndepett.

13. Extension of system.—*I. Wynád.* The great demand for timber in connection with erecting public buildings on the Nílgiris, particularly the Jackatalla barracks and the jail, has called my attention to the extensive forests at the base of these mountains, stretching in a northerly direction towards Cúrg, and some parts of which have been the favorite resort of sandalwood robbers and wild beasts. In accordance with my recommendation, Government have sanctioned the appointment of an officer, whose salary is to be defrayed partly by this Government and partly by Mysúr.

Extract Minutes Consultation, No. 577, Revenue Department, dated 28th April 1859, paragraph 3, and Commissioner of Mysúr's letter, 4th April 1859, paragraph 3.

II. Segúr.—This forest has been much exhausted by a succession of unscrupulous contractors, and there is very little teak or blackwood at present fit for felling. It is important that the forest should be allowed to recover, as it is the main source of supply to Utakamund for house building purposes. I proposed that Captain Morgan should have charge of this in addition to the Múdumalli forest, with a small establishment costing 50 Rupees per mensem.

Extract Minutes Consultation, No. 668, dated 16th May 1859, Revenue Department.

This was sanctioned,* and operations have now commenced. I hope that the sale of sandal and jungle wood will not only cover the expenses, but also yield a profit, while the young teak is coming on for future supply.

III. Nuggur.—In the Nuggur division of Mysúr also, an establishment which promises to be extensively useful for the supply of wood to Ballári, and the bare country to the eastward, has been organised.

14. Financial Results of Conservancy.—From the returns of my Assistants in Canara, Anamallai and Salem, rendered to the close of the official year, it may be seen that the operations have in these ranges been financially profitable. Large supplies of timber have been furnished to public departments at a time when such was indispensably necessary.

	Receipts.	*Expenditure.*	*Profit.*
Anamallai	9,835	33,012	*97,318
Canara	1,00,604	34,325	66,279
Salem	7,805	3,048	4,757

* To appear in the next account current.

15. Price of Timber.—The price of wood all over the country has been steadily rising for some time, and large timber is obtainable with more difficulty than formerly. In some localities on the other hand, the price of timber has somewhat decreased, in consequence of the establishment of depôts having broken up the monopoly previously existing in the hands of a few proprietors and contractors.

16. Canara.—The forest operations have been more extensive than in any previous year, but chiefly above ghát, and as predicted in my letter of 7th December 1858 [paragraph 6], the gross return has not been so large as in the years 1855-56 and 1856-57. Nevertheless, there has been a net profit of 66,000 Rupees. The subjoined statement shows the quantity and quality of timber supplied to various public departments during the year.

Department.	Teak.					Blackwood.					Junglewood.					Total.				
	Logs.	Cands.	Qrs.	G.	T.	Logs.	Cands.	Qrs.	G.	T.	Logs.	Cands.	Qrs.	G.	T.	Logs.	Cands.	Qrs.	G.	T.
Bombay Dockyard...	409	904	2	4	10	12	45	2	4	10	0	0	0	0	0	421	950	1	4	0
Hydrabad, Scinde, Engineer.....	37	118	2	2	10	0	0	0	0	0	0	0	0	0	0	37	118	2	2	10
Darwar Engineer ...	187	344	2	1	5	0	0	0	0	0	538	842	0	4	0	725	1186	3	0	5
Belgam do.....	88	146	1	1	0	0	0	0	0	0	375	160	0	3	17	463	306	1	4	17
Lingasur do.....	103	188	3	2	17	0	0	0	0	0	16	23	0	1	1	119	211	3	3	18
Darwar factory... ...	0	0	0	0	0	0	0	0	0	0	30	43	3	4	15	30	43	3	4	15
Belgam barrack.. ...	215	417	1	2	6	7	6	3	1	3	531	907	3	3	11	753	1332	0	2	0
Tuddy workshop.....	100	38	2	3	13	0	0	0	0	0	0	0	0	0	0	100	38	2	3	13
Edulgee Government Contractor.....	9	18	1	4	19	0	0	0	0	0	25	21	2	0	7	34	40	0	0	6
Total...	1148	2177	2	3	0	19	52	2	0	13	1515	1998	3	0	11	2682	4229	0	1	4

The accompanying forest chart which has been carefully prepared by Mr. Müller, shows the position of the teak forests, superior jungles, sandalwood tracts, poon-spar localities and timber depôts. As this chart is likely to be useful to revenue officers and Engineers, I beg to recommend that it be lithographed. The letter of Mr. Fisher, Collector of Canara (Appendix A.) notices fully the chief points in the forest management for the year. I concur with

him in reprobating* the admission of the agents of public officers to fell timber in our reserved forests. The deviation was exceptional, and arose from the necessity of meeting large and emergent military demands [especially the Belgam barracks], which could not be instantly met by the small staff of employees in the conservancy department.

* *Paragraph* 13.

I. *Gúnd Forest.*—Some progress has been made in working this valuable forest, and Captain Taylor, Indian Navy, has explored the Black river and taken the levels. He reports favorably as to the quantity of teak, and that although there is a succession of small rapids amounting to a fall of 120 feet in the river, the timber can be floated down, though not without some difficulty.

Captain Taylor's letter to Government recorded in Extract Minutes Consultation, No. 677, *Revenue Department, dated* 17*th May* 1859.

II. *Wurdah River.*—Rafts are being floated down the Wurdah and Túmbuddra rivers to Ballári, to meet the requirements of the north west line of the Madras railway.

III. *Roads.*—The two lines of road specially recommended by the Collector, would be of great value to the forest department, and enable us to extend our operations into tracts which at present are inaccessible.

I. *Hallial and Malapúr viâ Unshy ghát.*
II. *Hallial to Tinay, viâ Jugglebeti.*

IV. *Wood in Depôt.*—The accompanying table shows the quantity of wood in store in different depôts (12 in No.) the proceeds of the auctions will appear in this years account.

Táluq.	Name of Depôts.	Teak and Black.					Junglewood.					Total.				
		Lgs.	Cds.	Q.	G.	T.	Lgs.	Cds.	Q.	G.	T.	Logs.	Cds.	Q.	G.	T.
Ankolah.	Sedashegúr	1112	0	0	0	0	0	0	0	0	0	1112	0	0	0	0
	Gunawally	2362	0	0	0	0	0	0	0	0	0	2362	0	0	0	0
Yellapur. Sondah.	Sirey	0	0	0	0	0	981	770	3	4	2	891	770	3	4	2
	Malanjee	0	0	0	0	0	298	292	3	4	10	298	292	3	4	10
	Katur	1356	1498	2	4	15	1873	1812	3	1	4	3229	3311	2	0	19
	Mundagode	268	224	2	2	12	0	0	0	0	0	268	224	2	2	12
	Kantanally	0	0	0	0	0	375	549	1	3	5	375	549	1	3	5
	Kolekery	266	195	0	1	3	1634	1960	1	2	5	1900	2155	1	3	8
	Bagwattee	60	35	3	4	16	1055	1138	0	2	12	1115	1174	0	2	8
	Halial	520	878	3	2	17	368	428	0	0	1	888	1306	3	2	18
Súpah	Shirajur	0	0	0	0	0	1285	2216	2	2	11	1285	2216	2	2	11
	Harregallee	1411	2198	2	0	12	593	941	3	3	3	2004	3140	1	3	15
		7355	0	0	0	0	8372	0	0	0	0	15727	0	0	0	0

17. Anamallai.—Lieutenant Beddome in his annual report gives a concise and faithful account of the economy and working of these forests, which is generally satisfactory. The quantity of work done is considerable, but it would have been much greater, if a sufficient number of axemen could have been procured; the Palghat laborers frem whom we have hitherto drawn our main supply, find full and remunerative employment at the railway workshops close to their own houses.

I. *Extension of road to Cochin backwater.*—I hope that ultimately the forest road, which has been gradually extended westwards as our operations have progressed, may be carried on to the Cochin backwater, forming another avenue of traffic between the rich táluq of Polachy and the Western Coast, opening up a very wild country, intermediate between the Palghat gap and the Aringole pass.

The estimate for the Anamallai ghát, to supercede the present rude timber slip, has been for some time before Government, and the extension of the road above alluded to is a strong argument in favor of making this ghát.

II. *Elephants.*—Mr. Beddome has been instructed to pay the Mahouts what he considers necessary, and the services of a foujdar have been procured.

The account current does not shew the actual profit of the year, from the circumstance of the Assistant not having entered the receipts of the Bombay timber agent as cash, in accordance

with the order of Government. The sum [1,07,117 Rupees] will of course appear to the credit of Government in next years account.

It may also be noticed that the great object originally of working these forests, was to reduce the price of 1st class teak, which was yearly becoming more scarce and difficult to procure, and indeed the Indian Navy have latterly procured almost all their frigate scantling from this forest.

18. Salem District.—The indiscriminate felling of trees in the Government forests of Salem having been urgently brought to my notice by the Collector, coffee planters and others while the demands of the Railway company required to be speedily met, I submitted a scheme for the consideration of Government, and suggested that a seignorage of 3 to 4 annas per sleeper, or 1 Rupee to Rupee 1-8-0 per tree should be charged, and to carry out this measure, I recommended a temporary establishment for marking trees suited for the railway.

Extract Minutes Consultation, No. 943, *dated 9th July* 1858, *Revenue Department.*

This was sanctioned in Extract Minutes of Consultation, 9th July 1858, No. 943.

As it was desirable to have an Assistant immediately in charge of these operations, Mr. L. Blenkinsop was appointed to the Salem range on a salary of Rupees 200 per mensem.

Extract Minutes Consultation, No. 1137, *dated 13th August* 1858, *Revenue Department.*

I learn from the Railway Engineer that the selection of trees for sleepers is now more satisfactorily conducted than heretofore, and as a larger proportion is accepted by the railway there is less waste of timber. The seignorage derived from this source covers the expense of the establishment as originally contemplated. The permanent employment of an Assistant, (Mr. Blenkinsop), Overseer (Mr. Yarde) and four peons was sanctioned by Government.

Extract Minutes Consultation, No. 626, *dated 6th May* 1859, *Revenue Department.*

Looking to the fact that the Salem district is to have the benefit of two, if not three lines of railway, and that the demand for renewing sleepers will certainly be very great, I think that planting operations will eventually be required in this district. During a period of financial difficulty, I did not venture to solicit a grant for this purpose, nor is it yet necessary. The forests on the banks of the Caveri are still unworked, but they are notoriously unhealthy and little opened by roads. The Shevarai, Collemalli, Chittari and Yellagiri forests have all contributed their quota.

		Rs.		
September	1858	Rs.	18	12	0
October	,,	,,	328	14	0
November	,,	,,	127	14	0
December	,,	,,	654	6	0
January	1859	,,	1,002	9	0
February	,,	,,	1,152	9	0
March	,,	,,	3,261	0	0
April	,,	,,	1,259	7	0
Total Rs..			7,805	7	0

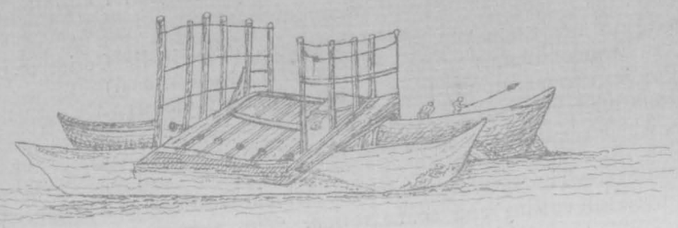
		Rs.
Assistant	200 × 9 =	1,800
Overseers	60 × 10 =	600
Peons		648
Total Rs....		3,048

The marginal abstract gives the monthly r sıdıəɔəfor railway sleepers compared with cost of the establishment.

19. Ferry Boat.—Considerable difficulty has been experienced in obtaining large logs suited for the preparation of jangars or ferry boats.* The wood best adapted and most used for this purpose is that of the Ayenee (*Artocarpus hirsuta*), which though still existing in considerable abundance along the ghâts has been cut away in all the most accessible localities.

* *Vide sketch.*

The trunks of other trees are now hollowed out for making canoes.



20. Plantations.—*I. Teak Nullumbúr.* Great attention has been paid to the important work of propagating timber. The thinnings of this plantation, [several thousand poles] were advertised for sale, and readily purchased. They were admirably suited for fencing, scaffoldings, roofing second class houses, and other economic purposes, as also for poles of country carts, yokes, &c., &c. The proceeds during the past year have almost covered the expenses of the plantation, and I believe I can with certainty assure Government of its prospective return being amply sufficient to meet all charges which may be incurred.

This plantation was inspected by the late Governor in November 1858, and was noticed in his Lordship's Minute.

Extract Minutes Consultation, No. 308, *dated 11th March* 1859, *Revenue Department.*

An ornamental woodman's knife and belt were presented to Chatu Menon, the Native Sub-Conservator, by the Collector under orders of Government.

II. *Canara.* Ground has been prepared and plantations commenced on the banks of the Black river, and two young men have been trained at Nellumbúr to carry out the work.

III. *Nuggur.* Two teachers of planting have been trained by Chatu Menon, and reported qualified to form a teak plantation.

21. Australian Plantations.—*Jackattalla.* These were commenced in 1856 by Captain J. Campbell and were reported* on by me in June 1858, when I solicited a further grant of 2,500 Rupees, which Government were pleased to sanction. The increasing European population at Jackatalla and Kunúr renders the preservation and increase of these plantations of essential importance to the barracks now occupied by about 1,500 persons. They are now under the charge of Overseer E. Hall. A detailed report on these plantations has been submitted.

* *Vide Extract Minutes of Consultation 3d June* 1858, *No* 748, *Revenue Department.*

22. Planting at Utakamund.—Government in Extract Minutes of Consultation, dated 3d June 1858, were pleased to sanction the disbursement of Rupees 2,050 for planting out 10,000 Australian trees in the neighbourhood of this station, under the supervision of Mr. McIvor, who reports "that four thousand plants have been planted in the Sholah at Malí Mund, but about one-third of these died from being planted too late in the season. About 700 trees have been planted round the Utakamund lake and in the neighbourhood of the station. Six thousand young plants of Acacias, Cypresses, (different species,) Deodars and Willows have been planted out in clumps along the road to Jackatalla" where shelter is much required.

23. Distribution of tree seeds.—Many applications have been made with which I have been enabled to comply. The French Government received a considerable quantity of teak and other seeds for experimental introduction into Algeria. Two supplies of sandal seed were sent to Major Phayre, the Commissioner of Pegu, for the King of Ava, and at various times seeds of different useful trees have been sent to the Hyderabad territories and to various stations in the Bombay Presidency.

24. Arboriculture.—The masses of the people have until lately been ignorant of the value of trees, but in the vicinity of large towns, and along the line of railways, they are now alive to the importance of this kind of property. I am full of hope that the ráyats will gradually be induced to plant useful trees in their hedge rows and by their wells and water courses, which according to the new regulations will be indisputably their own.

25. Avenues.—Much has been done in some districts by the Executive Engineers in the way of planting avenues, and the trunk roads are better sheltered by trees than formerly. There are few districts also without a nursery of seedlings, and the canals have in many places been planted. For the most part these avenues are under the charge of the Department Public Works, and, except occasionally supplying seeds, my work is confined to giving advice as to the suitability of particular trees to certain localities.

26. Reserved trees.—The list of trees which under the native rule comprised only teak, sandal, and blackwood, has been extended to other trees highly valuable for building purposes, which in most districts are:

Jack, (Artocarpus integrifolia.)	Muradhu, (Terminalia Coriaceœ.)
Ayenee, (Artocarpus hirsuta.)	Cedar, (Cedrela Toona.)
Vengay, (Pterocarpus marsupium.)	Erool, (Inga Xylocarpa.)
Palava, (Mimusops————.)	

There are others which require to be conserved in particular districts.

27. Minor Jungles.—The shrubby copsewood which is so useful for fuel is protected in some degree from wasteful cutting and conflagration. The management of these jungles,

however, must always remain with the local authorities, who, in communication with me, promulgate rules according to the necessities of their districts. No circular that could be devised would be generally applicable.

28. Sandalwood.—The preservation of young plants, and the means of ensuring a regular income from this source of revenue have engaged my attention. The system adopted in Mysúr for this purpose appears to be judicious. Colkars are employed to destroy the strong creepers which tend to choke the young plants springing from seed dropped in hedgerows by birds. It is their duty also to cut annually all the ripe* trees and no other, and to take care that the billets are properly prepared and sorted, and brought into the sandal godown. The sandal tree grows to perfection in Mysúr, and yields a large annual revenue to the State. It also thrives well in some parts of Salem, Koimbatúr and North Canara, in which district it is now under the charge of Mr. Müller. I have been in correspondence with the Collector of Koimbatúr, and have instructed Lieutenant Beddome to visit the several táluqs (noted in the margin) in the Koimbatúr district and to supply full and accurate information.

* 20 *years old.*

Danaickencottah.
Andyur.
Collegal.
Suttimungalum.

I. As to the size and abundance of the trees.

II. As to the method of curing or preparing the wood adapted in the district.

III. As to the means most likely to improve the quality of the billets and to secure a regular revenue to the State.

Mr. New, Superintendent of the Lall Bagh garden, Bangalúr, has raised a large number of seedlings in a nursery and finds the seeds germinate readily, if sown within a fortnight after removal from the tree, but they do not bear carriage well to a distance and few germinate if a month old.

Illicit traffic in Sandalwood.—On different occasions while travelling down the Carúr ghát, I met parties of Mápillas with fresh cut sandalwood on their backs. On enquiry, I ascertained that these men barter the wood with the Kúrumbers for saltfish and cocoanuts. I addressed the Commissioner of Mysúr, the Collectors of Malabar and Koimbatúr, requesting their co-operation in stopping this illegal traffic, and I am happy to say steps have been taken which have nearly put an end to it.

Mr. Grant suggests that the most effectual way to stop the practice will be to grow the tree in Malabar. This will be tried, but there is reason to doubt whether the aroma, for which it is valued, will be produced in that climate.

29. Babool preserves.—I have suggested that this most useful tree should be conserved along the banks of the Túmbaddra, both in the Ballári district and in the Nugger division of Mysúr. The Babool springs up in the alluvial soil on both banks, [in similar ground to the Shikargahs of Scinde] and if three trees be planted when one is cut, there will be an increased supply of useful material in a few years. The pods and tender twigs form a favorite food of sheep in the hot weather.

30. Munjeet.—Samples of this dye root have been sent to Calcutta and England for experimental trial and report. The product is abundant upon the slopes of the Nilgiris, and if it could be prepared for export so as to be packed in small compass, a trade would probably spring up. There appears to be very little difference between the Nilgiri and Punjab article.

31. Firewood.—There is no doubt that this necessary of life is more scarce than formerly, and more expensive near all large towns, owing to the greater distance from which it is brought and the unrestricted license with which it is cut. Zamíndárs have increased their tax on wood, owing to the great demand for railways and other public works; whilst Government in a liberal spirit have left the fuel of a district untaxed, unless special reasons can be shewn.

Extract Minutes Consultation, 4th June 1859, *No.* 744, *Revenue Department.*

Rules for the cutting of Streeharicottah and other firewood jungles have been laid down and the subject is receiving much attention generally from revenue officers.

32. Charcoal.—Native iron smelters employ fuel from 1-3 inches in diameter, and to procure this they take sapplings, or the tops and branches of the largest hard wood trees, allowing the trunks to decay. Large trees are not adapted for fuel for smelting, as the cost of splitting them adds greatly to the expense; and unless the logs are split, the inner wood is not carbonised. Skilled Europeans prefer branches 4 to 8 inches in diameter, which size they consider most convenient for charcoal burning; if smaller, the wood is liable to be overburnt, and if larger, it is not properly carbonised.

In the forests of the Western ghâts the average price of charcoal brought several miles to the furnace is 3 annas a basket of 50lbs.

33. Forest Conflagrations.—These are of frequent occurrence; the unextinguished fire of a camp of Brinjarrees, the sparks from the torches or cheroots of travellers, the spontaneous ignition from friction of bamboos, but much more frequently, the wilful burning of grass by the hill tribes [as heather is burnt in Scotland] in order that the ashes of the herbage may nourish the roots of young grass, and thus improve the forage of their cattle—are among the causes of this devastation which extends annually over large tracts.

The largest trees skirting the forest suffer more or less from these fires, the saplings are scorched and mutilated, and the smaller seedlings perish. If the same spot is again visited by conflagration in the following year, the largest trees which escaped the first time are often consumed.

34. Elephants.—On several occasions, my attention has been directed to the uncere-monious way in which the Mahouts of Elephants, belonging to Devasthanums, lop the branches of trees on trunk roads, as if they were entitled to gratuitous forage. This should be stopped by the officer in charge of the roads.

35. Forest Assistants.—These are four in number.

I. Lieutenant Beddome succeeded Major D. Hamilton two years ago, in the charge of the Anamallai range; his report of the operations in that reserved forest will be found in Appendix B. He is a botanist of great industry and promise, and has made some important additions to our knowledge of the Flora of Southern India.

II. Mr. S. Müller has been in charge of the North Canara forests, since the death of Mr. Poulton; he is a good Canarese scholar, is well acquainted with his district, and the forests (under his charge) have been brought into good order.

III. Mr. L. Blenkinsop was appointed to Salem this year, chiefly in connection with urgent railway requirements. It is intended that he should have charge of the sandalwood in the north of the Collectorate, and any planting operations which may be found necessary.

IV. Native Surgeon Francis Appavú, is in charge of the office at Madras, and during my absence, countersigns the abstracts and arranges the herbarium.

V. I have also the benefit of the partial services of Captain Morgan, Executive En-gineer, who has the oversight of the Segúr jungle which lies on the road from Utákamund to Múdumallai forest.

36. Overseers.—Two officers of this grade have been appointed during the year, Mr. E. Thompson at Putúr, and Mr. Curry at Hallial, the former in South, the latter in North Canara. There are several places in which I am anxious to place Overseers, as Denkinacottah, Palghat, Palni, Gúmsúr and Kircumbadi. It is, however, extremely difficult to find men of good character, steady habits, robust health and some education, who are willing to take appointments involving a lonely residence in unhealthy climates.

The risk of fever, the frequent difficulty of obtaining necessaries, and the small amount of salary deter many persons from joining the department.

37. Public Gardens.—The Horticultural institutions at Utakamund, Bangalúr and Madras, are respectively superintended by Mr. McIvor, Mr. New, and Mr. Brown. These gardens are valuable adjuncts to this department in promoting arboriculture, young trees being supplied to the road departments, soldier's gardens and the public at low rates. Seeds are also distributed to applicants at cost price.

38. Manual of South Indian Botany.—In consequence of extensive travelling and separation from books and specimens, I much regret that little progress has been made in digesting the mass of materials accumulated in my different journies. I hope to work up these in after years; but at present, I can do little more than collect and arrange specimens. Go-vernment will, I trust, excuse the delay which has occurred, my time having been so much occupied with investigating trespasses, settling boundary disputes, arranging jungle contracts, and conducting miscellaneous inquiries, connected with the vegetable kingdom.

The recent publication of Major Drury's "Useful plants of India," a book which has had a rapid and extensive sale, has to a great extent supplied the present want; and the researches of Lieutenant Beddome, alluded to elsewhere, will greatly assist in the preparation of the manual.

39. Presidency office.—Towards the close of the official year Mr. Maclagan, my Assistant in charge of the office at the Presidency, resigned his appointment, having been nominated Agent of the Great Southern of India Railway Company. The object contemplated

in Mr. Maclagan's appointment to the department, viz. the arranging of a system of accounts, having been in a great measure accomplished, I considered that it would now be desirable to have an Assistant at the Presidency, who possessed a knowledge of botany, and who could devote a considerable portion of his time to the herbarium, and answer some of the minor references during my absence. I accordingly recommended the appointment of Francis Appavú, Native Surgeon, whose assistance I had previously found of great value, when Professor of Botany in the Medical College; and with this recommendation Government were pleased to comply.

Mr. Spring, my head clerk, has accompanied me in many of my travels, and has made himself generally useful, often at the expense of much personal discomfort.

The expenditure on account of the department generally has been as follows:

	Rs.	A.	P.
Salary of the Conservator, the Assistant in charge of the office at the Presidency and the establishment	17,193	4	7
Salaries of the three Assistants and their establishments.	18,377	4	2
Contingent charges.	5,623	4	4
Rupees...	41,193	13	1

The accounts of the Anamallai and Canara forests for the official year 1858-59 have been forwarded to the Board of Revenue.

After three years experience I may observe, that it is only by the cordial co-operation of the revenue officers, and those under their orders, that the Forest department can be success-fully carried on, and I therefore, strive to keep the Collector and Sub-Collector informed of the nature, scene and extent of all the forest operations in their districts, with a view to receiving their aid.

In conclusion, I beg to state, that throughout my tour in the provinces, I received every attention and assistance from the local authorities.

From W. FISHER, Esq., Collector of Canara; to H. CLEGHORN, Esq., M. D., Conservator of Forests; dated Mangalúr, 9th July 1859.

I have the honor to submit the following report on the Forests of this district for the year ending 30th April 1859.

2. The account current shows the expenditure to be Rupees 34,325-7-9, and the gross receipts Rupees 1,00,604-10-9, leaving Rupees 66,279-3-0 as net profits for the year.

3. The principles on which this account is prepared were explained in my report for 1857-58; and as I need not recur to them here, I shall proceed at once to notice the operations of the year under report, and make such observations on forest management generally as cir-cumstances call for.

4. The transactions of the year may with advantage be divided into amani and contract works.

5. In the Soopah forests 11,880 logs of teak blackwood and junglewood have been felled, trimmed, and for the most part brought into the depôts, under the superintendence of the con-servancy establishment. The 12,794 candies of timber so secured costing Government about Rupees 1-6-2 per candy.

6. 10,300 teak poles, measuring 2,495 candies from clearings about to be brought under cultivation, are ready for sale, and will be disposed of with other timber after the monsoon.

7. The Wudders employed by Mr. Müller have been allowed to export butts and ends of timber lying about in the jungle on* pay-ment of Rupee 1 per candy, and Rupees 139-7-7 have been realized on this account, but the arrangement does not appear to have proved satisfactory, and has, I gather from Mr. Müller, been discontinued in Sondah at any rate.

* *The accounts do not bear out Mr. Müller's statement, as butts and ends seem to have been given to Wudders at lower rates.*

8. Two thousand trees have been girdled on the banks of the Gungawally and some progress seems to have been made in planting teak, but I learn this from the accounts rather than from Mr. Müller's statements.

9. In the southern táluqs, the Overseer, Mr. Thompson collected, and sent down to Man-galúr, 189 logs of junglewood, the sale proceeds of which more than doubled the expenditrue

incurred in saving this wood from destruction. Scattered as it was, I am rather surprised that we succeeded so well, and I should have been satisfied by the mere payment of expenses of an operation which necessarily preceded the introduction of a new system. The timber in the forests from which wood can be floated down to Mangalúr, is very much scattered, but I am now engaged in arranging contracts, from which I hope to obtain a supply of timber for this market. The contracts noted in the margin are in the course of completion. Two satisfactorily so. The third, however, has in point of fact expired, and some correspondence is now passing between me and Mr. Müller regarding it, as Mr. Müller does not appear to have put a stop to the contractors' operations, but to have allowed him to proceed with his work, though there is little hope of his ever completing it.

	Trees.
1. *Messrs. Brice and Co.*	2,500 *for sleepers.*
2. *Pond Shenvy*.....	3,747 *Nakary teak.*
3. *Venktaish Prubhoo*....	2,424 *trees.*
4. *Vishvanatapoa*...	2,000 *jungle wood.*

10. Of the execution of the 4th within the period fixed, Mr. Müller holds out but small hopes.

11. One new contract has been entered into for the conveyance to the coast of 2,000 teak and blackwood trees, girdled in the lower part of the Goond forest. The rates are Rupees 2-11-11 per candy, no distinction on this occasion having been made between selected and rejected timber.

12. A three years vaidah has beed recommended by Mr. Müller on account of the difficulties the contractor will have to overcome in bringing out this timber, which is scattered over a jungle high up the black river. The trees having been all specially selected and girdled by the conservancy establishment, it was thought unnecessary in this instance to make the distinction which contracts hitherto entered into have contained, and the contractor will be paid by the candy, and have no share of any sale proceeds.

13. From our depôts, timber as per margin, has been furnished to the different public departments, but so much of it as is still unpaid for, appears in the accounts as at the depôt. Mr. Müller has been led, I am sorry to find, into breaking through our forest rules, because otherwise unable to meet the sudden and enormous demands that have been made for timber. I, however, strongly object to this system of allowing the agents of public officers to fell timber in our jungles.

Bombay Dockyard.
Engineer Scinde, Hydrabad.
Do. Darwar.
Do. Belgam.
Do. Lingasúr.
Darwar Factory and Engineer's Department in this district.

14. The people so employed are generally the very men whom we have had so much trouble in getting rid of, and who are systematic plunderers.

To return under any circumstances to a system which has cost us so much not only in timber actually stolen, but in wanton waste; and to re-admit men into the forests who have every temptation to tamper with our establishments, is indeed a false step, and one against which I hope you will steadily set your face.

15. Dr. Forbes I see, continues to obtain his honniwood at nominal rates, and I think this should be put a stop to. Other public officers pay for the timber they take, and charge for it in their accounts, and Dr. Forbes should in my opinion do so likewise. The Bombay Government manufacture and sell cotton gins below cost price, with a view to encouraging their adoption in place of the native instrument, and however praisworthy or politic this may be, there can be no reason for our breaking through our system, the fairness of which both the Bombay and Madras Governments have admitted, when the only point gained is a reduction in the cost price of the gins at the expense of Canara forest revenue.

16. As the contractors employed failed in delivering their timber in proper time, no coast sales have taken place, and Mr. Müller having postponed the Soopah and Yellapúr sales, but one of any consequence has come off. The amount realized at this auction in the Sondah táluq was Rupees 22,465.

Sales.

17. The only other points which call for comment, are depôts and roads.

18. As regards the former, Mr. Müller urges, I think correctly, that depôts above the ghâts must from time to time be changed according to the position of the forest being worked, and the means of communication between it and the market. He would not, therefore, go to any expense in protecting them with walls, &c., where land carriage only is available, and experience shows that protection is unnecessary, no thefts having as yet occurred. Below the ghâts, there is great reason to think that properly constructed depôts would save timber which

can at present be occasionally floated away, sunk or otherwise disposed of, until a sale can be effected.

19. On this subject, I have already been in communication with the District Engineer, who will take steps in consultation with Mr. Müller, for submitting plans and estimates for your consideration and approval.

20. In Soopah, roads are required, not only to enable the conservancy establishment to work the forests to advantage, but for every reason, military and political. The subject has been constantly before Government, but hitherto nothing has been done beyond the rejection of the plans and estimates sent in, on account of their extent and magnitude. I would, however, take this opportunity of again urging the propriety of making these táluq roads the subject of special sanction, as one of the best means of restoring peace and safety to the people, and securing the future advancement and prosperity of the táluq.

1. *Hullial and Mallapúr viâ Unshy ghât.*
2. *Hallial to Tinay viâ Jugglebett.*

21. In conclusion, I have to observe, that the establishment seems altogether to be working satisfactorily. Since Mr. Müller closed his account of the years operations, a writer has been found for Mr. Curry. Mr. Thompson, in addition to the work performed in the Buntwal and Pootoor táluqs, was for a short time employed in looking over the jungles in Barcoor and Oodipy, in which sandalwood stills are worked. Much of the jungle seems to be of little value, and is well turned to account, but the sandal oil manufacturers have in some instances, notwithstanding all the precautions I have taken, found their way into tracts of good timber jungle. It is true, perhaps, that at present at any rate, this jungle is from its position valueless, as it will not pay to work it, but I have taken measures to punish infringement of contracts, and to put a stop to the wastful proceedings brought to light by Mr. Thompson's visit. The amount realized during the year under report, from sandalwood oil stills, amounts to only Rupees 75, but the fact is, that up to June 1858, the proceeds have been entered as muhtarafa tax, and those to be realised under the new system have not been collected within the official year.

22. The papers noted in the margin are herewith transmitted as received from Mr. Müller's office. His account current and mine do not, as you will observe, agree, as the one relates only to northern transactions, but is not confined to actual cash receipts and charges, whilst the other is for the whole district, and is prepared according to the rules laid down in Government Minutes, dated 22d March 1855, No. 349.

Summary of Forest operations.
Account current of North Canara forest.
Memorandum of the stock of wood on the 30th April 1859.

23. As Mr. Müller furnishes an account of stock, I have not thought it necessary to do so, but beg to append the other accompaniments required by the rules above quoted.

1 *Account current.*
2 *Memorandum of advances.*

From Lieutenant R. H. BEDDOME, Assistant Conservator of Forests; to H. F. C. CLEGHORN, Esq., M. D., Couservator of Forests, dated Coimbatúr, 1st May 1859, No. 37.

1. I have the honor to forward the annual accounts of the Annamullai forests for the official year 1858-59, duly countersigned by the Collector of Coimbatúr, with reference to Extract Minutes of Consultation, dated 12th of November 1857, No. 1153, paragraph 9.

2 I have experienced very great difficulty throughout the season in procuring axemen, as owing to the great demand for sleepers by the railway, many of the Malabar axemen, who formerly looked to our forest for work, have taken contracts with the railway company. I procured some axemen from the Cochin territory, but I found it difficult to persuade these men to remain long in the forest. From the above cause I have not been able to cut as much teak for the Bombay Dockyard as I could have wished; 275 trees, almost all of very large size, have been filled in the Colongode Mumbúdy's territory and 44 all of which were girdled trees, have been felled in the Government forest, these were dressed up into 1,565 pieces, which are classed as follows:—

1st Class.....	131
2nd ,, ...	137
3rd ,, ...	281
Rejected.....	541
Heads.....	345
Butts.....	130
Total...	1,565

3. I was utterly unable to cut the amount of timber (blackwood) required by the Madras Gun Carriage Manufactory, Colonel Maitland's demands for this wood were most urgent, I therefore, purchased 4,000 cubic feet of it from the Colongode Mumbúdy, this I succeeded in getting at 40 Rupees the 100 kalls all first class planks, which, considering the market rate on the Malabar Coast is now Rupees 65 the 100 kalls, I consider it was purchased at a very reasonable rate. The cost of this timber forms an item in my annual expenditure, but will be refunded by the Gun Carriage Manufactory. Late in the season, I was enabled to fell 39 blackwood trees in our Government forest, these yielded 2,430 cublic feet, and are now stored in the forest.

4. The Mulcers, the tribe inhabiting the foot of the Annamullai hills, took contracts to supply me with vellay nayu ("conocarpus latifolia") and ven teak ("lagerstrœmia microcarpus") two timbers required by Colonel Maitland for the Gun Carriage Manufactory. They have cut about 2,000 cubic feet of the former and 1,500 cubic feet of the latter timber. Of this about 2,000 is of the dimensions and quality required by the Gun Carriage Manufactory, and the remainder can be sold at the annual auction.

5. This tribe has been very useful to me in this way during the last season, as I could not have procured axemen for this work. The Mulcers have hitherto done nothing in the forest, but prepare the elephant ropes from the vaca nar and assist in the clearing of brushwood and the repair of roads, &c., for which they are paid daily cooly hire. I found them this season very willing to take contaracts for the supply of the above timber, though they often would not come up to work in the forest for daily wages. I could not procure the services of any of this tribe for the usual repairs to the forest roads this season, and was obliged to contract for the same with the wudders, who are a most unsatisfactory tribe to deal with, they will only work by contract and two-thirds of them invariably run away when they have received their advances, they also suffer much more from the fever than the Mulcers, and I had very great difficulty to getting the roads repaired this season before the carting commenced. Hitherto the Mulcers have performed this work, but I could not persuade them to give their services this season, they seemed under the impression that they were not allowed to work in the forest. Even if they wished, and I had at times great difficulties in procuring the necessary supply of elephant rope from them.

6. Almost all the girdled trees were felled and trimmed up this season, Rupees 84-8-0 were spent in clearing the brushwood round outlying timber and young saplings to guard against fire. This amount was expended chiefly in the months of February and March previous to the periodical fires. No timber whatever was lost by the fires this season. I could wish to do much more in the way of clearing, trimming and protecting the young teak saplings in the forest, but the impossibility of procuring labor is an obstacle that I cannot contend against.

7. The timber slip was put into very fair repair at the end of November, at the small cost of 70 Rupees, these repairs only last for the slipping season, and it will require the same repairs each year, it is useless attempting any repairs to it until after the rains, in some places the slip is a perfect watercourse, and every thing is swept away with heavy rain. The slipping of Bombay planks, however, need never commence until December, and logs and butts are not much damaged by the slip being out of repair.

8. The slipping of planks, &c., has this year been entirely performed by our elephants. The Mulcers will never undertake this work, and the Colongode coolies, who undertook part of this work last season, lost so many of their number and suffered so much from the fever, that they refused to come this year.

9. I have had great annoyance and difficulty with cart contractors this season, many have left us and gone over to the railway, preferring to take work in and near Paulghat to entering the forests: the advances formerly given to these cart contractors were very large, I have lessened these, never in any case giving more than 10 Rupees per cart in advance, and half of this is withheld until the carts are brought up above ghát. I have lost the services of several contractors by so doing, but I considered the measure necessary.

10. 885 of the planks cut this season have been already carted to Mungara and 105 remaining at foot of ghát, and will be carted before the end of the month.

11. I tried this year to procure coolies to float our planks down the river to Ponany, thinking that thereby a saving might be made upon the contract system, all the coolies,

however, are in the pay of the contractors, who have the monopoly of floating all the timber that goes down the river. I failed in my attempts, I however, succeeded in getting the contractors to reduce their rates from 7 annas to 6 annas per plank.

12. In anticipation of Lord Harris' visit to the forests, a small wooden bungalow was erected at a cost of about 70 Rupees, this amount is included in the hutting expenses, the building has come in very useful for the establishment.

13. The Kaders who were formerly located near Toonacadunú (our forest station), have entirely left our portion of the forest and have gone over to the Cochin territory. They state their reasons for so doing to be that the hill produce on our side is exhausted, they pay Mr. Kohloff on behalf of the Cochin forests Rupees 100 per annum, for the privilege of collecting cardamoms, ginger, &c., whereas they paid no seigniorage for the hill produce collected in our forests. I shall regret the loss of their services as guides, but otherwise they were of no use in the forest, refusing to undertake any labor whatever. One of the tribe (Attly) has agreed to reside at Toonacadunú as a guide receiving an increased salary.

14. I have had great changes in my office establishment during the past year. Mr. St. Martin my head Overseer resigned his appointment last June, Mr. Lemion, the 2nd Overseer, was then at Madras, and his return to the department was at the time doubtful, so I nominated Mr. Smith to the office, he suffered much from fever and resigned almost immediately. Mr. Lemion was afterwards appointed 1st Overseer and has given me much satisfaction during the last working season. Mr. Martin, junior, my 3rd Overseer also resigned his appointment about the middle of the working season, I procured a 2nd Overseer in Mr. Eagles, and I have appointed a Native to the office of 3rd Overseer. My writers and duffadar have several times been changed, the fever frightening them away and one of my writers, who had been for about two years in the forest department, died from the jungle fever.

15. The District Engineers of Trichinopoli and Salem have both indented largely upon me for teak timber this season, the former has paid Rupees 3,342 for teak logs, and the latter has received teak to the value of 2,270-12-10 Rs., which sum appears in memorandum No. 3 as money due but not paid during the official year. This timber was all supplied from the logs which were cut in former years and were outlying in the forest. These large demands from public offices precluded the possibility of my holding an auction during the past year. I had to use every effort to meet them, and I supplied every log that I was able to cart and slip out of the forest. I hope to hold a public auction in August or September next.

16. I greatly require the services of more elephants, but do not know where to procure them from the 10,000 Rupees sanctioned by Government for the purchase of elephants 4,945 still remain in hand. I regret to have to report the death of one of our forest elephants during the past season, and also of two old decoy elephants lent by the Collector's department.

17. The services of a Foujdar to look after the elephants and to treat them when they fall sick, would be a great addition to the forest establishment, I have great difficulty in procuring mahauots and under mahauots the pay sanctioned for the former being only 5 Rupees per mensum and for the latter only 3 Rupees, which is less than half the salary generally given on the Malabar Coast, I can only procure men of the lowest description, and they are continually running away.

18. The Walliar jungle close to the Annamullai hills has been worked very systematically this season by Mr. Ross of the railway department, trees only of a certain girth have been cut, he has paid Rupees 3,342, seigniorage upon sleepers cut from jungle wood in this forest. Teak and blackwood are strictly preserved.

19. A new platform was made this season to the large bridge near Colongode, over which all the timber for the Bombay Dockyard is carted at the cost of Rupees 179-2-9.

20. The account current does not shew the actual profit of the year, as only the sums of money which have been actually paid for, appear on the credit side, all wood sold and not paid for during the year appears in No. 3 memorandum. After deducting the sum of Rupees 6,110-12-9, that has been paid for the Gun Carriage Department and which is being refunded to us, the expenditure of the year, including the pay of the establishment, amounts to Rupees, 22,383-0-2. The amount of timber sold during the year amounts to Rupees 1,19,701-7-9, which gives a profit for the past year of Rupees 97,318-7-7.

21. The following is a comparative statement of teak timber supplied to the Bombay Government for Dockyard purposes in the year 1857-58 and 1858-59, showing the increase or decrease in the number of planks, quantity, and class delivered, and the amount realized in each year, the rate being determined by the Collector of Malabar from their fair market value.

Comparative Statement of teak timber supplied to Bombay Government for Dockyard purposes in the year 1857-58 *and* 1858-59. *Shewing the increase or decrease in the number of plankes quantity and class delivered and the amount realized, in each year, the rates being determined by the Collector of Malabar from their fair market valuation.*

For the year 1857-58.									For the year 1858-59.										
No. of planks.	Class.	Quantity. Kolls.	Barrels.	Visums.	Rate per 100 kolls.	Rate per cub. feet.	Amount. Rs.	A.	P.	No. of planks.	Class.	Quantity. Kolls.	Barrels.	Visums.	Rate per 100 kolls.	Rate per cub. feet.	Amount. Rs.	A.	P.	Decrease.	Increase.
715	1st.	49,971	4	2½	80		39,977	1	2	748	1st.	56,107	9	3	75		42,080	8	7		
572	2nd.	33,503	2	14	70		23,452	4	3	446	2nd.	25,565	10	7	65		16,617	8	6		
1314	3rd.	60,331	10	4	60		36,199	1	9	743	3rd.	33,164	8	10	55		18,240	6	4		
260	4th.	9,440	4	2	50		4,720	2	9	229	4th.	9,345	7	14	45		4,205	6	4		
81	5th.	2,685	2	3	40		1,074	1	2	101	5th.	3,813	11	2	40		1,525	6	2		
112	Inferior.	4,841	6	11½	35		1,694	8	8	157	Inferior.	6,557	7	1	30		1,967	3	0		
3057		1,60,773	6	5			1,07,117	3	9	2424		134555	6	5			84,636	6	11	Rs. 22,480-12-10	

No. 32. ORDER THEREON, 23d January 1860, No. 115.

Ordered to be taken into consideration on a future day.

(Signed) T. PYCROFT,
Chief Secretary.

Rev. 1859. Dept.
Pro: of Govt. 31st January 1860.
No. 21.

From,
R. Cleghorn Esqr. M. D.
Conservator of Forests.

To, J. D. Bourdillon Esqr
Secy to Government
Revr. Dept.
Fort St. George.

Dated 31st Decr } 1859.
Recd. Jany 3 }
No. 890.

Enclosures 2 with a map
No 1

Submitting a Summary
of the Forest operations during
the official year 1859/59.

No. 115. 23d Jany
William Order

No. 115

Ordered Co
~~This report will~~ be taken
consideration on a future day.

Fort St. Geo. }
23d Jany 1860. }

Copy in a Letter to
England Dy 9th November
1860 No 123

No. 31 & 32.