M.R.O. 14—18,000—27-9-24.

MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

G.O. No. 2374 Press ~~Mis.~~

418-419

Dated 24. 12. ~~19~~ 1863

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department, 24th December 1863.

No. 418. Read the following letter from Captain R. H. BEDDOME, Officiating Conservator of Forests, to C. G. MASTER, Esq., Deputy Secretary to Government, Revenue Department, Fort Saint George, dated Camp Ootacamund, 8th December 1863, No. 766 :—

SIR,

1. I have the honor to acknowledge the receipt of the Government Order No. 2,018 of the 9th November 1863, together with 30 enclosures herewith returned.

2. If Dr. Balfour would forward to the Conservator's Office at Madras a list of what timber trees are required, flowering specimens could, from time to time, as they are procured in flower be forwarded by the Forest Officers in charge of Districts and Forests. Figures of most of these trees have been published by Dr. Roxburgh and Dr. Wight.

3. If Dr. Balfour wishes for drawings of the trees themselves, he might get some assistance from Colonel Hamilton, at present sketching for Government, and who has great skill in delineating the general characteristics of the different varieties of foliage.

No. 419. ORDER THEREON, 24th December 1863, No. 2,374.

1. In his letter dated 23rd October 1863, Dr. E. Balfour stated that he had commenced a series of lithographed drawings of trees, and he sought the aid of Government in furtherance of his undertaking. The aid he desired from Government was explained to be the "issue of orders to its Botanists, its Forests Departments, and its Gardens, each within their respective ranges" * * * "to furnish drawings of all undelineated timber trees peculiar to their several localities."

2. Captain Beddome in the letter above recorded states what assistance the Forests Department can afford towards the undertaking. It consists merely in furnishing specimens of such trees as Dr. Balfour may require.

3. The Government consider Dr. Balfour's suggestion to be well worthy of being carried out. They could not however order their Officers to furnish such aid as he requires; many, indeed, could not supply drawings, and it would be scarcely fair to require those who could, to contribute as a matter of duty to a publication, of which the credit would not attach to them.

4. Moreover, a work of this kind to be really useful ought to be prepared by a skilful Botanist, who could ensure correctness of representation and description and clear the many doubts which still exist regarding the identity of many woods.

5. The Government could not largely patronize such a work unless edited by a Botanist of known attainments, and it is doubtful whether the public would appreciate such a publication unless so edited.

6. On the other hand, they apprehend that Dr. Balfour has no particular desire to undertake the proposed work, if the Government with their ample means are willing to undertake it.

7. The Governor in Council considers it very desirable that Dr. Balfour's useful suggestion should be worked out.

8. The Conservator of Forests, Dr. Cleghorn, and the Officiating Conservator, Captain Beddome, are both Botanists of known ability, and the Department over which they preside is the one most interested in possessing and disseminating the information which such a work would contain, and also best able to afford valuable assistance in its preparation.

9. The Government are prepared therefore to entrust the duty to Captain Beddome unless Dr. Balfour wishes to persevere with it himself, as an entirely private adventure. The work, if undertaken by the Forest Department would be limited to the timber trees of the Madras Presidency and should comprise—

I. Lithographed drawings of the tree, showing all the parts necessary for its identification.
II. The Botanical name and description with the English and Vernacular names.
III. Information as to its locality, qualities, uses, abundance, &c. &c.
IV. Reference to authorities, &c. on the subject.

10. The work would be issued periodically and sold to the public at cost price, a sufficient number of copies being reserved for distribution to Government Departments.

11. Captain Beddome's suggestion that drawings showing the general form of the trees should also be prepared, is good, and Colonel D. Hamilton will be requested to state whether he would undertake this duty. Such drawings would not be required of all trees, and Captain Beddome would furnish a list of those which he considers should thus be represented, in order that Colonel Hamilton (if he can furnish such drawings) may be able to select good typical specimens of them.

12. Six Copies of the work as issued would be furnished gratuitously to Dr. Balfour for his own use.

13. Captain Beddome will report fully on the subject of this Order, stating what assistance he will require, &c. in the event of the work being entrusted to him.

(True Extract.)

(Signed) **J. D. SIM,**
Secretary to Government.

To the Military Department.
„ **Conservator of Forests.**

Exd. S. T. Augustin.

MILITARY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following papers:—

From the Deputy Secretary to the Government of India, Military Department, Fort William, 20th April 1861, No. 756; to the Secretary to Government, Military Department, Fort Saint George.

Memorandum by Colonel Balfour, C. B., dated 29th October 1860.
Letter from Military Finance Department, to the Secretary to the Government of India, in the Foreign Department, No. 78 A, dated 18th February 1861.

I am directed to transmit, to be laid before the Madras Government, copies of the documents noted in the margin, relative to the supply of Teak and other timber to the Admiralty and to the various Departments of the Indian Governments requiring it.

2. It will be seen that the Military Finance Department have clearly pointed out the unnecessary expense caused by the high prices now maintained by the various Departments competing with each other; and that to remedy the evil and at the same time afford a wholesome stimulus to private enterprise, they have recommended the establishment of a timber purchasing agency, and sketched the plan by which the business can be most efficiently and economically carried on.

3. The Right Honorable the Governor General in Council has entirely approved of the scheme proposed by the Military Finance Department, and resolved that it be carried out with as little delay as possible. I am therefore to request that the Honorable the Governor in Council may be moved to cause the necessary arrangements for the establishment of the Agency as proposed to be made, and a report of them to be forwarded for the information of the Government of India, when the requisite instructions will be given to the Commissioners of Pegu and the Tenasserim Provinces, and the arrangements under which the timber will be supplied, will be notified for the information of all concerned.

4. The attention of the Honorable the Governor in Council is particularly requested to the valuable suggestion made by the Military Finance Department for the employment of Surgeon Balfour in arranging all the information respecting Forest trees which may be now in his possession, or which he can obtain from public or private sources, in a compendious form, to be printed for general use.

No. 757.

Copy of the foregoing forwarded to the Military Finance Department, for information.

Memorandum for His Excellency the Earl Canning, G. C. B., Viceroy of India.

For upwards of ten years, whilst serving in the capacity of Member of the late Madras Military Board, and Inspector General of Ordnance and Magazines at Madras, I constantly directed my attention to the subject of the supply of timber for the Gun Carriage Department of the Madras Presidency, and had under review a vast mass of information collected by numerous able Officers on the subject of supplies of timber from various localities, a question which, year by year, becomes more important and more difficult to solve, owing to the sources of supply becoming exhausted.

2. The abundant forests of Mysore, containing Teak wood of the most excellent quality, have ceased to be a source of supply, on account of the heavy expense of transporting the timber from thence. The extensive forests of Malabar and Canara are not found equal to supply the wants of the Indian Navy, and the Madras Gun Carriage Agency, except at a cost which virtually precludes any extensive operations in the Navy Dockyard of Bombay. The Anamally Forests which border Malabar and Coimbatore, are too distant from water communication to admit of cheap transport, and the fine wood there procurable, cannot therefore be brought down except at a very high price.

3. The resources of the Godavery forest will not be fully available, until the river is further opened up, and the right of free navigation ceded to the British Government. The only known sources therefore, whence timber could be bought at a cheap rate, are the marts of Rangoon and Moulmein, to which other nations already resort.

4. During my late visit to Rangoon and Moulmein, I endeavoured notwithstanding the shortness of my stay, to collect information regarding the arrangements made for completing the requisitions sent from Madras, for timber of a quality suitable for the Madras Gun Carriage Agency, and I regret to state, that limited as are the wants of that Agency at all times, and much as they have been curtailed of late, on economical grounds, there still remain requisitions to a considerable extent uncomplied with. I entered into communication with the Heads of the Ordnance and Commissariat Departments in the Pegu and Tenasserim Provinces, and found that they despair of obtaining a sufficient quantity of Timber, of a suitable quality to meet the wants of the Madras Gun Carriage Agency. There is no want of timber of one kind or another, but the best quality of wood appears to be insufficient. The Teak timber shewn me under the Saw at Moulmein, was such as would not have been admitted into the Gun Carriage yard for Gun Carriages, for, judging from past experience, I am convinced that it would crack and break down under the strain it must bear, and it is equally unsuitable for Naval purposes.

5. During the past few years I have constantly been in communication with Colonels Simpson and Briggs, of the Madras Artillery, who served in the Tenasserim Provinces during the time that Colonel Durand was Commissioner there; and both these Officers have often borne testimony to the excellence of the arrangements made by Colonel Durand for working the forests, and would fully bear out his account of the ample supplies of good timber then available in these Provinces. Since that time however a great change has taken place, and taking into consideration the great extent of the supplies of timber exported since that date, and the mistaken course afterwards adopted in reference to these forests, Colonel Durand would, I think, recognise, that the trees located in the nearest and most accessible parts, must by this time be cleared away.

6. The Report of the Commissioner of the Tenasserim Provinces, (Captain Hopkinson,) dated 21st September 1860, fully bears out this view. He states that only about an eighth part of the timber required by the Admiralty could be supplied from the forests of Moulmein, and that vast as is the area of this Province, still the greater part of the timber exported is brought from the Districts beyond the British Frontier.

7. It will also be seen on a careful perusal of the Report of the Commissioner of Pegu, Colonel Phayre, and especially the enclosure from Dr. Brandis, Conservator of Forests in the Pegu and Tenasserim Provinces, that the forests of Pegu although as yet much less worked than those of Moulmein, are nevertheless very inadequate to supply the wants of the Admiralty, even supposing the maximum quantity (24,026 trees) named in paragraph 5 of Dr. Brandis' Report, to be of the superior quality suitable for the purposes of the Admiralty; whereas it is shewn in paragraph 8, that only about one-fourth of that number may be expected to yield timber of the requisite quality. It is further stated in the same paragraph, that this supply could only be gardually obtained by means of having a number of canals dug for floating the timber, and roads made for carting it, and by rocks obsructing the river being blasted.

8. Dr. Brandis adds, that the deficiency in the number of trees required would have to be met by supplies brought from the territories of the King of Burmah, and from independent, or partially independent States, over whom the British Government can exercise but little authority. It is true that Dr. Brandis gives the opinion, that the requisite supplies will eventually be obtainable, but we have as yet no evidence of such facilities existing; and in paragraph 14 he expressly recommends that Government should not enter into any engagement with the Admiralty for supplying them with timber from these Provinces, until time has shewn how far it will be feasible to do so.

9. This recommendation is the more worthy of attention, because the probable cost, as well as quality and quantity of wood obtainable is still but little known. As respects quality it will be seen by the last paragraph of the Despatch from the Admiralty, dated 2nd July 1860, that they purpose preparing clear and definite information as to the dimensions and quality of the timber required, and they enjoin careful attention being given to instructions on these points, referring to the large rejections of the timber procured by the Indian Government for the Admiralty in 1847, two-thirds of which appear from the Report of the Admiralty Surveyor to have been on arrival in England, found unfit for Naval purposes.

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10. I have always understood from the Officers of the Madras Artillery already named, that the timber sent from Moulmein on that occasion was selected with great care, by an Officer of the Admiralty, specially deputed for that duty; and as regards future supplies instead of one-fourth of the logs brought to the general market, being found fit for Naval purposes, as estimated by Dr. Brandis, I do not think from the remarks in the Admiralty Despatch and from what I have observed, that above one-tenth would now be found of suitable quality. And this view is confirmed by the difficulty experienced last year, even by great exertions and activity, in obtaining a very limited supply for the Madras Gun Carriage Agency.

11. The next point is the price proposed to be given by the Admiralty for the selected timber. Dr. Brandis says in paragraph 13, that the rates are satisfactory, but at the same time considers that for the larger scantling increased rates should be given, and shews (in paragraph 2 of his Memorandum attached to the letter), that the value of a load of 50 cubic feet is Rupees 52-15-10, being actually 12 Rupees more than the rate proposed to be given by the Admiralty, *viz.*, £4 per 50 cubic feet; the timber so valued by Dr. Brandis being of mixed quality, some inferior, and some of a superior quality, whereas all the timber passed for the Admiralty must be of the superior kind. As far as I can learn the lots in which the timber is at present sold, at a high rate, consists of logs of inferior quality of which few, often none, would be fonnd to be fit for Gun Carriage purposes, and equally unsuitable for Naval purposes. I must further remark that the ton of 50 cubic feet required by the Admiralty, is a ton of measurement; but that as charges for transport are incurred virtually by the weight, it should be borne in mind, that the Teak wood, which will yield by measurement 50 cubic feet to the ton of 2240 lbs. avoirdupois, will not be found of that substance as to pass the scrutiny of the Admiralty. The Teak wood which would probably pass, would be required to weigh at least 50lbs. to cubic foot after 18 months' seasoning, and this will necessitate the green woods, weighing about 60 lbs. per cubic foot: causing thereby an increase in the cost of transport. It is apprehended that in appraising the value of timber too little consideration is given to this last point, when in fact being the main element in the cost of all descriptions of timber, it demands paramount attention. I may state here, as a fact rendered so from experience, that the conveyance of good Teak timber from a distance of only 100 miles, would entail a cost nearly equivalent to the rate (4 lbs. per fifty cubic feet) offered by the Admiralty.

12. In an estimate of the cost of timber required this year for the Madras Gun Carriage Agency, I observe the rate is entered at Rupees 1-11 per cubic foot of timber in log, and I think this is the rate at which timber from Burmah is expected to be procured, and does not include any portion of the cost of Establishments employed for the purpose of procuring timber, and as the Admiralty rate (£4 per 50 cubic feet of sided timber) includes the cost of shipment, it would appear that the Officers of the Indian Government think it worth while to give considerably higher prices than are offered by the Admiralty.

13. In mentioning these difficulties, I do not however intend in any way to discourage attempts to develope the timber resources of these provinces; on the contrary before seeing these papers, I had resolved to submit to Government my views as to the necessity of terminating, as early as possible, the competition now existing between the Public Departments of the three Presidencies, by endeavouring in every way to increase the supplies of timber which are at present wholly inadequate for the public service of India.

14. I fully understand from Dr. Brandis' Report, that he is prepared to supply annually 16,000 loads of selected teak timber, each of 50 cubic feet, which is the quantity required by the Admiralty, and although this is a large quantity of choice timber, still Dr. Brandis seems to entertain no doubt of procuring it, from the forests of Pegu and Tenasserim, either within or beyond the British Territories, on certain conditions of Canals and Roads being made, and arrangements for saw mills for cutting and squaring the logs in the jungles. It would however be well for Government to deliberate further before complying with these conditions, and I think the suggestions made by Captain Hopkinson, in his report of the 21st September, are well worthy of attention.

15. I would not impose on Doctor Brandis any duties foreign to those which peculiarly appertain to the Forest Department. The squaring of timber requires machinery and Establishments; and the cutting of Canals and formation of roads call for some knowledge of Engineering works. If therefore any such works be necessary to open up good forests, let the roads and Canals be separately considered, the results following being carefully set forth, and let a special Officer be employed to execute the work.

16. Doctor Brandis' undivided attention should be confined to bringing forth the undeveloped timber resources of these fine provinces. There are many other most valuable woods besides Teak, and every effort should be made to bring these valuable woods into use, in order to lower the demand in Teak. Pedouk for instance is in great request in the Madras Gun Carriage Department, and will be found most valuable for many building purposes. There are other woods whose properties are well known in Madras, where the subject of Pegu timber has been discussed.

17. The Commissioner of Tenasserim in his Report calls attention to the great difficulty which an Agent will experience in obtaining accurate information, from the residents at the port of shipment: I believe that the Timber trade is a very dangerous one for an inexperienced party to enter upon; and Officers of Government are not exempt from the mistakes which private persons are liable to fall into.

18. As far as my personal experience extends, the best selection of timber for the Madras Gun Carriage Agency was made by Captain Benson, lately Assistant Commissary General at Moulmein; a Subordinate Non-Commissioned Officer (lately deceased) from the Madras Gun Carriage Agency, being also usefully employed in the selection. If the Madras Government could spare Captain Benson from his present duties, and if that Officer would undertake the very troublesome, and, perhaps, in the end unsatisfactory duty of acting in concert with Doctor Brandis in collecting a large stock of timber at Moulmein and Rangoon, either from the Government Forests or from private speculators, the experiment would serve to test the practicability of supplying the Admiralty; but before a foot of Teak is given to the Home Service, I hope the Public Departments of India will be furnished with the quantities required. I make this observation because I see no mention made in any of the Reports of the Indian wants. I also hope that the Indian Exchequer will not be required to furnish wood to the Admiralty at a rate lower than that which Departments of India will pay for supplies of timber.

19. Captain Benson if selected for this duty, should have the entire control over the arrangements for the provision and stocking of timber; including the payment of all monies, the keeping of accounts, the supplies to the several Departments, the internal economy of the stocking Depôts, &c., and in these duties he should be aided by Subordinate Officers, principally by the Ordnance Department, who under the supervision of their immediate superiors should zealously carry out his orders. The Subordinate Agency need not be large, and being drawn from the Ordnance Department, would be economical.

20. There is a large Ordnance Department at Rangoon which might be usefully employed in the charge of the timber as collected, and there are two experienced Ordnance Officers (Captain Wade and Lieutenant Craig) at the head of the Department. The Artificers and Warrant Officers of the Ordnance Department might be usefully employed in various ways, such as selecting the woods, both as to description and quality. A saw-mill might also be added to be superintended by the existing Ordnance Establishment; if successful, additional saw-mills might be set up for siding and cutting up the timber before shipment.

21. The result of the experiment would in a very few months guide Government as to the propriety of going on, and even of enlarging the Agency, clear and intelligible accounts being kept of the transactions, and the charges for the timber being carefully recorded. The Departments of the three Presidencies requiring supplies might be called on for information as to their probable wants, specifying the woods required, the quality, for what purpose needed, and probable quantity, the scantling being also stated. The allotments of the wood for the different services will be difficult, but I have no doubt that with suitable Agents the Division may be satisfactorily arranged.

22. I do not anticipate that arrangements of the above comprehensive nature can possibly be made by Government without an outcry from the residents at the ports of Moulmein and Rangoon who have hitherto largely benefitted by the competition created by the Government Departments bidding against one another; but in the present state of the finances, I think the Government are called on to see that economy is effected in every branch of the public service; and that the measures above recommended will, if successful, be economical in many ways, I entertain little or no doubt.

23. The promised instructions of the Admiralty adverted to in paragraph 9 of this Memorandum should be called for.

24. I would observe in conclusion that the information contained in the hitherto published Reports of the Conservators of Forests in Scinde, Bombay, Madras, Pegu, and the Saugor and Nerbudda Territories is very scanty; and for the most part, not of that practically useful character necessary to a clear appreciation of the economic uses to which the various descriptions of timber can be applied; their peculiar qualities, the quantities in which available, and the cost at which they can be obtained; and I submit that much practical good will result from making the reports of the Conservators more generally known. Heads of Departments requiring woods might also be requested to point out the kind of information which the Conservators should collect and set forth in their reports.

The papers received accompanying this Memorandum.

CALCUTTA,
The 29th October 1860.

(Signed) G. BALFOUR, Colonel,
President Military Finance.

From the Military Finance Department, Calcutta, 18th February 1861, *No. 78A; to the Secretary to the Government of India, Foreign Department.*

We have the honor to acknowledge the receipt of your letter, No. 5563, dated 16th November 1860, conveying the thanks of His Excellency the Governor General in Council, for the useful suggestions contained in Colonel Balfour's Memorandum of the 29th October, on the supply of timber for the Admiralty, and calling for a report in greater detail on the measures to be adopted for carrying out the proposal set forth in paragraphs 19 and 20 of that paper, respecting the Establishment of a purchasing agency on behalf of Government.

2. We would state at the outset what we understood to be the real state of affairs in respect to the timber trade in British Burmah, a subject to which our colleague Mr. Temple and Colonel Bruce gave attention during their recent sojourn to those parts.

3. At Moulmein, there is a considerable supply of Teak timber chiefly derived from localities beyond the British Frontier; of this a large portion is taken up by the Admiralty in England, who have contracted with the house of Messrs. Tindlay and Co. It seems probable that the Admiralty will make their own arrangements for the present at least irrespective of any Agency that might be established by the Indian Government. At Rangoon, on the other hand, the supply is small, and at present comparatively insignificant. The Forests of Pegu are under strict conservancy, and supplies cannot practically be obtained except through the Government Forest Department, which Department is not at present able to meet the demand for Teak timber in any adequate manner. We are aware, however, that our colleague Mr. Temple and Colonel Bruce have recommended a partial opening of the Pegu Forests to capital and enterprize, under such restrictions as may prevent the premature exhaustion of the source of supply.

4. Now the Government of India through its various Departments will need to purchase timber at Moulmein at all events, and at Rangoon also, should a supply become available either through the opening of the Forests or through the exertions of the Forests Department. In that case various Departments might be out-bidding each other, unless one Agency were established to make purchases for all Departments alike, the same reasons which in other analogous cases render it desirable to employ one Agency for all Departments alike, exist in this case also; the Government of India ought therefore, we apprehended, to have such an Agency. If the Admiralty avail itself of that Agency, well and good. If the Admiralty should not do so, still the Government of India would need the Agency for its own Departments.

5. In recommending the establishment of such an Agency, however, we do not propose the formation of a new and separate Department for the purpose of laying in more extensive supplies of timber for the Public Departments, from the resources in Pegu and Tenasserim. A separate Department of this nature would not only be isolated and placed beyond that general control of a departmental head, which is so essential and useful, but would further be liable to involve Government in an outlay to which definite limits cannot easily be assigned, whilst at the same time giving but little security for the service being regularly and correctly performed. All experience in India has established the important fact, that so long as care is taken not to overburthen a Department already in fair working order, a variety of other kindred duties may be annexed to that Department without much additional outlay, and without fear of interrupting the regular course of the ordinary official business confided to the Department.

6. Government have already in the Pegu Commissariat Department, an Agency employed in the Eastern Settlements, in laying in supplies of timber for the use of the Commissariat Department, and Gun Carriage Manufactory of Madras—Contracts are already existing for the supply of 6,000 tons or loads of timber of different descriptions, (for departmental purposes on the Continent of India) or more than one-third of the quantity named as required by the Admiralty. The whole of this timber, however, would not come up to the standard of quality named by the Admiralty as necessary for naval ship building: and in addition to the above, the Madras Gun Carriage Agency report that 1,000 loads of timber are required annually, besides which 1,000 loads are due to complete the past requisitions and stated allotments.

7. These contracts have some time to run before being fully completed; but the machinery for making arrangements of this nature is shown by these contracts to be already in existence, and although admitted to be defective in many respects, owing to very few subordinate Agents employed, and the great economy exercised, it appears to us infinitely preferable to adopt every measure for securing in this formed Department, greater efficiency, at the same time extending the Agency, so as to enlarge operations already in action, rather than to institute an entirely new and separate Agency at a large outlay.

8. There are many considerations in favor of the former course, for published correspondence clearly shows how greatly practical experience is needed in entering into contracts in the Eastern Settlements for the supply of timber. The arrangements with the Foresters for killing the trees before felling; the time and season for performing the operation, the period at which the timber can be brought down the rivers; the advances to be made to Foresters, the purchase of Elephants for dragging the trees, the provision of boats for their transport, or other means necessary for rafting the logs; the precautions to be taken against accidents so as to cover risks and losses; are all duties requiring a special training, the proper performance of which can only be looked for from a Government Officer actually engaged in the business, and aided by members of a fixed Department, where the necessary knowledge has been already acquired, and is retained. The mode of transporting the timber to the Continent of India is also a difficult question, the shipment of the dense and heavy Pedouk timber requires to be specially bargained for; arrangements being also made for the ships being loaded in part with woods of a much lighter nature, so as to form a set-off against the heavy Pedouk so inconvenient for ships to take in.

9. In the Memorandum of the 29th October 1860, to which your letter under acknowledgment refers, the rates which the Admiralty proposed to give for the select timber of the Eastern Settlements were contrasted with the rates then entered in the Madras Ordnance estimate; but by a Memorandum we have since received from Lieutenant Colonel Simpson, the Inspector General of Ordnance, Madras, we find that the rates at which Timber is charged to the Madras Ordnance, as entered in the margin, are, as Government will see, far in excess of the rates offered by the Admiralty; thus confirming the opinion previously expressed, that any guarantee for deliveries of timber being made for the Admiralty at the very low rate proposed, would entail on the Finances of India a heavy additional burthen.

	Per Cubic foot.		
	RS.	AS.	P.
Teak Timber annually	2	10	5
Ditto Pegu	2	2	5
Pedouk	1	12	2
Peengadoo	1	12	2
Peemah	1	9	10
Rose wood	2	7	10

10. Under this view, we would advise Government not to form a separate Department for laying in a stock of timber, but to extend and improve the Agency already existing. In Captain Harris, Assistant Commissary General in Pegu, the Government possess an excellent Officer, with long experience in that Province, and who has already for some years past superintended the procuring of supplies of timber, and has brought into operation the Account Department for recording the Timber transactions. The Department under Captain Harris could easily be enlarged; and we may mention that the services of Captain Benson, at present Deputy Assistant Commissary General at Bellary, would be found very useful in this duty. Captain Benson served for several years in Moulmein, was particularly active in providing supplies of timber, and is well acquainted with the system followed at Moulmein, which is peculiarly difficult for an Officer of Government to learn. And as an Officer who has had some local knowledge, and possesses an acquaintance with the system peculiar to the Burman Provinces would be required, we recommend that if the Government of Madras could spare Captain Benson, this Officer be directed to proceed to Rangoon, to act in communication with, or in subordination to Captain Harris, in making arrangements for the provision of timber.

11. The instructions given to these Officers should be simple and few, and the discretion left to them must at first be wide. Timber has of late years increased in price, whilst at the same time the demands are increasing. The business of these Officers would not be to engage in felling timber, or in such like operations, but to purchase it from any party who might be selling it from the Forest Department, or from European Capitalists, or from Native Foresters, or in open market. Having thus obtained the timber they would dispose of it to the several Public Departments. Government must therefore expect to see them maintained, even if the Forest Department in Pegu and Tenasserim be active and successful.

12. We do not anticipate that the Government experiment of a Timber Agency would be successful if tried on a very small scale, and therefore we recommend that Government should at once allow Captains Harris and Benson a credit of, say two lakhs of Rupees to commence operations; it being understood that this sum is to be appropriated solely to the purchase of supplies of timber, the costs of transport, and other contingent expenses, the office establishments, and persons employed on fixed salaries, being obtained from the Government Departments. This outlay would be, of course, more than covered by the realization from the several Departments who might take the timber.

13. Captain Harris should be directed to open a separate account for the timber transactions, and to arrange for paying for the supplies procured by Captain Benson, who should be freed, as far as possible, from the business of accounting for either money or stock; his duty consisting in finding out, and settling for the purchase of supplies of timber. The actual payment of money should be a distinct duty, confided to Captain Harris, who will adopt the usual precautions for causing the exact and regular deliveries of the timber, as agreed for by Captain Benson, under proper supervision.

14. The business of storing the timber may either be left with Captain Harris, or given over to the Ordnance Department in Pegu, or a portion of the Ordnance Establishment might be handed over to Captain Harris for the charge of the Timber yards, to be formed at Rangoon, or Moulmein, and perhaps at other Depôts in the interior.

15. The use of Government Elephants for dragging and piling the logs, should be authorized; but the expenses on this account, as well as those incurred for the Government establishments employed in the work, should all be noted down separately in order, at the end of the operations, to be added to the price paid for the timber.

16. The strict auditing of the whole of the transaction should also be provided for Captain Harris' general account of Commissariat transactions, will show the debits made for the timber concern; but the details of this part of the business should be fully shown in an Appendix, exhibiting every separate payment, properly supported by vouchers. Captain Harris' independence, as respects the preliminary examination, and correct settlement of expenses, will enable him to check the transmission of any defective vouchers, and the final audit should be made in the Continent of India.

17. The Stock Accounts should show clearly the number of logs of different kinds of timber on hand, as also their dimensions and cubical contents: their disposal being carefully accounted for.

18. As respects the kinds of timber to be laid in, we beg to observe, that there can be no doubt in respect to the Teak, Peemah, Pedouk, and Saul being very suitable for most purposes: but we believe that there are many other woods in the forests, as yet unknown, which would be most useful in various ways. It is only of late years that the excellent timber Pedouk has been brought into use; and we believe that the Madras Gun Carriage Manufactory principally uses it in lieu of Teak. Much valuable and useful information regarding the trees and timber of Pegu has been collected and published by Surgeon Balfour, of the Madras Presidency, in his Cyclopedia, as also in a separate volume on timber Trees; and we know that this Officer has much more matter equally useful and valuable, which he would be ready to place at the disposal of Government, if they should desire to have it. We recommend therefore, that Surgeon Balfour be requested to collect and arrange the information he possesses in a compendious form, and that the collection be printed for general use, access to the Records of Government being also given to him for obtaining further information about timber.

19. We would also suggest that Officers of all Departments in India requiring timber, should be directed to address Captain Harris, Assistant Commissary General, Rangoon, stating the kinds of timber required by them, the purposes for which the woods may be needed; the dimensions, the extent of seasoning, and the locality in India to which they want the timber to be sent. They should also state the rates which they would readily pay for the timber landed on the Continent of India, as a guide to Captains Harris and Benson in laying in stock.

20. It is also desirable however that the Officers addressing Captain Harris, should be informed that they must not expect to receive supplies, within one year from the date of Captain Benson's arrival at Rangoon, and for the first year or two, they must also be prepared to take over recently felled timber which will not be fit for use until subsequently fully seasoned. It is absolutely necessary that this point should be attended to immediately on the timber being received. The seasoning must be full and complete, and it cannot be effected in the dense woods of the Eastern Settlements, under three years, when seasoned in log, and one year in the scantling, nearly approaching to the size for which the wood would be worked up. For Carpentry purposes, it will require even a longer time, fully two years or eighteen months, which will in some degree account for timber being high priced, capital laid out on it remaining sunk in stock for a long time. The advantage Government will derive from the employment will be in the security, that no unfit wood will be obtained and sent to Departments of their own Agency. The logs, or rather perhaps the trees, will come to the timber yards in a green state, and the Officers in charge will then have the power of regulating the period of the wood being left in stock in the timber yards, until fit for transport to India.

21. It is therefore of great importance that demands should not be hurriedly made on the timber Agency, ample time should be allowed for the stock to accumulate, and every care should be taken in stocking the timber, to have the logs well raised from the ground, and if piled one above the other, to secure complete ventilation between the logs.

22. The assistance of the Commissioners of Pegu and Tenasserim is of grave and essential importance, for without their cordial aid and co-operation it will be vain to expect success. The operations of the timber Agency should form part of the Annual Administration Reports of the Province, and the Officers employed should be in close communication with the Commissioners, who should be kept fully informed of all the proceedings, and might thereby be induced to take an interest in this description of work, equally as in other branches of their administration.

23. The Commissioners should also be requested to set apart ground for forming timber yards so as fully to provide for the security of the stock of timber, also frequently to inspect the accounts and yards, and to consider themselves, as indeed they in reality are, the supervisors of the Agency on behalf of the Government of India.

24. The Forest Department should not be treated, as one intended to be, a paying concern, and the existing practice of debiting it with all the timber obtained at the actual coat, and crediting it with the supplies it tenders at the market rate, the Departments supplied should be discontinued.

25. We are of opinion, that the duties to be performed by the Superintendent of Forests are sufficiently extensive, without imposing on him the business of collecting and selling timber. The opening out of new sources of supply; the ascertainment of the various resources of the forests; the framing and enforcing of regulations for conservancy, are duties which will, if efficiently performed alone sufficiently occupy the time of the Superintendent of Forests.

26. It is obvious to remark that the establishment of a Government Timber Agency will not interfere with the speculations of private parties. The Government Agency will be a purchasing one: and will take timber from the parties who have it to sell. In this respect indeed it will rather encourage enterprize and capital that may be directed to opening the forests.

27. We recommend that the accounts of the timber supplied, and of the expenses incurred, be sent to Madras, where many of the Departments of the service have had experience, in respect to timber operations to the Eastward. The Commissary General, the Inspector General of Ordnance and Magazines, and the Auditor of Commissariat Accounts, are all Officers of great personal experience in respect to the Eastern Settlements. Lieutenant Colonel Simpson, the Head of the Ordnance Department, in particular, has extensive knowledge, not only as to the description of woods, but also as to the peculiarities connected with the timber trade. Indeed, this Officer's suggestions, offered many years since, would have proved most useful to Government, had they been followed.

28. We advise that the Madras Government be requested to enforce the immediate examination and scrutiny of the Accounts of Expenditure, and of the stock of timber available in Pegu and Tenasserim, and to cause the papers to be printed and circulated to the Heads of all Departments at the three Presidencies, in order to keep the Authorities acquainted with the proceedings of the Agency. The Heads of these Departments might, with advantage, be authorized to communicate with Captain Harris, at Rangoon, as well as with the Auditor of Commissariat Accounts, Madras, in view to obtaining information on any points, which may not be clear to them in these printed papers; and Captain Benson, as also the other Officers of the Forest Department, might be directed to supply any details that may be needed.

29. The references to the Government of India, should be as few as possible, and only would on special points. The decision on any references from any quarter might, with advantage, be made known to Officers interested in the procuring of timber.

30. As respects the mode of settlement for the timber handed over by the Timber Agency to indenting Departments, we advise that Government should require such Departments to provide the funds, and that the transactions be cash transations. The Officers of the Bengal, Madras, and Bombay Presidencies will therefore have to address their own Governments for credits, and the Accountants General will aid them in remitting the monies to Pegu and Tenasserim. The Officers of the Timber Agency should be allowed to fix rates at which they can supply the different kinds of timber and to make arrangements at their own discretion with the Departments requiring timber; all Government interference being avoided as much as possible, as a strict audit will sufficiently protect the public interests.

31. Government must be prepared at first to receive representations about one Department being favored more than another, and seeing that the Department is to be in the hands of Madras Officers, to bear that they are inclined to favor their own Presidency, but we think that the printing of the Reports of the Timber Agency, and the exhibition thereon of the demands for supplies from the different Departments and the quantities supplied, will to a great extent, ensure impartiality. We may also warn Government that, too great results must not especially at first be expected from the formation of this Department, for looking to the increasing wants and the restricted sources of supply, disappointment is not likely to be avoided if great expectations be formed.

32. After the above was written we received from the Inspector General of Ordnance and Magazines Bombay, a letter, copy of which we annex, No. 7461, dated 12th December 1860, from which you will learn, first, that the Bombay Presidency has had a contract, vide paragraph 6, with a Merchant for the supply of timber from Burmah, and of the same description of woods as required at Madras, and that Government have been bidding in the same market for the same article required for the Ordnance purposes, and necessarily enchancing the rates, and the conse-

quence has been that the contract charge per cubic foot is shown to be 2¾ Rupees, a rate which when contrasted with that proposed by the Admiralty, must appear very high even if the freight per ton, or load, from Rangoon to Bombay be put down at 20 or 30 Rupees a ton, a charge which we consider to be excessive. Government have now before them in the 7th paragraph, a Statement of the quantity of wood used last official year in the Bombay Gun Carriage Agency, amounting to nearly 20,000 cubic feet, or nearly 5,000 tons, or loads, being nearly equal to one-third of the quantity required by the Admiralty, and we have no doubt that if the Bombay Dockyard be put into operation, that much more will be required, and Madras and Bengal will swell the quantity so that India can take up more than the Admiralty have stated as their requirement, and India will have to pay higher rates than the Admiralty offered for timber, a quality much superior to that which will satisfy India.

Extract from letter No. 1532, *dated Rangoon, the 26th January* 1861, *from Captain Harris, Assistant Commissary General, to the Commissary General, Madras.*

* * * * *

III. I beg to submit my views on both these communications of the Commission, under the following heads:—

1st, Timber; 2nd, supplies from Calcutta purchasing Officer; 3rd, supplies from Coringa; 4th, compilation and audit of accounts both of Commissariat and Timber in connection with a Chief Controlling Commissariat Office at Rangoon.

IV. 1*st*, Timber.—I have not yet received the Report of the Finance Commission to the Foreign Department on the subject, but I conclude from the opportunity I had of personally learning Colonel Balfour's views, that the scheme is a very comprehensive one, and entertains the idea of placing the supply of Timber for all Presidencies, and for every Department, in the hands of one Officer, he, as I now learn, to belong to the Commissariat Department.

V. If this proposal is adopted in its entirety, the Establishment energetically and carefully surpervised, and aided with Steam Machinery, to my mind, it is not possible to conceive any scheme more certain to result, and that forthwith in a most sweeping economy.

VI. Now take Rangoon and Moulmein, and see how many Government Officers are bidding against each other and running up the prices. Here they are:—

Commissariat Officer, Moulmein—For Gun Carriage Manufactory, Commissariat and Ordnance of Madras.

Private Merchants—For the Dockyards of Bombay and England.

Executive Engineer, Moulmein—For the Department Public Works, Moulmein.

Two Executive Engineers, Rangoon—For the Department Public Works, Rangoon Town and Cantonment.

Executive Commissariat Officer, Rangoon—For Ordnance Department.

Naval Yard, Rangoon—For local use, and for the Calcutta Dockyard.

VII. The Superintendent of Forests sells the wood at his auctions. The Merchants purchase it, clap it under a Steam Saw, ship it to Bombay, and Government buys its own wood back again at some thing over a hundred Rupees a ton.

VIII. Now if it is a profitable, and it is profitable—very—for a Merchant to do this, why should not Government reap the profit, and why should Government fear the trifling preliminary expense that a private Merchant fearlessly incurs.

IX. To make this scheme answer, you require an Officer, with one Assistant at Moulmein, with an inexpensive Steam Saw Mill, of a couple of upright and two Circular Saws for single and small work.

X. Every Department should send this Officer in order as to the particular description of timber it requires, whether of the commoner sort for common purposes, or the closer grained woods for particular purposes, such as Gun Carriage, and the supply should be selected and

made according to such demands. Nothing but squared or converted timber should be shipped or supplied. This will effect an immense saving—1st, in freight the ships hate round timber, and always ask a higher freight than for squared, which stows safely, easily and well; 2ndly, in preventing rejection of timber by the receiving Department. Under the present system, when a receiving Officer gets a round log, he rolls it round, taps it, squints along it, and finds out that it is spilt, or that it won't cut into proper dimensions, or that something or another is about it—so he condemns right and left; but if he indented for so many squares, 20 × 12, × 12 or so many 15 × 2 × 3, or whatever wrought timber he requires—the shipping Officer will be able to see that what he ships is according to requirements, and the receiving Officer, if he has to condemn, will be able palpably to demonstrate why he does so, which is far from being the case at present; 3rdly, economy in the accounting of timber by the receiving and using Officer, who could fairly be made to account for every cubic foot of converted timber he is supplied with, whereas with unconverted, he must be allowed a considerable wastage not easily to be ascertained; 4thly, economy in Sawyers. I believe the Department Public Works in these Provinces finds it cheaper, and far better to buy converted timber than to saw their own by manual labor; 5thly, direct economy in prices paid, for instance, it stands to reason Government being large timber consumers, can convert by steam agency their smaller, and refuse wood necessarily purchased with larger into battens and shingles, cheaper than they can buy those shingles and battens from merchants.

XI. The Timber Officer will have to attend all sales, whether Government or private, poke about the different rivers, and fearlessly buy whole rafts of timber, good and bad, taking the raft as it is. This, with the command he will have of ready money, will ensure cheap bargains, whereas now fastidious selection of fancy woods certainly entails extremely fancy prices. He will lay in stock of woods of different qualities for different purposes—keep his mills constantly going, converting his small refuse timber into small stuffs for roofs, planks, &c., &c., and the best of the stabs into shingles for the Department Public Works, shoving the utterly useless into his furnaces. Thus I believe he would be able to meet all wants, and utilize every inch of timber he purchased. He would coin money, and the pleasure he would take in proving that he was doing so, would make his work so interesting as to ensure energy and economy.

XII. This plan would not be affected by any alterations the Government may hereafter be pleased to make, regarding the throwing open or reserving these forests, as in the one case the Timber Officer would purchase at auction from the Superintendent of Forests, competing with the Merchants in the other, he would buy direct from the Foresters who worked the forests.

XIII. A branch Depôt could be formed at Rangoon under Executive Commissariat supervision, but still subordinate to the Timber Officer for the purchase and storing such description of woods as may be advantageously purchased there.

XIV. The accounts could be sent for prompt local audit and compilation to the Chief Commissariat Officer at Rangoon, under whose authority the Timber Officer would work.

XV. I would leave the Timber Officer to be his own architect to erect his own mills, and send for his own engines, for it is easy to find fault with other people's tools, but difficult to do so when you find your own.

XVI. You will observe I advocate nothing more in the shape of machinery than what every merchant going into even a small timber business, would consider indispensable and economical, how much more so must similar aid be to a Government Department that will be charged with a supply of wood to three Presidencies, three Naval Yards, and probably the English Dockyards besides.

XVII. Much economy will be secured in labour and supervision. Existing Commissariat Establishments, though indespensable for the Army work that has to be done, may still bear being saddled with a little timber work in their leisure moments. The Officers Non-Commissioned, Store-keepers, the Elephants and the Bearers may all assist without extra expense—for instance the Timber Officer may hear of timber at Tonghoo, and can tell the Executive

Officer there to buy it and raft it down for him, he paying all expenses or he may run over to Rangoon himself, buy a lot of timber, tell the Executive Officer at Rangoon to square it, and ship it for him, thus in many ways departmental aid may be useful in furthering business and diminishing expense.

XVIII. Other Departments such as the Department Public Works would pay for converted timber in cash at fair market rates. Disputes as to price between the Executive and timber supplying Officer could be settled by the Chief Engineer and Chief Commissariat Officer.

XIX. Under the present anticipative Budget system, all Departments can anticipate their requirements, and can give fair notice thereof to the Timber Officer.

XX. I know of no Officer—as I personally had the honor of informing Colonel Balfour,—better adapted to work this scheme than Captain Benson, who not only is a bit of mechanic, but devoted much time during the three or four years, he was at Moulmein to the study of timber; as to energy he wants the curb more than the spur, and will be quite in his element in meeting that opposition which may reasonably be expected from receivers at first starting.

From the Acting Inspector General of Ordnance and Magazines, Bombay, 12th December 1860, *No.* 7461*; to the President of the Military Finance Commission, Calcutta.*

I have the honor to acknowledge the receipt of your letter No, 2853, dated 23rd ultimo, and to intimate in reply that the timber for the Gun Carriage Department at Bombay is obtained through the Agency of the Conservator of Forests, and from local sources, as required; the former has up to this period never been able to complete the demands of the Manufactory, and every year a large balance has remained uncomplied with. The timber generally supplied by the Conservator has been Malabar Teak, Black wood, Eynee, and Baubool; the three first named woods are supplied from Calicut, Allepee, and the circumjacent Districts; the latter, Baubool, from the Decan.

2. I have recently cancelled all supplies due on former requisitions by the Conservator's Department, and only such timber as has been already purchased by his subordinate at Calicut has been ordered for the Gun Carriage Manufactory, the number therefore, is only that specified in the margin.*

* 7 *Logs Allipoy Teak.*
49 ,, *Kurry Moon Teak.*
33 ,, *Blackwood.*
10 ,, *Eynee.*

3. Until lately the Conservator of Forests debited the Gun Carriage Agency with the value of timber supplied, though no actual money disbursements took place between the two Departments; now the Conservator alone charges Government with the cost price, and for transporting the timber, an arrangement that tends much to the simplification of accounts and the convenience of the service.

4. No contracts for the supply of any timber for purchase have been entered into this year, further than a demand which the Agent has submitted for 600 cubic feet of Cedar wood—600 cubic feet of Phunsey, and 3,000 cubic feet of Eynee, from the local market. These woods cost on an average Rupees 1-2-0 per cubic foot—but I have not deemed it expedient to sanction the purchase until the decision of the Arbitrator relative to the timber referred to in the 6th paragraph is known.

5. From the stock of Government timber in charge of the Conservator of Forests at Bombay, 800 Teak wood planks, 30 Blackwood planks, 10 Logs Blackwood have been selected as per requisition.

6. There was a contract with Messrs. Wallace and Co. the Bombay Merchants, in May 1859, to supply the Gun Carriage Department with 50 Tons of Peemah, 50 Tons of Pedouk, and 50 of Palavoo, from Burmah. In compliance with which they have supplied the stipulated quantity of the two former descriptions of timber, but there being some nominative error in specifying the latter, Messrs. Wallace and Co. have substituted Saul or Engyeen, Poawn, and Paithan woods, a difference of opinion exists between these parties and the Agent, with regard to the quality of the wood, and they equally object to the system of measurement prevailing in

the Gun Carriage Department. This difference is under arbitration and has not yet been settled; no receipts have been passed for the Timber nor is it yet paid for; the contract price was Rupees 2-12-0 (two and twelve Annas) per cubic foot for round logs not under 80 inches in girth and not under 15 feet long of the finest description to be landed in the Gun Carriage Timber yards.

7. The kinds of timber in use in the Bombay Gun Carriage Department are Teak, Blackwood, Baubool, Bhendy, Eynee, Cedar, Phunsey, and a small quantity of Dealwood. The quantity of timber and plank used last official year, was as follows:—

	Cubic Feet.	*Inches.*
Teakwood...	3,828	1,405¾
Blackwood.....	1,097	1,225
Baubool...	964	206¾
Bhendy...	42	844
Eynee..	796	697
Cedar....	129	794¼
Phunsey...	249	867½
Dealwood...	61	60¾
Heady...	272	1,571
Callum...	43	1,185
Jungle...	1,108	1,556
Plank Blackwood...	331	63
,, Heavy.....	679	1,164
,, Jungle Teak...	176	54¾
,, Teak...	13,07	1,110½

The quantity purchased during this official year has been Teakwood 4,6[illegible], cubic feet in plank, numbering 621 only. The scantling is for round logs, length n[illegible]ss than 15 feet, and girth 80 inches upwards, for plank not under three inches thick, and of any breadth over eight inches and over ten feet in length,—sided logs are not generally purchased by this Department, not being procurable unless in Teakwood from Burmah, of which very little is obtained. The timber usually is supplied from the Conservator's Department partially seasoned, and that obtained from local sources unseasoned wood, free from knots and splits, of even grain and straight, is invariably selected when purchases are made from the market, and as near as possible to those qualities, in dealings with the Conservator of Forests.

	RS.	A.	P.
8. The rate per cubic foot of Teakwood is...	3	0	0
Ditto ditto dirto Blackwood ,, ...	3	8	0
Ditto ditto ditto Baubool wood is.	1	9	7

ORDER, No. 1764, *21st May* 1861.

Ordered to be communicated to the Commissary General with instructions to report, for the consideration of Government, the arrangements he would propose for giving effect to the orders of the Government of India.

2. In paragraph 14* of their report appended to the foregoing letter, the Military Finance Department suggest certain alternative arrangements for the business of storing the timber obtained by the Agency—on this point, Colonel McCally will consult the Inspector General of Ordnance and Magazines, whose views he will submit with the report called for in paragraph 1 of this order.

* *Page* 7.

3. The Governor in Council resolves to request Surgeon Major Balfour, to whom the letter from the Government of India will also be communicated, to be good enough to collect and arrange in a compendious form, for the purpose of being printed for general use, all the information respecting forest trees which may be now in his possession or which he can obtain from

Pro: g the Madras Govt: M. D.
No: 1764 92 21st May 1861.

public or private sources. In furtherance of the object in view, he will be allowed free access to the records of Government in all Departments, and he will apply for any small Establishment he may require for this purpose.

(True Extract.)

Secretary to Government.

To the Commissary General.
" Inspector General of Ordnance.
" Surgeon Major Balfour.
" Public Department.
" Department Public Works.
" Auditor of Commissariat Accounts.
" Military Auditor General.
" Military Finance Department.

Exd. W. D'Arachy.

MILITARY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following letter :—

From Surgeon Major Edward Balfour, Madras Army, Madras, 7th June 1861 *; to the Secretary to Government, Military Department.*

It will be a pleasure to me to aid in carrying out the views of the Supreme Government, in having the Timber of the country made better known; but the Establishment offered in paragraph 3 of Order No. 1764 of 21st ultimo, would involve a cost to Government and not be of any assistance to me.

2. The Conservator of Forests, for whose opinion, in 1858, was referred the volume* which I then submitted, reported that it would be useful.

* *Surgeon Balfour to Government, 24th May* 1858.
Conservator of Forests to Government, 22nd June 1858.
Surgeon Balfour to Government, 10th July 1858.

3. It was purposely high priced, for, besides other reasons, it was the first work of the kind that had appeared; and, as its preface mentioned, it was necessary to be secured against loss.

4. It was a compendium of the same kind, seemingly, as now called for; though, as mentioned in its preface, admitting of being added to from ample materials in my possession ;—and in my letter of 10th July 1858, I offered the whole of that issue for distribution, if Government would patronize a second, enlarged and improved edition.

5. I re-submit that suggestion for the re-consideration of Government. A description of the Timber Trees, Timber and Fancy Woods of British India, is a large subject, and one which each succeeding year has seen becoming of more importance to the State and could not in a single issue of any work be completely treated on.

6. The little brochûre which appeared in 1858, though even then pronounced useful, was the first attempt to bring together all existing information, and I may mention that careful emendations, through two or three successive editions, in the next ten years, would be required to make it a complete or exhaustive work—for now that the attention of the State is directed to the subject, large additions to our information, ought to be received.

7. I would therefore submit, as the course best calculated to benefit the State, by ensuring the work being brought to ultimate perfection, and at the same time to preserve my property in it, that the State take such copies of a second, and improved edition as may now be required for the public service.

8. In size, for the object in view, it ought never to run to more than 200 to 300 pages, and the charge would be at the rate of Rupees 1½ per 100 pages, 8 vo. per copy; *i. e.*, a work bound, of 200 pages, would cost Rupees three per copy.

9. I clearly understand that the Supreme Government desire to possess a portable volume, applicable to, and of use throughout, the entire dominions of British India :—I estimate that, for this imperial purpose, for Bengal, Northern, Western and South Eastern India, would be required about 250 copies ; for Madras about 150; and for Bombay, say 100 ; thus, for the State, 500 copies.

ORDER, No. 2145, *21st June* 1861.

The Governor in Council resolves to accept the offer made in paragraph 7 of the foregoing letter, and to inform Surgeon Major Balfour that Government will take five hundred copies of the second and improved edition of his work on " Timber Trees," at an average cost of Rupees (1½) one and a half per hundred, 8 vo. pages per copy, bound.

2. The Military Auditor General and Controller of Military Finance will report, whether this charge can be met from the Budget sanctioned for the current year, in order that, if necessary, application may be made to the Government of India, for a special grant for the purpose.

3. His Excellency in Council presumes that the second edition of "Balfour's Timber Trees," will be published in all 1861-62.

(True Extract.)

Secretary to Government.

To Surgeon Major E. Balfour.
To the Military Auditor General.
" Military Accountant.
" Public Department.
" Commissary General.
" Inspector General of Ordnance.
" Military Finance Department.

Exd. A. A. DeMonte.

MILITARY DEPARTMENT.

No. 4253

Proceedings of the Madras Government.

11th December 1862.

Read the following Paper.

Madras 8th December 1862.

To the Secretary to Government
Military Department

Sir,

I have the honor to mention that the second Edition of the work entitled "The Timber Trees &c" which I have reprinted has been entirely completed,- the printing of the Index alone excepted. That however, has been entirely prepared and is also in the Printers hands and the 500 copies of the work for the purposes of Govt. will be delivered to Government in a few weeks.

Govt of India	250
—do— Madras	150
—do— Bombay	100

2. As it may afford Government to have from me a Memorandum shewing how the 150 copies taken by the Government of Madras

may

may be distributed, I subjoin such a list.

Chas. Hart Esqr
&c &c &c

Sir, I have the honor to be Your most obedient humble Servant
Edwd. D. Balfour Surgn. Major.

Forest Department	30	Brought over	140.
Revenue — " —	25	Irrigation —	3
Public Works —	30	Ceylon Govt. —	6
Ordnance —	15	Mr Thwaites Ceylon —	1
Madras Railway 25 and Southern of India 5	30	Total	150.
Public Department —	5		
Home Government	5		

Order. — Recorded.

True Extract

W. Marshall
Secretary to Govt.

Govt.

14

Recieved 8th March
1813 Lord Wellington

In the Train
near Vellore. 15

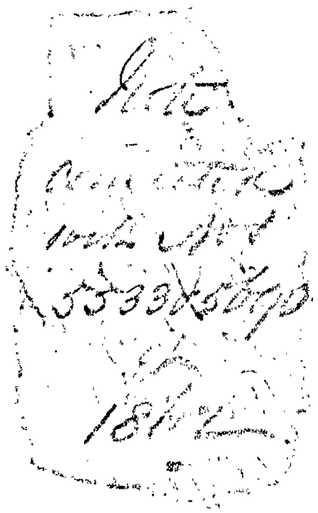
My dear Marshall,

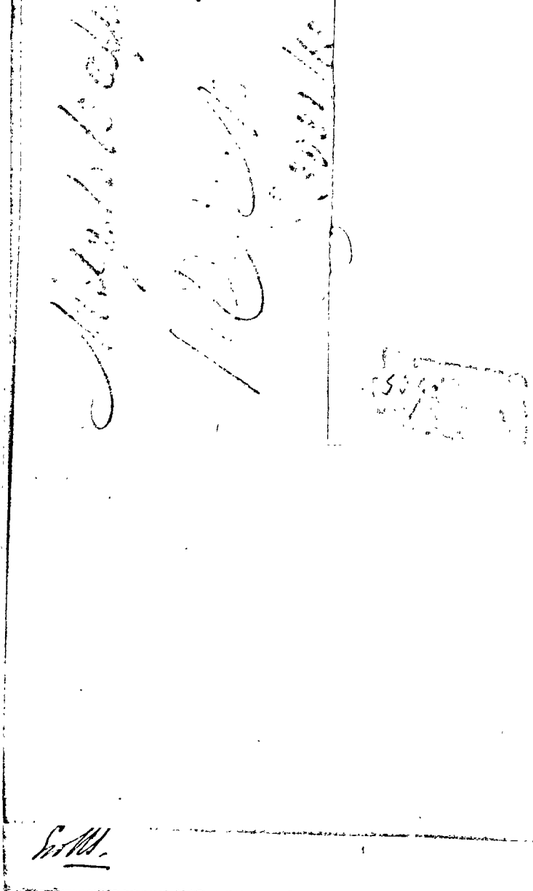
When you are discussing of the subject of the "Timber Trees" book, would you be able to discuss of the subject of my letter, in Dec. ult, in which I submitted copies of the geographical of trees?

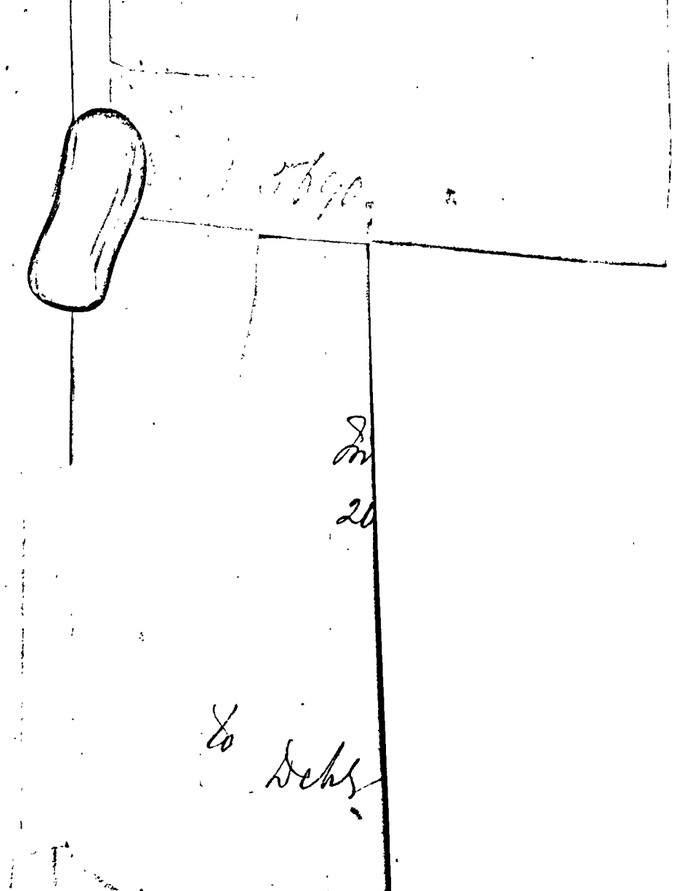
Yours sincerely
Carnatic

Die Lehrerstelle
1862 ist die
bekannte Lehrer
Heinrich
provisorisch

20 Dez 1862







15 M.D.

Memo

With reference to Deputy Inspector Genl. of Hospitals E.G. Balfour's letter of 8th Dec. 1862, transmitting certain litho-graphed drawings of Sheds, the undersigned has the honor to request to be favored with information as to the point in which the rules of Government are departed from, the letter in question, which was filed at the time [illegible] in this Department, appearing to have been mislaid.

Dr. Sutherland
20 October 1863

To Deputy Inspector Genl of Hospitals E.G. Balfour
Copy dispatched 21st Oct. 1863.

Sutherland

From
Deputy Inspector General of Hospitals
Edward. F. Balfour

To
Colonel H. Marshall
Secretary to Government Military Department

Sir,

I have the honor to reply to the question in Memo
of 20th Instant;
2 Surveying on the 8th December last, the
commencement of a series of lithographic drawings furnished
to submit to the Secretary of the mode of classifying forest trees
1862, 4th August, Letter to Government, which my previous Letter had
" 11th " " No 2436 Proceedings of suggested, and them to have
Government
Government, the examination of the various specimens
the series; but, no private individuals influence would suffice
to complete such an undertaking, unaided by Government;
the said required seeing skins of orders to the Botanist to the
Forest Department to enable the Gardens, each must fill their
respective ranges and with a series of lithographs as a standing
point, to furnish drawings of all undetermined timbers their
peculiar to their several localities.—
3 The subject of the forests of this country and
their timbers and many woods, had been before me, for
many years and in various forms and ways; and my 4th August
letter mentioned the result of my own thoughts regarding
one mode of verifying the trees producing timber.—
4 This was object that the Public Works and
Ordnance Departments, the Docks Yards and the Railway
Companies

Emly 1863 Depart.

Memo.

To
The Depy Inspt. Genl.
of Hospitals E. G. Balfour
&c &c &c

&/20 Oct. 63.

Reply No. 4520 of 23 Oct. 63.

Ref. to Rec. Dept. 31 Aug. 63.

Rec. 30 31 Oct. 63

Rec'd Instn Aug.t/62 No. 135/36.

Public Works Dept.
1863

From
B. Balfour Esqre
Dy Inspr Genl of Hospitals
Rangoon

Dated 28th July 1863.

Rec.d 2nd Sept.r 63.

Public Works Dept.
30831.

Rec.d 2nd Sept.r 63.

Public Works Dept.
Submitting with reference to the enclosed letter from Dy Inspr Genl of Hospitals Rangoon certain suggestions for improving the present form of Contract agreement & to the letter in question.

Secretary.

MILITARY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Proceedings of Government, 21*st June* 1861, *No.* 2145. } Read again the papers noted in the
" 11*th Dec.* 1862, " 4253. } margin.

Read also the following letter :—

From Deputy Inspector General of Hospitals E. G. Balfour, Rangoon, 28th July 1863; *to the Secretary to Government, Military Department, Madras.*

Messrs. Graves, Cookson and Co., having intimated completion of printing, I have the honor to mention that I have directed them to forward with this the 500 copies of the 2nd Edition of the Timber Trees of India, ordered in Government Order, No. 2145 of 21st June 1861.

I will ask payment of value of same into Oriental Bank when the number of pages are known to me, at the rate named in paragraph 8 of my letter of 7th June 1861.

ORDRE, No. 3437, 27*th October* 1863.

Ordered that the 500 copies of Mr. Balfour's work be distributed as follows :—

250 copies to the Government of India.
100 " to the Government of Bombay.
25 " to the Home Government.
40 " Revenue and Forest Departments.
20 " Public Works Department.
5 " Public Department.
5 " Military Department.
15 " Inspector General of Ordnance, for distribution in the Ordnance Department, and Ordnance Manufacturing Establishments.
3 " to Educational Department, for distribution to Libraries of Civil Engineering College, Medical College, and School of Arts.
15 " to Consulting Engineer for Railways for distribution.
5 " Ceylon Government.
1 copy to the Government of New South Wales.
1 " " Victoria.
1 " " Tasmania.
1 " " Queensland.
1 " " South Australia.
1 " " Western Australia.
11 copies Government Record Office.

To the Offg. Secy. to the Govt. of India, Mily. Dept.	Here enter 27th October 1863, No. 3438.		
To the Secy. to the Govt. of Bombay, Mily. Dept.	" 27th " " " 3439.		
To the Colonial Secretary, Colombo.	" 27th " " " 3440.		
To do.	*New South Wales.*	" 27th " " " 3441.	
To do.	*Victoria.*	" 27th " " " 3442.	
To do.	*Tasmania.*	" 27th " " " 3443.	
To do.	*Queensland.*	" 27th " " " 3444.	
To do.	*South Australia.*	" 27th " " " 3445.	
To do.	*Western Australia.*	" 27th " " " 3446.	

(True Extract.)

Secretary to Government.

To the Revenue and Forest Departments, with 40 copies of the work.
" Public Works Department, with 20 do.
" Public Department, with 5 do.
" Inspector General of Ordnance, with 15 do.
" Consulting Engineer for Railways, with 15 do.
" Educational Department with 3 do.

Exd. R. Stephenson.

in their respective ranges
× × × "to furnish drawing
of

Note

In his letter of 23 Oct 03
Dr Balfour states that
he had commenced a
series of lithographed drawings
of trees — which he intended
to continue — and he sought
the aid of Govt — the aid
being the "issue of orders to
its Botanists, its Forest Depts
and its Gardens, each within
their respective ranges" "
"to furnish Drawings of all
undelineated timber trees
peculiar to their several
localities."

Capt Beddome in

Letter Dr Balfour Sikkim
1896. Jan 7th

Cuttings. Leaves
this one

Rec'd Jan 31 1896

Sir W. Thiselton Dyer
Kew

Jan 7th

Dear Sir Thiselton Dyer

Will you kindly read the enclosed letter from Dr Balfour, and let me have your opinion upon it?

Yours very truly
J D Hooker

Sikkim Himalaya
Dec 31st 1895

My dear Hooker

I have long had in my mind to write to you about the Botanical Survey of Sikkim, but have refrained from doing so, as I knew you were overwhelmed with work, and I thought it better to wait till I had something definite to propose.

Now, however, I have come to the conclusion that it is desirable that such a survey should be commenced, and I am willing to undertake it, if I can get the necessary assistance and support.

I have been collecting in Sikkim for 30 years, and have a very large herbarium, but I am not a botanist, and have never had the time to work out the collections. I have always intended to do so when I retired, but I am afraid that I shall not live long enough to do it myself, and I am anxious that the work should be done, and that my collections should not be lost to science.

I have also a large number of drawings of plants, but they are not botanical drawings, and are of little use for publication. I have also a number of notes, but they are very incomplete, and would require to be worked up before they could be published.

I am anxious to do something for the Botanical Survey of India, and I think that the best way I can do so is to undertake the work of Sikkim, and to publish the results of my collections and observations.

I am aware that there are many difficulties in the way, but I think that they can be overcome, and that the work can be done with advantage to the Botanical Survey of India.

I am willing to undertake the work, and to publish the results of my collections and observations, if I can get the necessary assistance and support.

I am, dear Hooker,
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I am, dear Hooker,
Yours very truly
J D Hooker

Office of Conservator of Forests.

No. 766 Comp. 7th December 1863.
4th December.

From Captain H. B. Beddome.

Officiating Conservator of Forests

To C. E. Master Esq
Secretary to Government &c.

Sir,

I have the honor to acknowledge the receipt of the Government order No 2018 of the 9th instant, 63 together with the enclosures therein referred.

2. I shall forward to the Conservator of the Cadras a list of such timber trees as are required there, bearing Pallungus entered from time to time as they are procured and shall be forwarded by the Forest officers in charge of those to such Forests. Separate Journals of these trees shall also be kept in the Nilgherry and Pulney Hills.

3. The Collectors making Surrenders of the Forest Timber to such Depots should receive from their Assistants or Tahsildars Certificates for Government Guard as to the proper selection of trees by the general inspectors of the Depots hereinafter to be appointed.

I have the honor to be
Sir
Your most obedient Servant
H. B. Beddome Captain
Offg Conservator of Forests

Pro-g^s 4th November 63. ff 112-113

Revenue 1863 Department
Pro. of Govt for Dec^r 63
No. 3031-

From

The Officiating Conservator of Forests.

To

Sec^y to Govt Rev^e Dept

Dated 8th December 1863

Received 11th -

S.O. No 2374 & 7pk

No. 766

Enclosure

No. 30

Subject.

Acknowledging receipt of
S.O. No 2018 of the 9th November 63
and returning the 30 enclosures

For Orders
with print
date within
C D S

No 418

8003

Ch. Dec^r 63 118

Pol Cost £320

Revenue Department

No. 2374-

Proceedings of the Madras Government
under date the 24th December 1863.

Read the following
-ing letter from the Offg
Conservator of Forests-

Acknowledging
the receipt of S.O. No. 2018
of the 9th November 1863
and returning the 30 enclo=
-sures.-

(Here enter 8th Dec^r
1863, No. 766.)

In his letter dated
23d October 1863 Lt Col
Balfour stated that he
had commenced a se=
-ries of lithographed ex=
-tracts of drawings of trees, and
he sought the aid of
Govt in furtherance of
his undertaking - The
aid he desired from
Govt was explained to
be the "issue of orders
to its Botanists, its
Forest departments, and
its Gardens, each, with
-in their respective ranges
x x x " to furnish drawings
of

of all undelineated timber trees peculiar to their several localities."-

Captain Beddome in the letter above recorded states what assistance the Forest Department can afford towards the undertaking.- It consists merely in furnishing specimens of such trees as Dr Balfour may require.-

The Govt consider Dr Balfour's suggestion to be well worthy of being carried out - They could not however, call upon order their officers to furnish such aid as he requires; many, indeed, could not supply drawings - and it would be scarcely fair to require those who could, to contribute as a matter of duty to a publication, of which the credit would not attach to them.-

Moreover a work of this kind to be really useful ought to be prepared by a skilful Botanist-

The Govt could not largely patronise such a work unless edited by a Botanist of known attainments - and it is doubtful whether the public would appreciate such a publication unless so edited. —

On the other hand they apprehend that Dr Balfour has no particular desire to undertake the proposed work, if the Govt with their ample means are willing to undertake it. —

Botanist, who could ensure correctness of representation and description and clear the many doubts which still exist regarding the identity of many woods.-

The Governor in Council considers it desirable that Dr Balfour's useful suggestion should be worked out by the Govt ~~Report~~ ~~Govt~~

The Conservator of Forests - Dr Cleghorn - and the officiating Conservator - Captain Beddome are both Botanists of known ability - and the department over which they preside is the one most interested in possessing and disseminating the information which such a work would contain - and also best able to afford valuable assistance in its preparation

preparation.-

~~The Govt is prepared~~
~~to do so~~
therefore to entrust the duty
~~preparation of the pro-~~
~~posed work~~ to Captain
Beddome* ~~The work should~~
be limited to the Timber trees of the Madras
Presidency and should
comprise

I. Lithographed drawings of the tree - showing all the parts necessary for its identification.-

II. The Botanical name and description - with the English and Vernacular names.-

III. Information as to its locality - qualities - uses - abundance &c &c -

IV. References to authorities &c on the subject.-

The work should be issued periodically and sold to the public at cost price - a sufficient number of copies being

* unless Dr. Balfour wishes to persevere with it himself, an entirely private adventure. The work, if undertaken by the Forest Dept^t would

being reserved for distribution to Govt departments.-

Captain Beddome's suggestion that drawings shewing the general form of the trees should also be included is good, and Colonel Hamilton will be requested to state whether he can undertake this duty - such drawings would not be required of all trees - and Captain Beddome should furnish a list of those which he considers should thus be represented - in order that Colonel Hamilton (if he can furnish such drawings) may be able to select good typical specimens of them.-

Copies of the work as issued will be furnished gratuitously to Dr Balfour for his own use -

use.—

Captain Beddome will report fully on the subject of this order, & stating, what assistance he will require &c.—

"

Copies to the Dep.ts Cap.t & — Com.r of Harbours

25/5

Revenue 1863 Deptt.
Pro: of Govt for Decr.

No. 2374.

Pro: of the Madras
Government
of 24th Decr/63.

From D. Balfour recd 22d Jan.
1864 C. No. 272 - Dis Pro.

Dr. C. Balfours
suggestion to publish
a series of lethographic
ed drawings of timber
trees, with orders thereon.

No. 148 & 149.