M.R.O. 14—18,000—27-6-34

MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

G.O. No. 1331 Press ~~Mis.~~

333.332

Dated 16 — 6 — 1865.

Not to be folded or roughly handled

Proceedings of the Madras Government, Revenue Department, 16th June 1865.

No. 333. Read the following letter from H. NEWILL, Esq., Resident of Travancore and Cochin, to the Honorable A. J. ARBUTHNOT, Chief Secretary to Government, Fort Saint George, dated Trevandrum, 31st May 1865, No. 47.

Sir,

1. I have the honor with reference to the Order of Government No. 787, of the 10th ultimo, to submit the accompanying papers on the subject of seasoning timber by girdling in these States.

From Conservator of Forests,	Cochin.	
Do.	do.	Travancore.
Late do.	do.	do.
Commercial Agent,		do.

2. These reports contain the opinions of Officers in these States possessing considerable experience in forest work, and may be said to contain the best information available on the subject.

From J. S. A. KOHLHOFF, Esq., Conservator of Cochin Forests, to H. NEWILL, Esq., British Resident of Travancore and Cochin, dated Trichoor, 2nd May 1865, No. 1,828.

Sir,

1. I have the honor to acknowledge the receipt of your letter No. 546, of the 20th ultimo. With regard to the information therein called for, I beg to state that the important advantages attained by ringing or girdling not only Teak, but even Anjely, and several other descriptions of timber, about a couple of years previous to their being felled, is a well established fact, and the practice is generally adopted in the Cochin forests.

2. The advantages derived by girdling timber, (that are not intended for slabs or boats,) previous to felling are, first, comparatively greater security against the risk of fire, for about *three* years at least after being ringed, than timber felled green, and stored in the forests to season for at least two dry seasons; second, comparatively less liability to heart shakes, owing to a more gradual and equal process of seasoning, than timber felled green and left to season in a horizontal position, with both ends cut, and exposed to the heat, heavy dews, and occasional showers alternately, chiefly on the uppermost side; third, facility of land transit, as a well-seasoned log, viz., one that has stood girdled for two or three years, is about twenty-five per cent. lighter than a green one; fourth, facility for being floated down to a *depot immediately* on being felled. Whereas timber that is felled green has to be kept in the forests about two years, to become floatable, and exposed to serious risks during that period.

3. Judging from my own experience in forest matters, during the last 27 years, and from information gathered from my oldest subordinates, and other parties, possessing very great experience in timber work, I feel convinced of the following facts:—first, that the process of girdling or ringing Teak has not the effect of depriving the wood of its oil; second, that it does not render the wood liable to be shattered by the fall, as any tree, whether girdled or not, is liable to such injury, if carelessly felled, especially in very rocky places or on the slopes of precipitous hills or ravines, or even by falling across other large fallen trees; third, that it does not render the wood much harder than such as have been cut green and *well* seasoned; fourth, that it certainly does not cause deterioration in the quality of the wood, but in fact the very reverse; fifth, that it does not involve the slightest risk of damage to the sound portion of the wood from insects of any description whatever.

4. It is not usual to girdle or ring Teak or Anjely timber that are selected for slabs or boats, owing *solely* to the great difficulty experienced in splitting up, or scooping out dry wood, and to no other cause whatever. Consequently the axemen who engage by contract to split and dress Teak slabs, strongly object to cutting down a dry or dead tree for that purpose, and as sawn slabs fetch a far inferior price than those that have been split by wedges, the latter mode has to be

acceded to, as the only available alternative for having the largest Teak trees, (some of them hundreds of years old, from the more distant forests, and requiring heavy land transit charges,) being reduced to portable dimensions, so as to facilitate their transmission to the low country by bullock carts.

5. In seasoning Teak logs or slabs that have been cut out of green trees, so as to provide as much as possible against cracking, it has been found advisable to protect them from the direct and intense heat of the sun's rays, by piling them in moderately shaded spots with a free current of air, across common jungle wood logs, laid on the ground, so as to prevent their absorbing any moisture from it.

6. In girdling or ringing, the incision should not penetrate deeper than one-eighth the diameter of the place where the incision is made and the cleaner it is the better.

From C. R. VERNEDE, Esq., Acting Conservator of Forests, to H. NEWILL, Esq., British Resident of Travancore and Cochin, dated Quilon, 26th April 1865, No. 91.

SIR,

1. I have the honor to acknowledge the receipt of your letter, No. 545, dated 20th April 1865, requesting me to furnish you with information regarding the practice* of seasoning Teak timber by girdling or ringing, and in reply I beg to say that the practice of ringing trees before felling them is, in my opinion, if not quite a necessary one, one which benefits the timber infinitely; great attention however should be given that they are not allowed to stand, after being rung, for more than six or eight months at the most, the failure of which may make them subject to most of the evils alluded to in your letter to me, as they are then deprived of all moisture, and rendered entirely dried and scorched by their lengthened exposure to the weather, but, on the other hand, if a tree be rung and then felled within the above specified time, little or no danger is to be apprehended.

* Prevalent in Travancore and Cochin.

2. The advantages attending trees rung before they had been felled are as follows:—first, they are seasoned and ready for use in a short time; second, they are less liable to be worm eaten; third, when sawn into either planks or taldoms, they are less liable to warp, shrink, and crack, and, lastly, they are made easy of transit; while the disadvantages on timber felled green are; first, they invariably split at both ends soon after they are felled; second, they are liable to be damaged by worms bred in the timber, owing to the sap being left to dry in it (this evil, however, may be remedied by having the logs cut up a short time after they had been felled and immersed for a certain time); third, they must be laid up for a period of four years or more before they are seasoned for work, if used before this the wood is apt to warp, shrink, and crack; fourth, they cannot be removed from the forest with any degree of facility as it will take three or four years to enable them to float; ringing therefore cannot in the slightest manner reduce the value of timber, it can only enhance it.

3. In reference to the Burmah Teak, the only reason I can assign for their not commanding a high price in the Bombay market, is because they are, though large, of inferior quality, owing to the peculiarity of the Burmah soil. In Travancore and Cochin, I have noticed that the quality of the wood differ vastly, according to the different soil on which they grow.

From H. CRAWFORD, Esq., Commercial Agent, Allepey, to H. NEWILL, Esq., British Resident of Travancore and Cochin, Peermade, dated Allepey, 29th April 1865, No. 133.

SIR,

1. I have the honor to acknowledge your letter, No. 547, of the 20th instant.

2. Teak of full growth, from 80 years and upwards, found on the slopes of the hills, may not require to be girdled, or if girdled, to be left as long as four years

before felling; if girdled in the autumn, about January, and felled the following season it *may* be sufficient for *this* the *best* description of Teak; but Teak growing on low, rich soil, even if full grown, must be girdled, and left for at least two seasons to get rid of the sap.

3. This last description of Teak *felled green*, does not stand the weather, shews marked symptoms of decay in a year, and is at once attacked by white ants. Whereas if treated in the usual way before felling, the white ants will not attack Malabar although they readily do Tenasserim or Moulmein Teak. The first mentioned above "hill grown Teak" when felled green, *appears* not to be affected in any way, both are difficult to work, the first more so, from the oil and sap adhering to the saws, and to the wood of the planes when attempting to smooth the work; this is observable in *all* Malabar Teak more or less, but not nearly to the same extent as in green timber.

4. With regard to felling, green timber falls more heavily than that which has been girdled, and is very liable, however careful, in the fall, to split from the fork down to within a few feet of the lower end, the fibre not having cohesion equal to girdled or seasoned timber. It will be found that in most instances of 'heart shake,' the evil has been caused in allowing the tree to fall the wrong way *down hill*, when the fall is frequently such that nothing could stand, and the finest timber is thus rendered utterly useless, instead of *up hill*, which is easily accomplished, and the tree and principal branches suffer no injury whatever. In girdling it should be done *effectually*, and the best time, the last quarter of the moon in January and February.

5. The above is principally the result of experiments made from 1850 to 1857 at the request of the late General Cullen, when British Resident of these States.

6. Teak from Moulmein and the Tenasserim Provinces is inferior in every way to *both* descriptions of Malabar Teak, it having little, or none of the essential oil, the result perhaps of the low wet soil on which it is principally grown, it is therefore not so durable, and is readily attacked by white ants.

7. The practice in these States is to girdle the trees and fell after four years; any fire passing through the forests does not in any way injure the *standing trees*, being principally long grass, or low brush wood, the fire passes quickly through. If the timber is not removed the same season it is felled, then they are liable to be burnt the following February by the annual fires.

8. It would appear that girdling Teak for some time before felling is desirable; it prevents decay; secures the wood against the attack of insects; is easier worked and transported, and is not so liable to injury in the fall, or any other evils to which timber felled green is subject.

9. I may remark that the roof of the Pepper Bankshall here, built between 1780 and the close of the last century, is being removed, and the wood work, Teak, (by *no* means of the best description) is as fresh and sound as the day it was placed there, retaining the sharp marks of the chisel of the workmen as if recently cut; this is a severe test, when it is remembered that Pepper is perhaps the most absorbent vegetable production known.

Memorandum of C. F. KOHLHOFF, Esq., late Conservator of Forests in Travancore, dated Trevandrum, 20th May 1865.

The mode of seasoning Teak timber in Travancore is by cutting five or six inches broad through the sap wood, and about half or one inch into the sound wood, round the trunk of the tree at the stem, during the hot weather, from the month of November to March. In this state the tree is left to dry, which is denoted by the smaller branches dropping off in the space of two or three years, depending much on the size and the locality it stands; if in an exposed place and the tree is not of a large size it will be sufficiently dry in about two years; if in a shady and damp place it will be longer in drying. The trees when dried are felled, trimmed of the branches and

sap wood, and placed on sleepers for a year or two to render them thoroughly dry so that they may float. If allowed to lay on the ground, the timber by absorbing the dampness of the soil will not turn buoyant for a length of time. This is the general practice observed in seasoning timber. Particular attention should be paid in seasoning timber, the trees ought not to be rung when they are filled with sap or when they are in blossom. Trees are full of sap about the full moon, and it is said to rise from the new to the full, hence the best time for ringing and felling will be during the last and first quarters of the moon. Common trees that contain no oleaginous matter, and felled for timber during the first and last quarters are better preserved than those felled during the other quarters of the moon. In a very few years the latter is thoroughly perforated by peculiar small bees, or is destroyed by dry rot. Though Teak and other durable trees converted into timber are not liable to be attacked by insects, yet they are likely to crack and become somewhat brittle. Such timber is generally attributed to the nature of the wood; I should say otherwise that it is more owing to the trees being girdled and felled when they are full with sap, and would recommend that if particular attention is required to be paid to the seasoning of the wood, they should be girdled and felled when the tees are less impregnated with sap. As to the trees having more sap at one quarter than the other may be ascertained by cutting a good sized branch with a clean cut (with a sharp instrument) in the upper end of it, placing it upside down perpendicularly, a large quantity of water exude from it in the full moon, than what will drain from the same branch so cut and placed during the first quarter of the moon. I have further observed full grown bamboos cut about the full moon, or while in blossom, completely destroyed by insects, leaving only a thin rind filled with dust in the course of six or ten months.

(True Copies.)

(Signed) H. NEWILL, *Resident.*

Ordered that the following letter be despatched.

No. 334. From W. HUDLESTON, Esq., Acting Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Public Works Department, dated 16th June 1865, No. 1,331.

SIR,

Forests, No. 10.

1. In continuation of my letter No. 15, of 18th May 1865, I have the honor to forward for submission to the Government of India the enclosed papers, containing the opinion of the most experienced Forest Officers in Travancore and Cochin States on the subject of girdling timber, received from the Resident of Travancore.

2. It will be observed that they are much opposed to the views of the experienced Officers of the Forest Department in this Presidency.

Revenue Department
16 June /65

No. 1331 4

To

The Secretary to the Government
of India. D.P.W.

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In continuation of my letter No. 15 of 18th January 1865, I have the honor to forward for submission to the Government of India the enclosed papers containing the opinion of the most experienced Forest Officers in Travancore and Cochin States on the subject of girdling Timber received from the Resident of Travancore.—

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[illegible]

Send copy [illegible]
[illegible] Cons[illegible]
[illegible]

Copies to the Govt of India Dec 19 June
do to the Collector of Travancore
do to the Conservator of Forests

Pro. 10th April 1865 No. 1564/57

Revenue Dept. Dept.
Govt. for Lines No. 1515.
From
The Resident of
Travancore & Cochin
To
The Chief Secretary
to Government
Fort St. George
Dated 31st May 1865
Received 6th June.

No. 47

Enclosures one
S. L. No. 1339 of 10 June
No.

Forwarding papers on the subject of seasoning timber by girdling in the States of Travancore & Cochin.

No. 333.

[illegible]

Revenue 1865 Deptt.
Pro: of Govt. for June.

No. 1331.

To
The Secretary to the
Govt. of India - P. W. D.
Dd 16th June 1865.

Papers containing the opinion of the most experienced Forest Officers in Travancore and Cochin on the subject of Girdling of Timber forwarded to Government of India -

No. 333 & 334.