

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	1049	Press
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	327.329	
Dated	18 - 5 - 1865.	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
18th May 1865.*

Read the following papers:—

No. 327. From Captain R. H. BEDDOME, Officiating Conservator of Forests, to J. D. SIM, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated Camp Ootacamund, 2nd May 1865, No. 1,273.

SIR,

1. In reply to the G. O. No. 804 of the 12th of April, I have the honor to inform you that the girdling of Teak had been pronounced a mistake, and had been given up before I took charge of the Anamallay forests in 1857.

2. On my assuming charge there were some 20 or 22 ringed trees standing in the Government portion of the Anamallays, I had great difficulty in persuading the axemen to work up any of these trees into Dockyard planks at the usual rates, they all stated that the heart-shake in these trees after they were felled would be so much greater than usual that they could not turn out the usual average of 1st class planks. These trees when felled certainly had far more heart-shake than is usual; I believe, however, that they had been girdled more than one year.

3. At the end of a season's felling several trees have more than once been left ringed or partially cut through, these being dead the next season were always avoided by the axemen for the reasons above stated, and they always grumbled at being made to trim them up. I always observed that the wood of these trees was far less oily, and consequently less elastic, the cause therefore of the heart-shake being greatly increased by the fall was so apparent that I never thought of having any experiments specially to prove it.

4. Dr. Brandis writes that the statement that the wood of girdled trees is deprived of oil could not be easily proved. The oil is the sap, and must necessarily run down when the tree is killed by ringing.

5. Teak timber when cut into scantling from green trees readily catches fire, and the wood has a most powerful scent; when cut from girdled trees it does not burn so readily, and has far less scent, the causes are that the former is far more oily than the latter.

6. Large green (standing) Teak trees are never burnt during the annual fires, the fires scorch or singe the bark, but do not get through it, girdled or dead trees (standing) are occasionally burnt; logs fresh cut from green trees catch fire most easily, the longer they are seasoned the less liable they are to burn as the oil gradually dries up.

7. When I made mention in my annual report of the heart-shake caused by girdling, I meant the increase of it, I have never known a Teak tree perfectly free of it.

8. I have never known a single instance of a Teak tree growing in the moist ever-green forests (Sholas) of the Anamallays, though large patches of this sort of forest occur in the midst of the dry deciduous forest in which we find the Teak.

9. I forward herewith reports on the subject received from Major Michael, Colonel Hamilton, and Major Gib.

From Major J. MICHAEL, Deputy Conservator of Forests, to the Conservator of Forests, dated Camp, Coimbatore, 27th April 1865, No. 190.

SIR,

1. With reference to the Order of Government No. 804, of 12th April 1865, on the subject of girdling timber, I have the honor to subjoin a few remarks on Dr. Brandis' Report, dated Calcutta, 3rd March 1865.

2. Paragraph 5. Girdling was first introduced by me in the Anamallays in 1848, at the suggestion of Captain (now Major-General) F. C. Cotton of the Madras Engineers, and the first batch of timber was cut from girdled trees in 1850, before I was deputed to Burmah. The practice of

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girdling was continued for another year after my return, but it was at the urgent request of the Malabar workmen that it was abandoned. Their argument was that the fall of a dead tree, with dry brittle branches, increased the heart-shake very much more than that of a living tree, full of sap and elasticity, both as to its trunk and branches.

3. I became fully convinced of the justice of their opinion, after observing that they turned a greater number of sound planks out of a green tree than they did out of a girdled one.

4. Paragraph 6. The increased hardness of girdled timber was never adduced as a reason for preferring the green trees for plank cutting. I never had any difficulty in getting workmen to cut logs or heads and butts from girdled trees, it was only when they were called on to cut Dock-yard planks from them, that they objected on the score of increased heart-shake.

5. Paragraph 8. The heart-shake of a tree cannot be caused by girdling, nor is it likely to be increased by the process, until the tree sustains a severe shock in falling.

6. Paragraph 12. The heart-shake of a teak tree is a natural hollow running up the centre of the stem, and that it exists when the tree is very young and grows with it, is proved by the fact that quartz and other stones are frequently found in the hollow of a Teak tree, 20 or 30 feet from the ground. These must have grown up with the tree.

7. Trees which grow on rocky hills, or in situations much exposed to wind and weather, have far greater heart-shakes, than those which grow in sheltered moist spots, such as the Mettigat Forests in the Atturan District in Burmah, which I visited, but at the same time the latter timber is generally very open grained. I venture to predict that the Teak of the Nellamboor Plantations will have very little heart-shake, but will be more open grained than the "Malabar Teak," of the present day.

8. Paragraph 20. Teak will float very soon after being felled and barked, but in localities where it must be removed in logs, by water carriage, immediately after being felled, girdling is no doubt an advantage, but wherever the timber can be stored in open spots, safe from fire, for a few months or can be converted into scantling, before being floated, I am of opinion that the trees should be felled green.

9. I cannot think that the durability of timber is much affected, by allowing the log to season after felling, because it is the universal custom in Malabar to fell Teak green, and allow it to season in the forest, and in course of transit to the coast, and "Malabar Teak" is celebrated for its excellence.

10. As regards danger from fire, I will merely remark that a Forest Officer should only fell such trees as he is prepared to protect efficiently from fire either by removal from the forest or by storing in safe depôts. If a tree is left standing it is safer ungirdled.

From Major W. A. GIB, Deputy Conservator of Forests, to the Conservator of Forests, dated Manantoddy, 26th April 1865, No. 174.

SIR,

1. In compliance with your Memorandum of the 20th instant, I have the honor to offer my opinion on the subject of girdling trees previous to felling them, premising that my experience is entirely confined to Teak trees.

2. I think there can be little doubt of the heart-shake in a dry girdled tree extending more by the extension of its fall than in a green one, and although it is true that a tree that has been girdled two or three years previous to its being felled is at once ready to be floated, that does not appear to me to be any great advantage, for Teak that has been felled for one year floats readily enough, and the standing girdled tree requires very nearly if not quite as much looking after as a felled and squared tree; for the felled ones are generally removed to some depôt where they are safe from fire, and when this cannot be done the grass and chips are removed before the log is measured and brought to the credit of the axemen.

3. When I first took charge of the Wynad Forests there were a great many trees standing that had been girdled for Coomari cultivation, and the Mysore wood merchants would never give as good a price for them as they gave for trees that had been felled green, stating as their reason their opinion that the timber was inferior in strength, and much more liable to decay; and in this opinion I share.

4. It appears to me that when the upper portion of the tree is separated from the root by ringing it, in its endeavors to live, draws all the good out of the trunk and leaves it, as it were, without the oil which causes its great durability and power of resisting white-ants and damp.

5. I have remarked upon the Neilgherry Hills that the timber of the *Acacia Robusta* when killed by girdling is much more full of cracks and splits than when felled green, and for firewood purposes it seems to lose half its value, having lost apparently all life, and it is most likely Teak may suffer in the same way.

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6. I think that the best way to season Teak, if it could be managed, is to fell the tree and top off the branches, and top and leave it there with the bark on for a year. By this means the more watery portion of the sap would dry up more gradually than it does when the log is squared, and the timber would, I think, be less likely to split and crack in the drying process; the objection to this plan is the axemen would have no work to do half the year, as the mere felling the requisite number of trees would take but a short time, and from there not being so much trampling about the log as there is about a squared log the grass would grow up and the log would be apt to be lost.

From Lieutenant-Colonel D. HAMILTON, 20th Regiment N. I., to H. CLEGHORN, Esq., M. P., Conservator of Forests, dated Ootacamund, 25th April 1865.

SIR,

1. I have the honor to acknowledge the receipt of Proceedings of the Madras Government, Revenue Department, of the 12th April 1865, on the subject of seasoning Teak timber by girdling, and requesting my opinion on the same.

2. The timber felled during the three seasons I was in charge of the Anamallay Forests consisted chiefly of Teak. Only live or ungirdled trees were felled. There was never, to my knowledge, any objection made to this timber with reference to its seasoning.

3. The time timber lies in the forest after it is cut into scantling, seasons it sufficiently to enable its being floated to the sea without difficulty, and the difference in weight between this and girdled timber, I imagine, must be but trifling.

4. Should an ungirdled felled tree, from any cause, be left in the forest, it will be less injured by fire than a dry girdled tree under similar circumstances.

5. It was the universal opinion both of the Europeans and Natives, who had any experience in the forest, that the felling a girdled tree increased the heart-shake. I may mention that I never once met with a Teak tree in the Anamallays entirely free from heart-shake, or the hollow passing up from the root of the tree through its centre. In some it was slight and of limited extent, but the heart-shake was invariably there; girdling a tree therefore is not the cause of the heart-shake, though this method of seasoning may increase it if the tree is allowed to remain for a long period before felling.

6. For the reasons above stated I am of opinion that no advantage whatever would be gained by girdling Teak in the Anamallay forests. Moreover, the risk of entire destruction of any timber lying out by the fires which annually sweep through the forests would be greatly increased.

No. 328. From Captain R. H. BEDDOME, Officiating Conservator of Forests, to J. D. SIM, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated Camp Ootacamund, 5th May 1865, No. 1,278.

SIR,

In continuation of my letter No. 1,273, dated 2nd instant, I have the honor to forward a report on the girdling of Teak, by Major H. R. Morgan.

From Major H. R. MORGAN, Deputy Conservator of Mudumallai, &c, Forests, to Captain R. H. BEDDOME, Officiating Conservator of Forests, dated Ootacamund, 4th May 1865, No. 20:—

SIR,

1. In reply to the Order of Government No. 804 of 12th April 1865, I have the honor to report that, in my opinion, the girdling of Teak in our forests is inadvisable.

2. The sole reason for girdling Teak in Burmah is to enable the merchant to float it, the tree remains girdled for three years before it is felled, it is then felled and floated at once; were the Teak to be felled and left on the ground for three years, until it became light enough to float, the chances would be very much in favor of the Teak being burnt in the annual fires.

3. At Nellumboor the Teak is felled and floated at once on bamboo rafts.

4. I do not think that the heart-shake in Teak is increased by girdling; indeed, a girdled tree falls far lighter than a tree with a heavy head of branches. I have often observed the bole of a tree riven to pieces by the branches striking the ground with great force and acting as levers to split the bole.

5. My experience shews that if a girdled tree left standing gets rid of its sap, by the tubes in the wood, it also loses its oil, and becomes far more brittle than ungirdled timber; the axemen on the Anamallays demanded a much higher rate for turning out planks from a girdled than an ungirdled tree; the reason being that the toughness of the timber was in a measure lost.

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6. The cause of heart-shake is principally due to the fact that the first rings of heart-wood formed are very far apart, four to five only in an inch, whereas when the tree is more than ten years old 10 to 15 rings may be counted in one inch; in the first stage of the tree, the heart-wood deposited is soft and liable to decay, in the latter the heart-wood being very hard and dense it is not liable to decay; in a tree squaring to 15 inches I have on the half side or 7½ inches counted 75 rings or ten rings to an inch.

7. Teak varies in this country quite as much as it does in Burmah. The Teak of the Atteron Forests is considered by ship-builders to be far superior to that of any Teak produced in Burmah. Mudumallai Teak is tougher and stronger in the grain than Anamallay. The Palghat Teak again is very inferior, almost white in color with a spongy grain. The Nellumboor Teak has a very good name; often selling for 2 Rupees a cubic foot on the banks of the river. In fact, as far as my experience goes, it appears that when Teak does not grow too fast then it is best; if it grows too fast the fibre is apt to be loose; if too slow knotty and twisted. The best Teak for general purposes on our side is that produced in the Wynad belt.

(Signed) J. GROSE,
Acting Under Secretary to Government.

Ordered that the following letter be despatched.

No. 329. From W. HUDLESTON, Esq., Acting Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, P. W. D. dated 18th May 1865, No. 1,049.

SIR,

Forests, No. 15.

* Letter from Officiating Conservator of Forests, dated 2nd May 1865, with three enclosures.

Do. do., dated 5th May 1865, with one enclosure.

Forest Officers of this Presidency on the subject of girdling Teak trees.

With reference to your Circular, dated 16th March 1865, No. 4, I am directed to forward, for submission to the Government of India, the accompanying papers* containing the opinions of Captain Beddome, and of other experienced subject of girdling Teak trees.

Referencing May 2

Rev. ³ Deft.

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18th May/60

The Secretary to the Govt of India
Public Works Dept.

With reference to
your circular, dated 16
March 1865 No 4, I am
directed to forward, for
submission to the Govt.
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panying papers contain-
ing the opinions of
Captain Reddome, and
of certain ^{Experienced} other Forest
officers of this Presi-
dency on the subject
of girdling Teak trees

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George Smith for the

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the boundary to the
Grandmound of
London
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According to the opinion
of the Court of Appeal in
the case of the Grandmound
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Case No. 189-190
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