

- (1) பக்கங்களின் எண்ணிக்கை 10
 (2) புதுக்கித் திருப்பிய நாள் 2/9/90
 (3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம் 6/9

தமிழ்நாடு ஆவணக் காப்பகம்.

(10)

தமிழ்நாடு அரசு

P.W.D. துறை

அரசாணை எண். மு. கோப்புத் தாள் எண்.	2791	அச்சகம் பலவகை
நாள் : 23 - 10 - 1891 198.		

மடிக்கலோ கண்டபடி கையாளவோ கூடாது

5-Sheets

Ln. 24/08/90

ஆவணக் கா-1-18,006-15-6-87.

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

General.
Account.

READ—the following paper:—

From C. G. BAYNE, Esq., C.S., Secretary to the Chief Commissioner of Burma,
to the Secretary to the Government of Madras, Public Works Department,
dated Rangoon, 24th September 1891, No. 510-60 M.

I am directed to forward, herewith, 10 copies of a memorandum, dated the 23rd July 1891, by Major C. T. Bingham, Officiating Conservator of Forests, Tenasserim Circle, Burma, on the qualities of *pyinma* as a valuable wood for buildings, railway sleepers, &c.

2. I am to say that efforts are being made to open a market for *pyinma* and that this memorandum is circulated with a view to bringing its good qualities to the notice of Public Works Departments in India.

ENCLOSURE.

MEMORANDUM by Major C. T. BINGHAM, Officiating Conservator of Forests, Tenasserim Circle, dated the 23rd July 1891, on *pyinma* as a valuable wood for buildings, railway sleepers, &c.

Under the name of *pyinma* the Burmese often include in a loose way of speaking several species of the genus *Lagerstræmia*. These they distinguish, when closely questioned, as the true *pyinma* (*L. flos reginae*), *kôn pyinma* (*L. macrocarpa*), *pyinma-pyu* (*L. floribunda* and *L. calyculata*), *laiza* (*L. tomentosa*), &c.

2. Of these only the true *pyinma* need be noticed here, for although the wood of *laiza*, *pyinma-pyu*, and *kôn pyinma* is used in Burma, it is neither valued nor employed to the same extent as that of the true *pyinma*.

It is, however, often hard to distinguish between specimens of the woods of these various species and of *pyinkado*, *kanyin*, &c., especially if such specimens happen to be old railway sleepers or weather-beaten planks. Nevertheless I have found that any Burman carpenter of experience can as a rule recognize and pick out specimens of true *pyinma* wood from woods of other kinds, while as a last resource microscopical sections of the woods will show a constant difference in structure and grain between the different species.

3. *Pyinma* (*Lagerstræmia flos reginae*) is thus described in Gamble's *Manual of Indian Timbers*: "A large deciduous tree, bark smooth, grey to cream colored; wood shining, light red, hard; annual rings marked by a belt of large pores; pores of all sizes, from extremely small to large, the latter often subdivided, joined by narrow, wavy, and often anastomosing concentric bands of soft tissue, which contain the smaller pores; medullary rays, very or extremely fine, often indistinct. The wood in Burma is frequently very porous, with an abundance of large pores."

4. Further on Mr. Gamble states that "the tree appears to add a cubit to its girth every 13 years."

5. The vernacular name of *pyinma* in Bengal is "jarul," which, however, like the Burmese name, is, I take it, generic rather than specific.

6. With reference to what Mr. Gamble says about Burmese pyinma, I can only state that no specimen of sound pyinma wood that I have seen in Burma could fairly be called "porous."

7. Pyinma is in Burma an acknowledged valuable wood and is in some parts of the country comparatively largely used. Of late years, however, the utilization of the wood has gradually declined owing to the fall in the price of teak, which as a wood more easily worked is generally preferred; still there is no doubt whatever that whenever good teak is found too dear and inferior teak cannot be procured, pyinma will be found most serviceable for any sort of work for which teak is ordinarily used.

8. Mr. Gamble gives the weight of a cubic foot of seasoned pyinma as varying from 36 lb. to 46½ lb., which is about the same as that of teak, while it is very much tougher (value of P. being on an average 732 in pyinma as against 600 in teak).

9. Comparing the qualities of pyinma, teak and pyinkado, the following may be stated. Pyinma is equal to either teak or pyinkado in its resistance to decay and the attack of insects, while its almost complete immunity from rot in damp situations and its capabilities for wear are double that of teak and quite equal, if not superior, to that of pyinkado. It has the advantage too over the latter wood of being more easily worked.

10. The following are two of many instances of the lasting properties of pyinma timber which have come under my own observation.

11. *As building material.*—The forest revenue station-house at Gyaing, inspected by me last month, was built in 1884, the general frame-work and outer walling being of pyinma. The house stands on the very edge of the bank of the Gyaing river, which is very broad here. The front walling is unsheltered and exposed to the full force of the monsoon in the rains and the baking heat of the sun in the hot weather. No earth-oil or other preservative has been applied, yet the wood shows no sign of wear or decay and is apparently as sound as the day the building was erected.

12. *As sleepers or posts laid in damp situations.*—Some sleepers of pyinma wood laid down seven years ago in timber slips in the Moulmein forest depôt, which have been since then daily submerged and throughout fixed in a thoroughly damp situation, were taken up a short time ago and found absolutely sound. This seems to me as severe a test as the wood could be put to.

13. From many instances of the durability of pyinma quoted in a statement furnished by Messrs. F. Foucar and Co. of Rangoon and Moulmein, the following is the most striking:—

"We have also used pyinma in the foundation of machinery in our mill, and in the case of sleepers for a rack-bench, where we used teak, pyinkado and pyinma, we found that after being buried for about 10 years the latter wood was the one which proved to have been best preserved. In one of our mill buildings we have used some pyinma as posts, and while the teak and pyinkado posts have had to be replaced in the ground, pyinma ones have been fairly well preserved."

14. As a railway sleeper pyinma has had a fair trial, as the following extract from a letter addressed to the Manager, Bengal Stone Company, Limited, Calcutta, and the Chief Engineers, East Coast Railway, Vizagapatam, and South India Railway, Trichinopoly, by the Manager and Chief Engineer, Burma State Railway, will show:—

"I cannot give any definite opinion regarding pyinma sleepers, but I may say that the Forest officer from Moulmein recently visited this line for the purpose of inquiring as to the suitability of pyinma for sleepers, many of which, it was understood, had been laid when the line was constructed or subsequently. He therefore examined some stacks of sleepers at Letpadan, which had been removed in course of removals in continuous lengths, and the Executive Engineer reports that some pyinma sleepers were identified, which appeared to be equally serviceable with the average of pyinkado sleepers which had been down for the same period."

15. To the above mass of testimony it may be added that the Forest Department, Tenasserim Circle, has for several years supplied the Gun Carriage Factory in Madras with pyinma, which wood has given entire satisfaction, and that eight years ago Messrs. Foucar and Co. supplied 12,000 pyinma sleepers 7' x 6" x 4" to Messrs. Mackenzie, Lyall and Co. of Calcutta, it was understood, for the Darjeeling Railway, which sleepers it is presumed, as no complaints have been received since, proved satisfactory.

16. With reference to the extent of the supply of pyinma in Tenasserim, the tree occurs in considerable numbers throughout the valleys of the Attaran, the Haungtharaw, the Hlaingbwe, and the Thaungyin rivers, and still more commonly in the Yè and Tavoy forests. Should a demand arise for the wood for railway sleepers and it is thought advisable to supply these departmentally, I am of opinion that from a lakh to a lakh and a-half of narrow gauge, or from sixty to eighty thousand broad gauge, sleepers could be turned out annually for some years to come at an outside cost of Rs. 45 per ton free on board at Moulmein or Tavoy. At the same time I have no doubt that a private firm working their own mill could turn out the sleepers at a cheaper rate.

17. In conclusion, I may add that, concurrently with the extraction which the above demand, if it arises, might entail, measures could and would have to be undertaken for the regeneration of the species.

ORDER—dated 23rd October 1891, No. 2791 W., Public Works.

Communicated to officers of the Public Works Department for information.

(True Extract.)

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

To Superintending Engineers.
To the Consulting Architect to Government.
" Superintendent of Works, Periyár Project.
" Chief Engineer for Irrigation.
" Consulting Engineer for Railways.

Exd. C. A. Munisawmy.
Spare Copies

GENERAL
ACCOUNT.

Gobt. of {1891} Madras.
PUBLIC WORKS.

Dated October, 23rd.

Recd.

Encl.

G.O., 23rd Oct. 1891, No. 2791 W.

OCTOBER.

Pyinma

Memorandum by Major C. T. Bingham,
Officiating Conservator of Forests, Tenas-
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2791/3 258

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2791/4

Burma.

FOREST DEPARTMENT.—No. 510-60M.

FROM

C. G. BAYNE, ESQUIRE, C.S.,

SECRETARY TO THE CHIEF COMMISSIONER,

TO

*The Secretary to the Government of Madras
Public Works Department*

Dated Rangoon, the 24th September 1891.

SIR,

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I have the honour to be,

SIR,

Your most obedient servant,

C. G. BAYNE,

Secretary.

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Acet.

2791. Id d/ 23 Oct. /91

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11 Oct.

Com^d to officers
of the I. W. Department
for information.

Recd: 14. 10. 91

Sig.

0013

15. 10. 91

Supdy. Engrs
C. A. to Govt.
Supt. of Mks. P. Project
C. E. for Insp
C. S. for Rep

2 Sept 58
11. 10. 91

Am. 2/10.

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