

(1) Number of pages 8
(2) Date of repair 17-3-79
(3) Initials of the Referencer _____

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No.	2656	Press.
B.P. No.		Mis.
Dated	6-9-1877	197

Not to be folded or roughly handled

2656

GOVERNMENT OF MADRAS.
REVENUE DEPARTMENT.

6th September 1877, No. 2,656.

Read the following paper :—

No. 94. Extract from the Proceedings of the Government of India in the Department of Revenue, Agriculture, and Commerce (Forests), dated Simla, 22nd August 1877, Nos. ²⁵ 1,016—1,023 F.

Read the following extract from a Report by Dr. E. Bonavia on the Horticultural Gardens at Lucknow for the year ending the 31st March 1877 :—

Paragraph 16. The *Eucalyptus rostrata* still maintains its good character as one of the species adapted to the plains of India. The old trees produce flowers, but do not appear to mature seed. This tree bears cutting without harm; it throws out new shoots readily, which soon replace the cut wood. It therefore appears useful for plantations, as cutting only regenerates the tree, and so the necessity of replanting is avoided.

The small plantation of this *Eucalyptus*, which I formed in the rains of 1875, is thriving admirably. During the hot months of 1876 it did not receive a drop of water by irrigation. The heat during that period was as follows :—

The means of the maximum temperature in the sun's rays were in—

April 1876	156°
May	151°
June	159°

The highest maximum was 175° in June, nevertheless the plants continued to flourish and to make vigorous growth. Now they are between 20 and 25 feet high, and are making new growth as the hot weather advances.

Last year I made two other small plantations of the *Eucalyptus rostrata* on soil different from the above and on higher ground. They are both on the same sandy soil without being specially manured. The first is on ground lately occupied by a *Casuarina* plantation; 650 of them were planted out in August and September. Many of them were 5 and 6 feet high, and most were 3 feet high when transplanted, and, although a good deal of damage was done to their roots, only 66 died and 170 suffered by transplanting, that is, they dropped their leaves, but threw out new ones later. The majority did not suffer by transplanting at this season. On this same plot I put plants of a younger batch which were 18 inches high at the end of August. Of these not one died.

The older trees were purposely treated without care to find out how much ill-treatment they would bear. The whole plantation is now in good condition, and the plants average 5 and 6 feet high, and are making new growth. The ground of the second plantation was also occupied by young forest trees. No manure was used. It was planted in October; the plants were younger; and out of 225 only 15 died. They now average 4 feet, and are making new growth. In September 1876, availing myself of a cloudy day, I sent 100 *Eucalyptus rostrata* by rail to Dr. Condon for the Memorial Garden at Cawnpore. They were about 18 inches high, and each ball of earth was packed in 'munj' grass. On the 25th September Dr. Condon stated "they are all doing well, some never dropped at all, and none very much." I have not been able to get any information how they have been doing since September 1876.

I tried sowing the seed in the rains, but the dampness kills the seedlings before they make any growth.

I also tried sowing it in the beginning of the winter, but the cold prevents the young seedlings from making any growth till the warmth returns.

The best time I find for sowing the seed is the beginning of February and March. The seed then germinates quickly and the seedlings make rapid growth. By April they can be pricked out into small spots or into a nursery; and when a foot or 18 inches high, they can be planted out permanently, where they are to remain. This size will admit of their being planted out just before the rains commence, so that not much labor will be needed afterwards for water-

ing them. After a year's growth experience has shown that they can stand the hottest weather and flourish without watering. Every additional growth after 18 inches makes it somewhat risky to transplant them from a nursery.

The tree in the Wingfield Park, specimens of which had been sent by Government to Kew, and was identified there as *Eucalyptus resinifera*, is, in appearance, totally distinct from the one we call *rostrata* in the horticultural garden. The latter grows rapidly, is very tall, does not spread, and sheds its bark. In September it had only flower buds. The former is of slower growth, is more spreading, is less tall, and does not shed its bark. In September it was in full flower and had many half-developed capsules. The *Eucalyptus resinifera* in the Wingfield Park is said to be about 10 to 12 years old. It is about 45 feet high, and is 3 feet 9 inches girth at 3 feet from the ground. Seedlings of *Eucalyptus resinifera* raised from acclimatized seed and planted on similar ground in the Wingfield Park in November 1874 were, in October 1876, one about 5 feet and the rest 2 to 3 feet high. The largest tree of *Eucalyptus rostrata* in the horticultural garden is between 60 and 70 feet high, and is about 12 years old. It is 5 feet girth at 3 feet from the ground. The young plants of *Eucalyptus resinifera* have a red stem and red edges to their leaves. The bark of the old tree is rough and very different from that of the *Eucalyptus rostrata*; the seeds are oblong, wedge-shaped, and many-sided.

I planted a few young seedlings of *Eucalyptus resinifera* in the horticultural garden raised from acclimatized seed. They are about two years old. Two are about 12 feet high and are growing vigorously, and the remainder, although of the same age, are only 3 and 4 feet high, and are not making any vigorous growth as yet. Probably a difference in the soil may be the cause of their different vigor. Baron Von Mueller says of this species (*resinifera*) that its wood is much prized for its strength and durability, and the tree has proved one of the best adapted for a tropical climate.

In January 1876 I sent a packet of seed of *Eucalyptus rostrata* to each Deputy Commissioner in Oudh for trial in their district, with directions for sowing, &c., but little or nothing has come of it. Only the Deputy Commissioners of Sitapur, Gonda, Sultanpur, and Partabgarh can give any account of the seed sent to them. I also sent seed to many other persons, but only the following have succeeded in making anything out of them.

Mr. Pearsale of Nahan states that the seed germinated in profusion. The plants were treated without care, and several were saved and are thriving. He thinks the *Eucalyptus rostrata* will do at that altitude, 3,057 feet. Those transplanted in the rains mostly suffered. One transplanted in the winter did not suffer at all.

Mr. Bellairs, Chowkoree, 5,000 feet high, states that the seed germinated well, but does not appear to thrive. The *Eucalyptus globulus* does better there.

Mr. Thomson of Kooshtea states the seed germinated and the plants are thriving. Mr. Pillans, Phoolbharrie Tea Estate, Silligori, Bengal, says that the *Eucalyptus rostrata* is doing very well indeed. He sowed a portion in July in boxes and then planted them out. Of these he has about 150 plants averaging 4' and 4' 8" high. The second portion was sown quite after the rains. Of these he has about 200 plants averaging 2 feet in height, are very healthy, and are growing fast.

Captain J. F. Miller, Roopur, states that the *Eucalyptus rostrata* germinated well. The seedlings were planted out in the rains, and, in December 1876, averaged 4½ feet. One was 7 feet. The best were on a bank 20 feet high, composed of shingle and sand exclusively.

All others state that the seed either did not germinate at all, or that it germinated and the plants withered while young; and I have little doubt that this was from want of management, as the seed was of the same lot which succeeded elsewhere.

The new kinds of Eucalypti, which I have tried during the past year, are *Eucalyptus cornuta* and *Eucalyptus sideroxylon* or *leucorhylon*. I have some hope that both these will thrive in the plains, especially the *Eucalyptus cornuta*. When young, the latter has a light green emarginate leaf, and is different in appearance from the other Eucalypti I have tried. It resembles more that ticked *colosseus*, but the latter has a pointed leaf. Of this kind (*cornuta*) I have alive 141 plants. They average 8 and 10 feet in height, and are all more or less in a vigorous condition. They transplant well, even when 3 and 4 feet high. Of the *Eucalyptus sideroxylon* I have 88 alive, although most of them are healthy; as a rule, they don't make rapid growth, and they don't appear to transplant very well at 3 feet high in the rains. Some were transplanted when 2 feet 6 inches high in the beginning of September, and several of them suffered; others of the same height transplanted in the beginning of August did not suffer. The seeds of these two kinds I procured from Baron Von Mueller, and I therefore think they are rightly named. Three other kinds procured also from him and tried for the second time, viz., *Eucalyptus fissilis*, *obliqua*, and *marginata* did very badly.

Baron Von Mueller has lately sent me the following new kinds, which are now undergoing trial:—

Eucalyptus pilularis,
" *cinerea*,
" *polyanthemos*,
" *Stuartiana*,
" *meliodora*.

besides more seeds of *Eucalyptus cornuta* and *sideroxylon*.

I also obtained the following new kinds from Mr. Cresswell of Melbourne:—

Eucalyptus cordata,
" *concolor*,
" *robusta*,
" *Gunnii*,
" *longifolia*,
" *paniculata*,
" *hemiphysa*.

and *Eucalyptus citriodora* from the Queensland Acclimatization Society.

I have also under further trial a number of seedlings from acclimatized seed of the *Eucalyptus resinifera*. The old tree in the Wingfield Park gave a larger quantity of seed this year, which the Superintendent forwarded to the Deputy Commissioner for transmission to Government.

RESOLUTION.

HIS HONOR the President in Council has noticed with satisfaction the continued success of the cultivation of two species of Australian Eucalypti at Lucknow, and desires that Dr. Bonovia's remarks on the subject be communicated to forest officers and others interested in arboriculture. A late communication from Professor Oliver, the Keeper of the Royal Herbarium, Kew, to the Inspector-General of Forests, states that specimens of the trees in the Wingfield Park, Lucknow, hitherto named *Eucalyptus resinifera* have now been finally identified as *Eucalyptus saligna*, Smith, a tall tree from New South Wales, where it is known as White or Grey Gum.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Local

Madras.	Central Provinces.	Governments and Administrations noted
Bombay.	British Burma.	in the margin, in continuation of the
Bengal.	Mysore and Coorg.	Circular letter from the Revenue
North-Western Pro-	Ajmere.	Department, No. 26, dated the 18th
vinces and Oudh.	Assam.	Aug at 1876. 779-780
Punjab.	Hyderabad.	

ORDERED also that a copy be forwarded to the Military Department for information, and to the Foreign Department for communication to the Agent to the Governor-General in Central India.

(True Extract.)

(Signed) G. H. M. BATTEN,
Offg. Secy. to the Govt. of India.

No. 95. ORDER THEREON, 6th September 1877, No. 2,656.

Forest, No. 5.

COMMUNICATED to the Board of Revenue and Conservator of Forests in continuation of G.O., 6th September 1877, No. 1,233.

(True Extract.)

(Signed) C. G. MASTER,
Secretary to Government.

To the Board of Revenue.
" the Conservator of Forests.
Ed. A. F. Goodall.

Eucalyptus growing at Lucknow—Communicated to the Board of Revenue and to the Secretary of Forests Division of Government of India forwarding extract of a report by Dr. Bonavia on two species of—

SEPTEMBER.
Nos. 91-95.

GO. Ld. September 1877, No. 2,000

Dated September 6th.

THE BOARD OF REVENUE.

REVENUE.

GOVT. of 1877/1 Simla.

Nos. 1016—1028 F.

Extract from the Proceedings of the Government of India, in the Department of Revenue, Agriculture and Commerce,—dated Simla, the 22nd August 1877.

FORESTS.

READ the following extract from a Report by Dr. E. Bonavia on the Horticultural Gardens at Lucknow, for the year ending the 31st March 1877:—

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ORDER.—Ordered, that a copy of this Resolution be forwarded to the Local Governments and Administrations noted in the margin, in continuation of the Circular letter from the Revenue Department, No. 779-780²⁰ dated the 18th Aug ust 1876.

Madras.	Central Provinces.
Bombay.	British Burma.
Bengal.	Mysore and Coorg.
North-Western Provinces	Ajmere.
and Oudh.	Assam.
Punjab.	Hyderabad.

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(True Extract.)

M. Batten
Offg. Secretary to the Government of India.

Rs 25/-
10/6

The Secretary to the Govt of Madras

Revenue Department

No 3894

1877.

GOVERNMENT OF INDIA

DEPARTMENT OF REVENUE,
AGRICULTURE AND COMMERCE.

FORESTS.

To

RESOLUTION.

Nos. $\frac{25}{1016-1028}$ F.

Dated Simla, the 22nd August 1877.

Rec^d 4 September

SUBJECT.

FORWARDS extract of a Report by Dr. Bonavia
on two species of *Eucalyptus*, viz., *E. resinifera*
and *E. rostrata*, growing at Lucknow.

Govt. Central Branch Press, Simla, No. 638 B., A. & C. 23-3-77-250.

W. A. C.

7/10/77
No 2656
Communicated
to the Board of
Revenue and Administration
of Forests in continuation
of G.O. 6 Sept
1876 No 1233.

6-9-77

14 To Secy Revenue 12-9-77
21 to Commr of Forests

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