

ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS  
EUCALYPTUS STUDY GROUP NEWSLETTER NUMBER 18, July 1988

Leader: A.R. Bean, P.O.Box 397, Nambour, 4560, Qld.

Dear Members,

Cheers. I hope you are all surviving winter, ready for renewed activity in the spring. I have just returned from Cape York, where the temperatures are much more amenable, and the plants enthralling. In the next newsletter, I may perhaps write an article about the eucalypt highlights of Cape York and "the gulf".

Well, it is that time of the year again, when we need to get our cheque books out, as subscriptions are due. The subscription rate for the Euc study group for 1988/89 is once again \$4. To check whether you are financial or not, see page 8.

Listed below are our newest members. Welcome.

### Breeding Super-trees

North Broken Hill Holdings Ltd has a Forestry Research Centre at Ridgley, in Tasmania's north west, where scientists are developing a new generation of 'super' trees - trees which can potentially grow up to 15 times faster than those which occur naturally in our forests.

From the tissue culture of specially bred progeny, the scientists are producing a new generation of eucalypts through micropropagation or cloning. This work is carried out in the laboratory and involves inducing eucalypt shoots from selected trees to take root and grow. To help the process of nature along, the work is conducted in a controlled environment in which such things as the hours of light, temperature and hormone levels are manipulated. Essentially it involves manufacturing trees from the same prime genetic source.

The other technique being used is grafting which is conducted in a computer-controlled glasshouse, in which optimum environmental conditions are maintained.

Grafting is used to induce selected breeding stock to produce immediate flowering. Controlled cross-breeding is then undertaken to create new and better genotypes.

While the progeny experimentation offers exciting opportunities, the scientists are also applying more conventional methods. They have established seed orchards in which carefully selected seeds from prime breeding stock are planted out in a process of selective natural breeding.

#### Members Letters

Brenton Lee from Adelaide is a member of "Men of the Trees", where free tree seedlings are grown for farmers under a special scheme. Last year, a quarter of a million plants were grown for farmers and other members. Farmers pay only membership to M.O.T.T. (\$18) to obtain free trees. Plant growers, such as Brenton, supply their labour for free. MOTT supply the tubes, growing media, foam boxes and other requirements.

Tim Hayes (Goulburn, NSW) reports that he saw seedlings of the Braidwood eucalypt (E.recurva) at the National Botanic Gardens during the ASGAP conference in January. A new botanic gardens near Campbelltown (south-west of Sydney), will be opened in October, Tim says, and boasts the largest collection of eucalypts in the country! However at this stage, not a lot of them are labelled.

Kaye Bartlett from Jervois, S.A., sent me a wonderfully newsy resume of her 6-week Northern Territory/Kimberley trip last year. She mentions so many wonderful eucalypts, including E.miniata. She says "I find it hard to understand why more are not grown in tropical gardens as it must be one of our most beautiful trees. The grey foliaged form around Lake Argyle is very attractive, complementing the orange flowers. I tried to grow E.miniata once but the cold winter killed it."

Marie Gooch (Frankford, Tas) tells us that Tasmania has recently endured their worst drought in decades. Not until May did the rains come. Even some trees in the bush nearby died. Despite the drought, the Gooch's have completed their bicentennial tree planting around the new stockyards.

#### Seedbank News

Rod Anderson from Canberra has sent seed of E.pauciflora 'Adaminaby'. This is a marvellous weeping form of Snow Gum, which is to be given subspecies status. Kevin Rule has donated seed of E.petraea which he collected from his own tree. Rhoda Jeavons has kindly donated some Angophora hispida, and Peter Francis has sent some E.leucoxydon ssp megalocarpa and E.sepulcralis. I have purchased for the bank some E.quadrangulata, and have many bits and pieces from Cape York which have not yet been extracted or sorted out.

Growing Eucalypts for their Bark - A selection of North Qld species  
by Ann Radke, Atherton

When you choose a eucalypt for your garden, what questions do you ask? No doubt you want to know its mature height, and probably its shape, flowers and foliage, but have you ever asked "What's its bark like?" After all, after a couple of years the bark on the trunk is just about the only thing you're going to be able to see - everything else will be too far up.

In North Queensland there are many eucalypts with very attractive bark, that are worth growing just for the bark in its own right, and all of them can be found in their natural habitats within an hour drive of most places on the Atherton Tableland.

1. Eucalyptus platyphylla (formerly known as E.alba) has a beautiful smooth trunk which changes in colour during the year from white to pink to purple (sometimes there's even an orange stage) as the old bark ages and finally peels off. The leaves are very large and roundish in shape. It flowers at the end of the 'dry', when it also tends to be deciduous especially if the 'dry' has lived up to its name. The old name 'alba' (meaning white) referred to the striking white trunk.
2. Eucalyptus citriodora (Lemon Scented Gum) also has a beautiful smooth trunk which changes from a cream/white to bright pink as the old bark peels off each year. The tree has a tall slender form, and as an added bonus the leaves have a beautiful lemon scent when crushed. The tree is a fast grower.
3. Eucalyptus pachycalyx (Pumpkin Gum) has a phenomenal bark! The bark is smooth and basically white, but usually also mottled with patches and streaks of orange, salmon pink and purple. The blaze is bright pumpkin orange - hence the common name. The tree has a somewhat twisted and gnarled form, which further enhances the very striking trunk. This species is not common in the wild, and even less common in cultivation, but it has terrific horticultural potential.
4. Eucalyptus tereticornis (Blue Gum) is a tall stately tree with a white/grey smooth trunk mottled and streaked with blue and brown. A fast grower.
5. Eucalyptus camaldulensis (River Red Gum) is similar to the Blue Gum (above) but with a trunk that is more of a creamy colour.
6. Eucalyptus tessellaris (Moreton Bay Ash) has a lovely smooth white/grey trunk with a neat 'sock' of dark grey, rough tessellated bark at the base. The tree has a tall stately form.
7. Eucalyptus grandis (Rose Gum or Flooded Gum) is the grandest by far of all the gums. It is a very tall, stately tree with smooth, pure white bark which peels off in long ribbons that litter the base of the tree and hang off the branches. There is a short 'sock' of rough bark at the base. This tree is a very fast grower, but too big for an ordinary garden.

8. Eucalyptus torelliana (Cadagi) is widely grown in gardens because it is fast and has a lovely shape. But have you noticed its lovely smooth green trunk with a short sock of pale brown bark at the base?

9. Eucalyptus pellita (Nth Red Mahogany) is a tall tree with deeply furrowed red/brown bark. Sometimes the bark can be a very striking bright red.

10. Eucalyptus peltata and E. similis are both known as 'Yellow Jackets' because of their bright yellow flaky bark. They are both medium trees with spreading crowns. E. peltata comes in two forms: E. peltata subsp leichhardtii has green leaves with a typical 'gum leaf' shape, and is very similar in general appearance to E. similis; E. peltata subsp peltata has broad, roundish grey leaves. Whether green or grey, foliage makes a lovely contrast with the yellow bark.

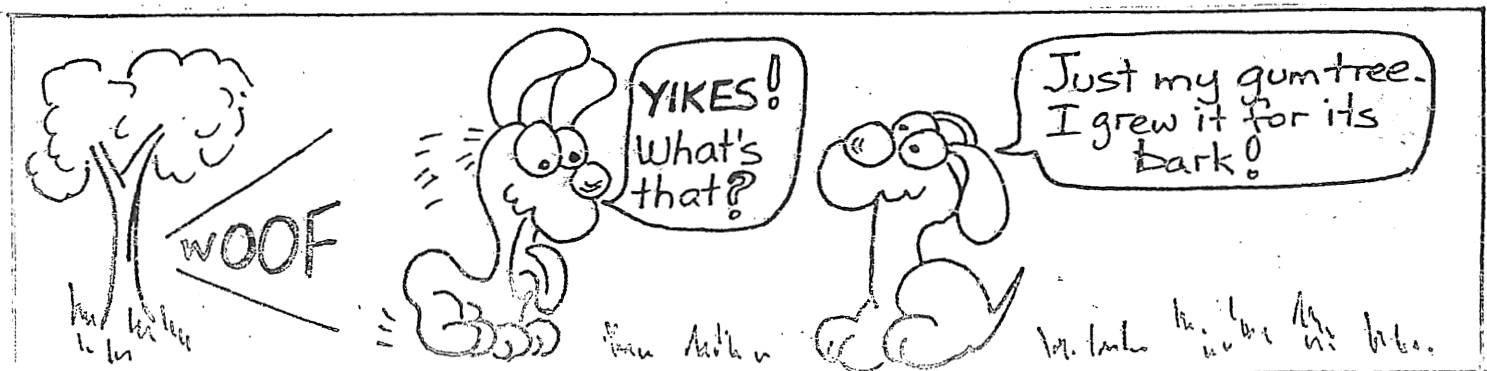
11. Eucalyptus miniata (Woollybutt) has a bark that reminds one of cornflakes - it is pale fawn, and flakes off in fairly small roundish pieces. The branches have smooth white bark. As an added bonus, this tree has spectacular orange flowers and huge gumnuts. However; it is extremely difficult to grow - the seeds germinate readily, but the seedlings are very susceptible to rot, and it takes great vigilance with fungicide at the ready, to get a seedling to a size large enough to plant out. Once established however, they continue to grow quite easily.

12. Eucalyptus crebra (Ironbark) has deeply furrowed black bark. In the garden it is easy to grow, and the black trunk makes a striking contrast with other trunks and foliage. E. cullenii is very similar to E. crebra.

13. Eucalyptus cloeziana is a tall timber tree with a striking dark grey tessellated bark. The distinctive pattern on the bark is very interesting.

14. Eucalyptus erythrophloia has flaky bark of two colours - grey and bright rusty red - which make an attractive colour pattern. It is a medium tree which has not been tried in cultivation.

15. Eucalyptus parruan (Ghost Gum) of central Australian fame, has got probably the most striking and beautiful trunk of all, but unfortunately it does not seem to produce this spectacular trunk in coastal areas. In fact, it grows here naturally on the Tableland, but you'd be hard pressed recognising it as its trunk is very ordinary. So, this is one species I wouldn't bother with.



Eucalypts in California by Kevin Penny, Sale, Vic.

I visited California in February of this year and experienced unusually warm weather.

Considering the ideal climate, very little use of Australian plants is made, apart from 5 or 6 Eucalyptus spp., Callistemon citrinus, Acacia spp., a few Grevilleas, Hakea suaveolens and Melaleuca quinquenervia.

Eucalyptus globulus along with its "compacta" form is still the dominant eucalypt planted. However most new plantings seem to be of Euc. polyanthemos, E. sideroxylon, E. nicholii and E. maculata. I also saw E. cordata and E. perriniana; interestingly they make a silk version of E. perriniana for use in home flower arrangements.

E. polyanthemos seems to be used very successfully as a feature tree in home gardens and lends itself well to this purpose. E. sideroxylon is now widely planted in estates and road barriers and E. nicholii has become a street tree. Grevillea robusta has become popular along with Lophostemon confertus for general planting.

Eucalypts grow extremely fast in California and do not seem to sink their roots as deeply as they do in Australia. Consequently they blow over very easily. Another oddity is that the bark of certain species take on different characteristics e.g. the Manna Gums (E. viminalis) do not shed their bark in ribbons. I would also say that the aforementioned species seem to grow straighter with fewer multiple trunks. E. globulus is considered a weed and after freak heavy snowfalls in 1972 were cut back badly. The timber was cut and the regrowth was poisoned.

Our Use of the Eucalypt

by W.R. & K.D. Lynch,  
Busselton, W.A.

We originally needed trees as a shelter belt for our Kiwi fruit. We did not use the traditional pine or poplar as we wanted to have the place beautiful and colourful. What better tree to use than the eucalypt?

Not having much horticultural or tree experience we set about a quick course in learning all about eucalypts. The library and our local Forestry office provided us with most of what we thought we wanted to know. As time has progressed we find we really know very little, but we are still enthusiastically learning. Basically we divided the tree growing venture into three steps:

- a. Selection                      b. Planting                      c. Aftercare

Selection

The trees we wanted needed to have windbreak qualities, i.e. a dense foliage and beauty. We also selected tall, medium and short trees so that the windbreak would rise from ground level to 30-plus metres and back to ground level using six rows. Thirty varieties were chosen and an overall plan made. This is a very important step. To simplify our plan we assigned numbers to the tree varieties to make the planning easier.

### Planting

We purchased a tree planting auger specially designed by the CSIRO to speed up the planting phase. The spiral auger on a post-hole digger is replaced by an auger having two opposing wings about 250mm long which digs down but does not displace the soil, but agitates it down a metre or so if needed. We found it extremely good (except where there were rocks), because it aerated the soil and cleared the weeds. Most of our initial planting of some 800 trees were in jiffy pots. After digging the holes with the auger - planting the small trees 1 metre apart, medium at 2 metres apart and the larger trees at 3 metres apart and between the rows 2 and 3 metres respectively, we tore the bottoms out of the jiffy pots, planted the trees, scattered a small handful of Osmocote and watered them with half a bucket of water per tree.

### Aftercare

Having planted in mid-winter we began watering in late November by hand held hoses. We also very soon discovered the soil was mostly a 'non-wetting' sand and we used the proprietary line 'Wettasoil' to overcome this. We gave them very little protection as such - staking or using plastic protection of any sort. We did weed by hand during the next 12 months and fertilised in November and March with a small measure of "Potato E" which has a good Nitrogen content.

Lessons we learnt in Selection. Of the 30 varieties selected, about 10 had near 100% survival, 15 had better than 50% survival, and about 5 varieties did very badly. We have since replanted the 'misses' in the windbreak with varieties which did the best. We did not spend enough time planning our selection and would recommend to anyone planting on a large scale for a particular purpose (windbreaks, shade etc.), to go for 'horses for courses' and select trees which do well in your area, or, study very closely the climate and soils where the trees are found naturally before selection.

We believe that with the proper care and attention, you can grow the vast majority of eucalypt varieties in any area. We aim to establish about 150 varieties on our place but they will get a lot more attention than the 1000-odd trees already planted and the 2000 or so still to be planted in windbreaks. Trees growing naturally in your area need little attention.

Lessons we learnt in Planting. We found that in our sand, those trees with deep depressions around them did better than those with shallow ones. This is important if watering by hand, because it allows a large volume of water to be collected. We lost a lot of trees which appeared not to break out of the jiffy pots. We now completely remove the jiffy pot. We also found that all the planting techniques listed in the various books were of value and if you cut corners you lose trees. The tree planting auger was worth its weight in gold. I only wish my knees were made of gold, especially after planting all those trees. Since then a 5 inch piece of foam

has been very useful! Luckily there are only a few rocky areas in which the auger was of no use.

Lessons we learnt in Aftercare. In our area where there are deep sands, plenty of water is essential. We watered once per week in the first summer but would have liked to water more often than this. Our latest planting has micro-jet sprinklers and since watering is not time consuming, they often get water twice or three times a week. Most importantly the watering must be heavy and deep to encourage deep root growth. Fertiliser is essential. We used a high nitrogen content fertiliser on our first plantings, but are now mulching with compost. We have not gone far enough yet to get any comparisons; that will come!

### Problems Encountered

Trees can be heartbreaking if you let them. I once read an article in which a farmer/tree grower said, "never mind the ones that die, just keep planting". This is what we are doing. Just when everything looked good at the end of winter we started getting cutworms eating the tap roots, then the trees went under stress through lack of water, then every leaf-eating and sap-sucking insect appeared from nowhere to decimate foliage, and to top it off, the wingless grasshoppers came in and cleaned up what foliage was left and ringbarked a few just for good measure!

We were somewhat depressed at the end of our first summer but we are replanting and are once again just as enthusiastic. We just pull out the dead, shed a tear or two, and replant, and hope the new one survives. We are experimenting a little with our replants and we stress that it is because of our particular environment and soils and what we are now doing may not suit others. Our first new innovation was to grow our own stock from seed. It is amazing just how easy it is with most eucalypts and is strongly recommended to anyone growing large numbers of trees. Secondly we keep all our trees in the shade house until they are about a metre tall and have developed bark. This gives them an excellent survival against grasshoppers (we also run guinea fowl to reduce grasshopper numbers). Whilst the larger trees need bigger pots, we find that a 180mm pot is sufficient. We used 'Wettasoil' to overcome the non-wetting sand problem but find industrial detergent diluted 1 part in 50 is much much cheaper and just as effective. We also believe that the cost of putting in drippers or micro-sprinklers (we use micro-sprinklers because of the sand) is worth every cent. The cost of drip irrigating trees is a small percentage of the overall cost of planting, and most Agricultural departments (in particular the Victorian Department of Agriculture) have very good pamphlets on how to do your own. With a little trial and error, drip can be installed by anyone.

We still have a long way to go with growing eucalypts but with two years under our belts we have at least made a start.

## SUBSCRIPTIONS

Euc Study Group subscriptions for the 1988/89 financial year are now due. The rate this year is once again \$4. Please take note of your financial status as indicated below, and act accordingly.

Subscription now required - \$4

You are financial until July 1989,  
no money required

### New Bloodwoods

During my recent Cape York trip, I was able to examine several bloodwood species which have been recently described by DJ & SGM Carr, in their book "Eucalyptus II". These are.

E.stockeri - a small tree with very narrow glossy leaves, Grey to reddish bloodwood bark on trunk and most branches, small branches smooth. Fruits egg-shaped, about 15mm long. Grows on shallow to skeletal soils between Laura and Mt Garnet.

E.rhodops - a medium to tall tree with grey chunky bark. Looks like E.intermedia but has larger fruits and has white flowers with red centres! Restricted occurrence.

E.ellipsoidea - a smallish tree with reddish bloodwood bark on the trunk. Branches often smooth. Leaves narrow, dull, same colour both sides. Closely related to E.erythrophloia. Moderately widespread in north Qld.

E.hylandii - a small tree with grey bloodwood bark on trunk and most branches. Small branches smooth, reddish. Fruits egg-shaped, about 15mm long. Grows on rocky hills between Laura and Mt Carbine.

Other valid species are E.clarksoniana, E.novoguineensis and E.pocillum.

Regarding cultivation, these species will be of interest to people in tropical or subtropical climates. Some are ornamental; in particular E.rhodops & E.stockeri. I have a small quantity of seed of these two species which will go into the seedbank.