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SUBTROPICAL FARM FORESTRY

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NEWSLETTER

A tour of mixed species plantations in Northern New South Wales



QUONGDONG—a product of a 12 year old plantation

The tour took place on Saturday 19 March and was coordinated by the Department of Primary Industries and Fisheries (DPI&F) and the Subtropical Farm Forestry Association (SFFA)

The tour was a part of a project funded by the Rural Research and Development Corporation involving a number of tours in Queensland and this one in northern NSW all encompassing the following objectives:

- Introduce mixed-species farm forestry concepts to interested landowners.
- Demonstrate the latest plantation establishment and management techniques.
- Discuss the anticipated wood quality of young, plantation-grown rainforest trees.
- Enable interested landowners to identify the techniques and methods most suitable to their own situation.
- Provide a unique forum where all stakeholders interested in mixed species plantations can meet and discuss the progress of this industry in northern NSW.

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AGM

Wednesday
September 7 2005

*(refer to Page 19
for details)*

PRESIDENT'S REPORT

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The long awaited high moisture levels this year have given growers an excellent opportunity to once again start up their planting regimes. As the weather cools with the winter temperatures it is a good time to get onto those maintenance jobs such as weed eradication and pruning. There have been quite a few excellent examples of larger and smaller planted forests being established this year.

On another note we apologise to members for the lack of SFFA output such as Newsletters and field days. Unfortunately these have been curtailed due to the lack of funds and our training courses, seminars, conferences and incentive schemes have had to be put on hold. However we ask members to bear with us for we have not been idle. Our focus has been on activities that we hope will provide benefits to members and support SFFA leading to generation of funds and other measures.

Below I have listed some of the activities your committee has been involved with, many of which will not be evident to members. All we can say is that we are following up opportunities as far as we can and hope that some of these will be fruitful and bring SFFA back to the good old days when government recognized the important role farm forestry has to play in regional Australia.

Many of SFFA memberships are due in August so I urge you to hang in there with us and if you have ideas that may help us in our endeavours please let us know.

Valda has asked me to pass on a request to members for help with the Newsletter in editing and forwarding articles, if we are to produce one every quarter.

The AGM is scheduled for the 7 September so please attend if possible otherwise send us your ideas on SFFA's future.

The committee has been active in the following areas over the past year:

- Forest and Wood Festival plans (+ Maleny Wood Expo trip)
- Herb festival / Lismore Council /Espeialevents / SCU & Wood artist.
- Catchment Management Authority lobbying and project proposal.
- Field days/Workshops-Big Scrub Field Day, DPI Tour (Kestevens Rock Creek, Lascelles)
- Research Projects Spacing Trial – SCU/Kestevens
- Publications (Photos and Video)
- BioEnergy project
- Carbon Pool (Mark Jackson)
- Vietnam Project – Macadamias and Cabinet timbers Card project.
- Mid Coast Farm Forestry – discussions regarding joint activities funded through Landcare.
- Biodiversity project - EnviroFund /Westheimer/ McQuire
- 4 Farm Forestry Plans and 10 site visits.
- Newsletter and specific information responses.
- Website and email requires further investment

Hope to see you at the HERB FEST 20th 21st August in Lismore

Martin Novak

AIMS AND OBJECTIVES

To foster and promote the commercially viable, socially and ecologically sustainable establishment and management of trees on private and public lands

To foster and promote all aspects of perennial tree crops through the establishment of special interests groups such as cabinet timbers, lobbying, plantation timbers, agroforestry, bush foods, polyculture and any other activity deemed of sufficient interest to members

To foster and facilitate co-operative marketing efforts and collective purchases of trees and materials for farm forestry purposes

To promote and engage in educational programs, relevant research and extension, and the flow of information to those planting trees on private land

In keeping with the above aims, to liaise with all other bodies, including community, government and industry.

The tour started at Southern Cross University and proceeded to the first site of cabinet timber plantings at Whian Whian. Here at Imogen Farm owned by the Ke-
 steven family Field day coordinator, DPI&F scientist Geoff Dickinson, introduced Southern Cross University (SCU), SFFA and Northern Rivers Private Forestry representatives from four establishment groups, and introduced discussion themes including plantation planning, design, management and appropriate species selection for this region.

SFFA President Martin Novak spoke about the role of the Subtropical Farm Forestry Association in providing information to members over the past 10 years. He described the interest by past and present members in the growing of rainforest cabinet timbers for conservation and timber values, pointing out that most members try and strike a balance in this respect. He lamented the lack of government support for farm forestry in our region at present and hoped that the interest of growers would once again be matched by that of government which would provide the much needed cost sharing from the community for the common good benefits growers were providing. He introduced the group to the

John Grant of Southern Cross University discussed his role in assessing the trial. He presented his early findings of growth rates on the site. At this point the 3x3m spacing blocks were outperforming the 2 other spacings of 2x2 & 4x4m. However from the perspective of individual species the Silky Oak were doing better in the 2x2m blocks and the Queensland Maple were doing better in the 4x4m blocks. Blue Figs were doing well in most blocks although many had been slowed down by Wallaby browsing. As anticipated the relationship of growth rates will most probably change over time.

The second site visited on the day was Big Scrub Rainforest Flora and Fauna Reserve near Rocky Creek Dam, which is the largest remaining Big Scrub remnant, (196 ha) where Dr. Alison Specht led a discussion focusing on biodiversity and original vegetation types and the role of farm forestry in restoring and/or linking these remnants. (Refer to Alison's article in this Issue)

The tour then moved to Rocky Creek Dam to inspect 14 year-old and 10 year-old mixed rainforest plantings. A discussion of species complementarity, thinning, harvesting and early wood quality took place. Ralph Woodford one of the north coasts most renowned rainforest regenerator's led the discussions. He pointed out the importance of understanding canopy interaction and related it to root interaction and tree competition. He emphasized the importance of thinning to maintain opti-



Alan Rowe following the debate on value adding

spacing trial at the Imogen Farm site and pointed out the difficulties with the establishment of the site because of wallaby and cattle browsing, also lack of early maintenance and below average rainfall. He discussed the establishment, thinning, pruning and maintenance techniques within the new planting of 4-5 year-old mixed rainforest species and went on to describe the spacing trial in which six cabinet timber species were planted at 3 different spacings of 2x2m, 3x3m, and 4x4m.



Ralph Woodford pointing out canopy interaction in 12 year old cabinet timbers

**THE RAINFORESTS OF THE 'BIG SCRUB' -
Rainforest regeneration, cabinet timber and carbon
sequestration in the environs of Rocky Creek Dam**

Alison Specht - Southern Cross University

The 'Big Scrub' was named by the early European settlers, and was the largest area of subtropical lowland rainforest in Australia, covering an area of some 75,000 hectares from Ballina in the east, west to Lismore and north to Rocky Creek Dam (Specht 1988, Stubbs 1999: Figure 1).

gan in the 1860s, when some small areas particularly around the rivers were cleared for cropping, notably maize and sugar cane, but it was the advent of dairying in the 1880s that accelerated the process and the period from 1880 until 1910 saw the removal of the major part of the rainforest (Stubbs 1996, 1999). Several cabinet species, in particular *Toona ciliata* (red cedar; formerly *Cedrela toona* and later *Toona australis*), were selectively logged from the 1850s and *Araucaria cunninghamii* (hoop pine) was extensively removed from the peripheries of the area (the western margins of the Big Scrub were particularly abundant in hoop pine and we can see some spontaneous recolonisation today). Since the 1950s dairying has declined on most of the former

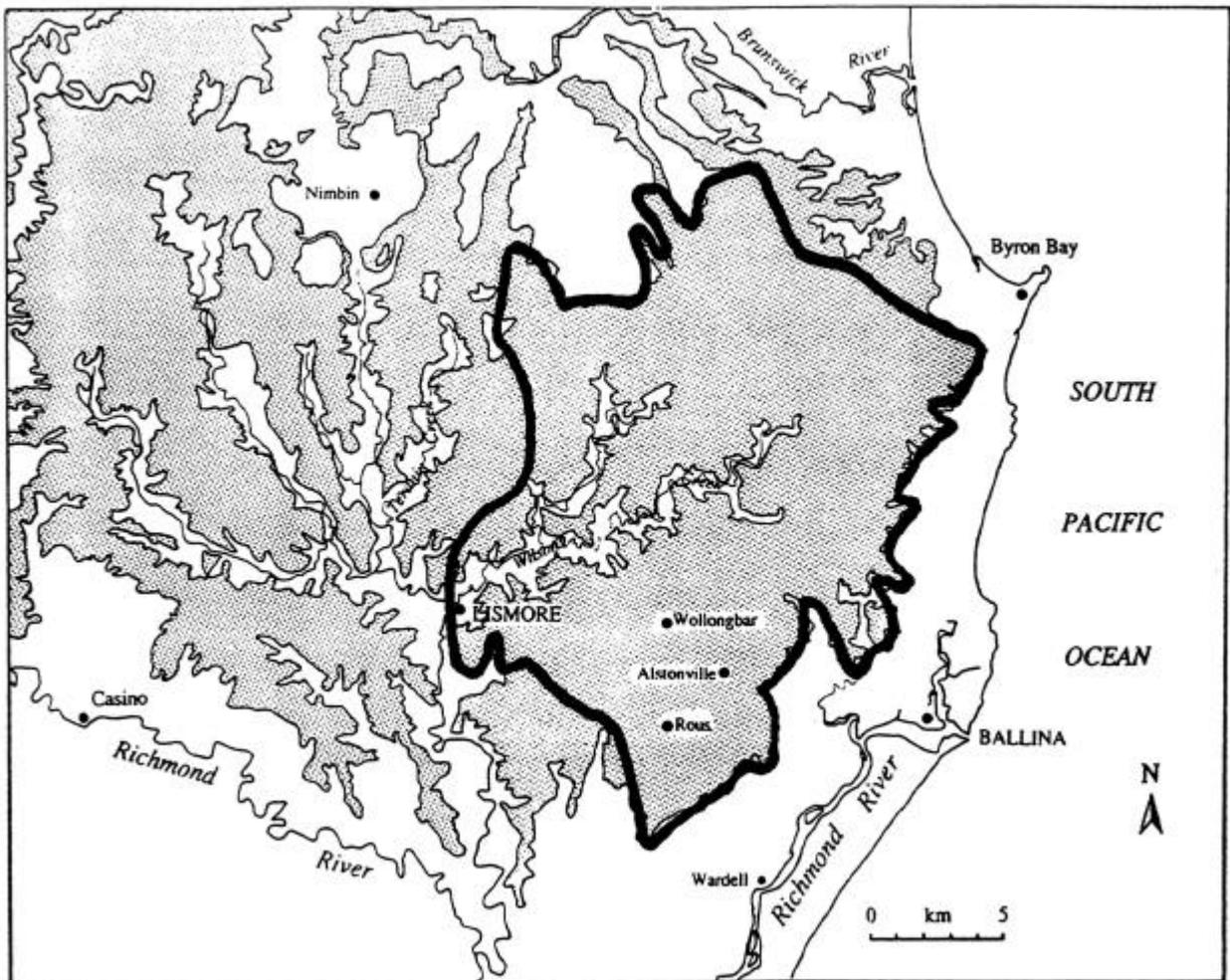


Figure 1: The extent of tertiary basalt which emerged from the Mt Warning complex of volcanic activity which largely defines the presumed original extent of the former Big Scrub. The area of rainforest was almost uninterrupted in the middle of the region, interspersed along the rivers and uplands by 'grasses' (Stubbs and Specht 2002).

Less than 0.1% of the original extent of this rainforest remains in the form of small remnants scattered in farm land (now often planted to macadamias). Clearance be-

Big Scrub lands—one factor being declining productivity of the land. In these high rainfall areas, and in similar country in south-east Queensland, the tightly-linked forest nutrient cycle is crucial in maintaining soil productivity, and the disruption of these natural cycles by forest clearing results in a rapid leaching of nutrients from the soil profile. Much of the ex-rainforest land cleared and now abandoned is infested by exotic weeds, in particular the woody species *Cinnamomum*

camphora (camphor laurel) and *Ligustrum sinense* and *L. lucidum* (privet) and is below production potential. This is similarly the case in many areas of the world with comparable land-use histories.

One of the largest and most floristically rich of the remaining remnants, until recently called the Big Scrub Flora Reserve, is situated on the slopes of the Nightcap Range, on the northern edge of the Big Scrub. The actual area of rainforest is around 60ha. This is the largest of all of the Big Scrub remnants (the others range from less than a hectare to 21 ha). Its large size, its position and elevation, resulting in a higher rainfall than at the lower-elevation sites, and its geology contributes to its high floristic diversity.

The rainforest at the Flora Reserve is predominantly white booyong-rosewood-blackbean association (Floyd 1981, Specht and Connelly 1988), with booyong the dominant, as it is over much of the Big Scrub. There are around 237 species present in the remnant, of which 181 are trees and shrubs, and 56 are lianes. The soil is basalt-derived ferralsols (krasnozem), one of the major determinants of the Big Scrub, with an interface with rhyolite-derived soils. The presence of rhyolite largely defines the boundaries of the reserve, although these boundaries have been clouded by clearing for plantations of eucalyptus, mainly *Eucalyptus pilularis* (blackbutt) and *E. grandis* (flooded gum). You can see these plantations, which were established in the 1950s and '60s on the Whian Whian forest drive, and the Gibbergunyah Range Road, which leads to the Reserve. The Whian Whian provenance of blackbutt is one of the best in the east coast of Australia for growth rates.

Rocky Creek Dam

Adjacent to the Big Scrub Flora Reserve and Nightcap National Park is a large area of ex-dairy farm that has been turned over to public purposes. It is now owned and managed by Rous County Council for water supply for Lismore and its surrounding villages. Prior to the establishment of the dam around thirty years ago, the area had been dairy farm for at least fifty years, and prior to that a mixture of rainforest and eucalypt forest with rainforest understorey covered the site. The need to convert an ex-dairy farm to a form suitable for a water catchment, together with the advantageous position of the Rocky Creek Dam site with respect to seed supply, stimulated the ground manager of the site (Ralph Woodford) to engage in a combination of activities directed at restoring forest cover while providing for recreational opportunities. The ground works since the establishment of the dam have fallen into three major categories, all focussed primarily on optimum management for a good water supply. These are: (i) recreation and picnic facilities; (ii) regeneration of the original rainforest; and (iii) timber plantings.

The site is at an elevation of 200 m above mean sea level, the average annual rainfall is 1802 cm, with a semi-monsoonal climate with summer rains and a drought in spring. The average monthly temperature is 17.5_C, with a daily average maximum of 28.7_C and minimum of 4.7_C. The soil is predominantly ferralsol (krasnozem; Northcote Gn 3.11) derived from basalt, the product of the Mt Warning volcanic complex which was active around 20 million years B.P. These soils are acidic, freely-draining, and bind phosphorus strongly in insoluble combinations with iron (Nicolls and Tucker 1956). After many years of dairy farming they are characteristically depauperate in nitrogen and organic matter. Mean values of topsoil carbon at Rocky Creek Dam between 3.0 and 5.0% (60 tonnes ha⁻¹) are in the low range of those recorded in other parts of Australia and very low when compared with data for subtropical rainforest (Specht 2000, Specht and West 2002). These soil conditions potentially pose considerable problems for regeneration and re-establishment of the original rainforest cover.

Rainforest regeneration and revegetation

The natural regeneration of subtropical and tropical rainforests is centred around the creation of gaps. Because of the high canopy cover of the closed rainforest community, the availability of light at ground level for establishment and growth of new species is the major limiting factor in the replacement of old individuals with new stock. The gaps may range from a small opening created by a branch falling, to a gap created by a tree fall (complexed by the network of lianes common in large overstorey trees), to much larger gaps created by cyclones. Cyclone gaps are less common in subtropical rainforests than tropical, but are a significant factor nevertheless. The range of niches provided by the variety of gap-types results in opportunities for a large number of species, and the species richness of the subtropical and tropical rainforest is the highest per unit area of any terrestrial vegetation type in Australia.

The species which occupy the rainforest are highly attuned to the opportunities provided by gap formation, and ecologists have attempted to categorise species types which are variously able to take advantage of the variety of gaps. These species-types fall nicely into linear successional theory, from large-gap specialists (fast-growing, light-demanding, short-lived, nitrate-users) to small-gap specialists (slow-growing, shade tolerant, long-lived, ammonium-users). The combination of gap-type, age of gap, and specialised species results in the mosaic species distribution and age-class pattern of the rainforest.

When dealing with the modified landscape which we see around us at Rocky Creek Dam, it is important to

define the terms commonly used to distinguish the restoration activity. *Regeneration* is a term often used to refer to the internal process of rainforest self-repair and potential for expansion of forest onto cleared sites, formerly covered with rainforest vegetation. *Restoration* is an activity that is used to facilitate that process when the forest is in a damaged state. *Revegetation* refers to the re-establishment of forest cover on cleared rainforest sites. The aim of all these activities is to restore a degraded rainforest area or to establish a rainforest area, so that it reflects the species diversity, abundance and community structure that occupied the area prior to a disturbance. Initial attempts at rainforest revegetation and restoration tried to mimic the natural succession process observed from the large gap, but this linear approach has been modified in recent years.

Both regeneration and revegetation activities can be observed at Rocky Creek Dam. Much of the area was cleared kikuyu (*Pennisetum clandestinum*) paddock and most of the area has had to be revegetated. If not actively managed, either for grazing, cropping or for forest establishment, the pastures are quickly colonised by the exotic woody-weed *Cinnamomum camphora*. Ralph Woodford has roughly divided the area revegetated to date into three: (i) the area closest to the intact rainforest on the far side of the spillway, (ii) the area in between near the creek, and (iii) that in the picnic area. The area of the site between the entry and the edge of the Dam has been revegetated in small clump plantings of local species which provide shelter and privacy for visitors as well as educational opportunities. Ralph has endeavored to ensure that these areas are decorative. Since planting, the management of these areas has consisted largely of the removal of colonising weeds and encouragement of self-seeded individuals. Near the spillway a slightly less artificial revegetation has proceeded, taking the form of *assisted regeneration*, rather than extensive planting. Although planting has occurred, this area is closer to the natural seed source, and Ralph has relied on seed recruitment to develop much larger clumps than in the picnic area. He has aggressively culled any exotic species, and the lack of such attention can be seen in the area on the opposite side of the Dam where camphor and lantana (*Lantana camara*) have become dominant over the same period.

The recruitment and establishment of native rainforest species in this area is similar to that documented for Lamington National Park, just over the Queensland border (Mike Hopkins 1976) where *Acacia melanoxylon* colonised abandoned paddocks first, and locked up the site for forty years before other species could establish. At Rocky Creek Dam the *Acacia* colonised the site, and provided a dominant canopy, but other rainforest species colonised underneath. This could have

been facilitated by the undulating nature of the site, the lack of fire, and the presence of mown areas allowing more light into the understorey than was the case at Lamington. The acacias died out approximately six years ago, and their dominant position has been filled by *Polyscias murrayi* (pencil cedar) a non-nitrogen-fixing early secondary stage species.

The regeneration on the far side of the spillway has followed a process closer to regeneration of a large gap with colonisation dependent entirely on seed supplies from the adjacent intact rainforest. The paddocks have been colonised, as in other parts of the area, with lantana and camphor, and as these are cleared in large patches, regeneration has been reliant on the available propagules. This has resulted in some patches of different species, the result of variation in fruiting patterns with season and year and the activities of birds.

The timber plantations

Information about plantation growth of Australian rainforest species has, until recent years, been sparse, and generally inadequate for use in economic plantings. There have been documented attempts to grow several of these timbers in plantations in the past, with varying degrees of success. Interest in the plantation potential of many rainforest species has been poor due to perceived slow early growth rates and, prior to 1982, the apparent abundance of the timbers in the natural forest. Only hoop pine is now being actively grown in plantations and harvested commercially on a moderately large scale. Although rainforest species have generally been dismissed as prospective plantation timbers, under modern growth, harvesting, and milling techniques they present a more favourable prospect than in the past (Specht 1998).

Measurements of the various plantations at Rocky Creek Dam were initially made as part of a larger study of the growth and productivity of cabinet timber species in relation to climatic, edaphic and management factors. The study of the suitability of cabinet species for plantation growth is of low national priority, and therefore reliance for information must be placed on information extracted from informal plantings, and often those more consistent with regeneration than traditional plantation design. These designs may indeed prove most suitable, but pose particular problems for analysis. The plantations at Rocky Creek Dam are probably some of the most formal of the plantations surveyed. They were established for several purposes: for amenity, revegetation, soil stabilisation and commercial timber under the direction of Mr Ralph Woodford, with assistance from Greening Australia and the Dorrroughby Field Studies Centre. Mr Woodford continues to manage the sites and they are actively pruned

and thinned. All sites were ripped on establishment to 30 cm depth and the trees fertilised with 100 g of animal manure per tree as a general site application. As with his sourcing of material for regeneration plantings, the species were propagated by Mr Woodford from seeds or seedlings collected by himself or obtained from Terania Rainforest Nursery.

The growth of the species to age four years were clustered roughly into three growth classes: high, medium and slow (Specht 1998):

- (i) **high growth class (> 1 m height growth per year):** *Acacia melanoxylon*, *Grevillea robusta*, *Elaeocarpus grandis*, and *Flindersia brayleyana*;
- (ii) **medium growth class (> 0.5 m < 1 m height growth per year):** *Agathis robusta*, *Araucaria cunninghamii*, *Flindersia schottiana*, *Gmelina leichhardtii*, and *Rhodospaera rhodantha*; and
- (iii) **slow growth class (< 0.5 m height growth per year):** *Castanospermum australe*, *Dysoxylum fraserianum*, *D. muelleri*, *Heritiera trifoliolatum* and *Toona ciliata*.

These growth classes are largely consistent with their ecological regeneration position, although the capacity of the species to grow may not always be indicated by these classifications. For example, the growth of *Toona ciliata* is greatly reduced by a tip-boring moth, although its potential and ecological position is that of a large gap regenerator. *Acacia melanoxylon* was removed from the first planting at age four due to its dominant nature, and a provenance trial was put in at the site for improved selection and investigation of its potential in monoculture. Later work by Specht, Sanders and Glencross has confirmed these classes—although there are some interesting variants. Increasingly, however, we are moving from straight growth considerations to more comprehensive assessment of the timber or restoration potential of such plantings, now we know so much more about early establishment criteria.

Carbon sequestration

Since 1998 there has been increasing on-ground interest in the potential of carbon credits and other such incentives to support restoration or other plantings. In the northern rivers the Australian Greenhouse Allies program of the Australian Greenhouse Office funded some on-ground work in the region to look at the potential for carbon trading for small-scale landholders (Specht *et al.* 2000). This entailed measurement of twenty five plantings on private land throughout the north of New South Wales with the objective of: (i) assessment of the carbon storage potential of these plantings, both above and below-ground, and (ii) determination of the opti-

mal measurement requirements for accounting. Rous County Council, with its plantings at Rocky Creek Dam, was one of the participants in this project. Five individuals of *Grevillea robusta* (silky oak) were harvested above and below ground, and allometric relationships between various components of the biomass of the species and diameter at breast height were established. This was compared with harvests of five other species throughout the region and correlation with in-situ measurements of many trees in the plantations and on farms in the region generally. This resulted in some interesting findings which greatly simplify the potentially complex measurements required for landholders (or carbon brokers) to gain credits for their restoration efforts (Specht and West 2002). Soil carbon is one of the most important components of our national carbon pool and soil carbon is very easily lost under cultivation. This is a major factor when considering the carbon sequestration potential of a site. The plantings at Rocky Creek Dam formed a very important component of the study, and it appears that on ex-rainforest land there can be a quite rapid contribution by trees to soil carbon in contrast to that predicted on similarly modified land in other, lower rainfall areas. Return of carbon to the soil after cultivation for tree planting has been predicted to take more than 40 years, largely defeating the benefits of planting in the first place. Here, however, the times were much shorter.

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A Teak-based Multistoried Agroforestry System

By

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(Please note: The following article is from *Teaknet Newsletter No. 32, 2004* and is reprinted with permission of U Saw Eh Dah, Coordinator (Editor) of TEAKNET, Forest Department, Bayintnaung Road, West Gyogone, Yangon, Myanmar.)

The ITTO Project PD3/98 Rev 1(F) 'Teak-based Multistoried Agroforestry System: An integrated Approach towards Sustainable Development of Forests' had been implemented by the Forest Department of Myanmar for two and a half years (April 2001 to September 2003) to help restore the productivity and ecological balance in the degraded areas at the fringe of the natural teak bearing forests in the Bago Yoma in Myanmar.

The project strived to achieve progress towards sustainable forest management through the establishment of plantations of teak mixed with other species of high economic value. Much effort was also made to establish cooperation among the Forest Department, other related agencies, the public sector and the local communities.

Teak-based multistoried plantations integrated with other suitable species were established with the application of agroforestry to enhance site value and to generate early economic returns. Due consideration was placed on the selection of tree species from both ecological and economic stand points. In an attempt to minimize the monocultural impacts natural teak associates with high commercial value such as *Xylocarpus* and *Pterocarpus marocarpus*, multipurpose trees like rubber, *Cassia siamea* and Kapok (*Ceiba pentandra*), and fruit trees such as Cashew and Mango were interplanted with teak with different combination, spacing and design. The associates, apart from having high economic potential, were meant to improve soil nutrient and generate additional income to attract the interest of the participating local communities.

Agricultural crops such as mung bean, green gram, sesame, pigeon pea, maize, beans, paddy, pineapple and some herbal and medicinal plants were also planted in

different agroforestry designs to induce early economic return and increase the active participation of the local communities. The project was, to an extent, research oriented and the planting of trees of both commercial and local importance, or fruit trees was done in accordance with experimental designs adopted by the project.

The project met with little success in the initial year with insufficient cooperation and participation of the local communities. This was due to their lack of awareness of the opportunities written down for them in the Community Forestry Instructions (CFI) of 1995. Better extension services on the part of the project staff greatly raised their awareness of such opportunities and the fact that what had been written in the instructions were actually practised on the ground. This and the incentives of the early returns from the cash crops had greatly accelerated their participation resulting in better performance of the plantations in the subsequent years. Such cooperation was further strengthened through the formation of users' groups and issuance of certifications to practise community forestry (CF) on lands with a 30-year lease which would be extendable in accord with the performance of the lease holders and their will to continue in the CF process. An Income Generation Group had also been organized among the forest plantation workers with the establishment of a revolving fund and credit system to relieve the participating farmers of their financial difficulties and give them a good start in securing seeds and fertilizers for their crops in the initial stage of their involvement.

In accordance with the objective of the project teak constituted 50% of the total tree species planted while the composition of the remaining half was equally shared between the selected commercial hardwoods and the fruit trees and cash crops. Teak, being planted in its natural habitat of the Bago Yoma, grew remarkably well. The climatic and edaphic factors were favorable and the life-long experience of FD staff in the establishment and conservation of teak plantations could also be attributed to the satisfactory performance of the plantations. The application of agroforestry and the participation of the local communities were very supportive in that the planted trees also receive care and tending as the agricultural crops were taken care of. Mixture with the appropriate tree associates would greatly reduce pest and disease occurrences as it would prevent erosions and improve the soil conditions.

It is expected that the project will be the forerunner of a system that can be generally adopted to reclaim and rehabilitate the degraded areas at the fringe of the Bago Yoma to retain its status as the legendary home of the best teak.

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mum growth and form. He explained the term canopy shy species, how these species, such as Queensland Maple would stop growing if their canopies were touching. This is unlike the emergent species such as Silky Oak, which are able to push through tree canopies without a big slow down of growth.

Kevin Glencross of Southern Cross University spoke about his research into the quality of young cabinet timber plantation trees. He is particularly focused on the faster growing species such as Silky Oak and Blue Fig. He has been taking core samples and felling some 10 year old trees in select plantings from north Queensland to northern NSW. His work will be completed in September but early finds show that the quality of the young wood is good and suitable for furniture products. Some of the trees however show defects due to bad or inadequate pruning. He showed the group a number of Blue Fig planks with knot markings in them running deep into the heartwood resulting often in second rate lumber.



Kevin Glencross revealing defects in 12 year old Quongdong

The final site to be visited for the day was at Rosebank, a 12 year-old well managed mixed species plantation at the Cutting Edge Nursery on Greg Lascelle's property, discussion centred around stand management & harvesting. Greg had been pruning

the stand on a regular yearly basis resulting in clear trunks 6-8 meters high and good form in most of the trees. Kevin had felled a number of Silky Oak and Blue Fig and pointed out the difficulty of felling select trees without damaging those remaining. Again defects were evident where fungus entered the pruning wound.

All appreciated the day and growers left enthused by what they had seen and keen to put what they had learnt into practice on their own properties.

Martin Novak

TIMBER

Phillip and Marge Flanagan of Marom Creek Road, Meerschaum Vale (Phone 6683 4213) have timber available.

It can be accessed by heavy vehicle in dry weather. It has cost \$1,300 to have the tree felled and any offers for milling will be accepted. The sizes are:

<u>Circumference</u>	<u>Length</u>
70-75cm	2m
48cm	1.5m
46cm	3m
44cm	1.5m
42cm	2.4m
38cm	1.7m
36cm	2.3m
35cm	1.8m
31cm	2.9m
30cm	1.5m
26cm	3m

WALLABY TRIAL

Introduction

The Swamp Wallaby (*Wallabia bicolor*) is the most widespread kangaroo species occurring in disturbed areas of the Byron Shire. Although not recorded on the study site, Red Neck Wallabies and Red Neck Pademelons are other local species of macropod which eat shrubs and trees¹.

Swamp Wallabies browse on newly planted seedlings as well as established trees and feed mainly on shrubs and bushes rather than grass¹. Swamp Wallabies usually eat the new growing shoots of plants; however, during dry times when there is less food available, the animals eat the bark, which often ringbarks and kills small trees. The Swamp Wallaby population in the local area is increasing due to creation of additional habitat through active restoration and natural regeneration of native and exotic species in areas previously used for grazing.

A significant amount of extra labour, materials and money is needed to reduce the destructive effect of wallabies in regeneration and farm forestry plantings.

Methods

The results are from 3 sources of information:

(1) A planting trial to determine species of plants that wallabies do not eat.

The planting trial started in July 2003 and 50 species of endemic trees were planted. The plants were checked several times over 6 months and as plants were eaten by wallabies the severity of wallaby attack was recorded. The damaged trees were guarded with wire netting to prevent further browsing.

(2) Assessing established plantings that used different wallaby deterrence and exclusion techniques.

This involved discussing the advantages and disadvantages of various protective measures. They fell into 2 categories: physical barriers (tree guards and fencing) and chemical applications for foliage protection or deterring wallabies (spraying additives to plants which changed the texture or taste of the leaves and chemical and homeopathic deterrents).

(3) Land owners and LandCare members.

This involved a survey of landowner opinions and ex-

perience. Through this study many different opinions and theories were discovered. It should be noted some of the information below is based on personal observations and hypothesis rather than proven facts.

Results and Discussion

Planting trial and land owner feed-back.

The browsing trial showed that over time most plants species are eaten by wallabies. Although the data were collected to show the level of browsing and the preference for the species attacked first, the results only list the species wallabies did not eat. The reason for this was the design of the experiment biased the results. Once trees were grazed they were guarded and this then increased the chances of unprotected trees being browsed. In field situations, wallabies eat most plant species. This is confirmed by observations that during dry times when less food is available, wallabies eat previously untouched trees and cause more damage by ring barking and stripping the bark from trees.

There were some tree species wallabies did not eat and information from people indicated wallabies in the Mullumbimby Creek area never or rarely ate those species. It is assumed wallabies do not eat various species of plants due to chemical compounds in the leaves which make them unpalatable. Also, a few species of plants may be protected by their thorns. Unfortunately it appears these results cannot be extrapolated across the region. When discussing these results with land managers in different areas the plant species avoided by wallabies aren't consistent. A hypothesis for this could be plants from other areas may have different provenance and phenotypes and therefore different chemical composition, amounts of trace elements and nutrients of the leaves. Alternatively different environmental factors such as soil type may again alter the chemical composition of the leaves. Another point to note from the results is that several of the plants not eaten by wallabies in this study are closely related or from the same genus (eg *Polyscias* species, *Stenocarpus* species and several species in the family Pittosporaceae).

Physical exclusion and deterrence measures.

Many different techniques have been developed to protect trees from wallabies. However, it was decided by several people that the best method for large scale regeneration and tree planting is to construct perimeter fencing. If you are going to install exclusion fencing, consider the impact on limiting the movement of other fauna species including bandicoots, pademelons and

echidnas. The most effective fencing used was 1.2 metre high Waratah Dingo wire or the equivalent. This hinge wire (similar to sheep or pig wire) comes in various gauges and hole sizes and is graded with the rectangles being smaller at the bottom and larger at the top. The hinge wire was wired to star pickets (starlite type pickets were preferred as they are lighter than standard star posts). The starlite pickets are not as strong as conventional star posts but are sufficient in areas without cattle. Depending on terrain and stock pressure the posts were around 4 metres apart. If needed the fence can be pegged down to the ground or logs used to fill holes where the ground level is not even. Be aware to not put the fence on a steep slope where wallabies may be able to jump over from the upslope side. Although exclusion fencing is an expensive outlay, it is cheaper for larger areas per tree than tree guards. Another advantage of fencing is that it protects natural regeneration as well as allowing native seedlings to establish throughout your planting. (See Appendix 1 for prices and comparisons with other techniques.)

Wire tree guards ended up being more expensive and time consuming per tree in larger plantings. They are good for protecting a few scattered planted paddock trees. The best mesh was a 5cm hex that was 1.2 metres. Wallabies can't get their mouths through the mesh holes to eat the trees. Wire guards are usually made with a circumference of 1-1.2 metres. However, some tree species, such as Brown Kurrajongs and Cheese Trees, may need larger diameter guards as they have a spreading habit at an early age and can grow through the guard. If they grow through the guard the exposed branches are eaten by wallabies or the guard needs to be cut away from the tree to remove it. It was found that one hard wood post (1 inch square tomato stake) was sufficient to support each guard if it was woven through the guard 3 times.

Plastic guards, such as those used for vineyards can come in lengths of 92cm or custom made to size. Wallabies will browse the tops out of the 92cm high guards. Their main fault is they are not suitable for rainforest trees as they are too narrow, but they can be used on eucalypts, acacias and casuarinas. However, they cause the tree to grow up fast, and not being able to move in the wind, the plant doesn't develop strong stems and stabilising roots. The trees usually need to be staked once the guard is removed so they don't fall over. The plastic guard should last long enough for the tree to establish but is not usually re-useable.

A number of products are on the market to deter animal browsing. Some home made concoctions include chilli,

garlic or tobacco sprays, or sprays to stick metal filings on to the trees. Although not used in this trial one effective commercial deterrent used in plantation establishment is WR 1 (Wallaby Repellent 1)². It is an egg-based solution sprayed onto seedlings. The main drawback is these repellents do not protect the new growth unless constantly re-applied. The WR 1 product lasts for 6 - 8 months or longer if a thicker paste is made with the powder^{3,4}. Other solutions may not last as long or after rain. Painting the stems with paint and sand mix has been reported to prevent wallabies from ring-barking trees.

As of yet I have not received positive feedback from people trialling homeopathic sprays. Human urine and dog urine have been reported to deter wallabies from certain areas, but this is not the case on my own property as the wallabies do not appear disturbed by our presence and urine.

Here are some other suggestions on wallaby browsing:

Leave some weeds around unprotected trees to help hide them from wallabies. Alternatively plant into thickets of Lantana, Native Raspberry or Farmers' Friends when in fruit.

Wallabies do not eat Bush Tobacco so you can use this weed species to help obtain site control. The Bush Tobacco will die out after a few years and new seedlings will not emerge when the regenerating canopy shades it out.

If you come across species of plants wallabies appear not to eat, try planting other closely related species.

The author and other regenerators are always interested in finding out more information to reduce time and costs involved with protecting areas from wallaby damage. The author can be contacted by email if you have any ideas, suggestions or questions.

References

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2. Greening Australia, <http://www.greeningaustralia.org.au/NR/rdonlyres/D115CA61-537F-4B8E-A44B-E4853C5ACFAA/1001/SECTIONAPART4.pdf>
3. Pers.comm. Hank Bower, Byron Shire Council
4. *What Can We Do About Wallabies*. Matt Armstrong, Agroforestry News Autumn 2000.

Acknowledgements

This work would not have been possible without the support of the Mullumbimby Creek/Brunswick Valley LandCare Group, and all the other people who have assisted by giving information. In particular I would like to thank Joanne and Brad Green, Michelle Gurton and Hank Bower for all the advice and knowledge they shared. I also acknowledge the support of the Natural Heritage Trusts Envirofund.

APPENDIX 1 Material costs (March 2004)

100m roll Dingo wire \$160
 168cm Starlite pickets \$4 each
 50m Heavy duty hex mesh \$150
 Hardwood stakes \$0.50 each
 Treemax plastic tree guards \$0.60 each
 Ken's Vine tubes (900mm high) \$1.00
 Fencing, including posts, \$2.60 per metre (star pickets at 4 m intervals).
 Guard and stake \$3.50 each.
 (Although cheaper mesh can be bought for the tree guards it was found to not hold its shape, and unless staked with several posts can be pushed in by wallabies trying to get to the plant.)

Examples:

A 9m x 9m planting at 1.5m spacing (49 trees)
 All trees guarded = \$171.50
 36m perimeter fence = \$93.60

A hectare random planting (100m²) at 1.8m spacing (3,600 trees)
 All trees guarded = \$12,600 (\$3.50 per planted tree)
 50% trees guarded = \$6,300 (\$1.75 per planted tree - 50% of planting with trees wallabies are found not to eat)
 400m perimeter fence = \$1,040 (\$0.29 per tree)

The larger the area fenced, the cheaper price per tree. This does not include labour costs - fencing is much more labour effective than constructing tree guards.

Dave Rawlins
Brunswick Land Care Co-ordinator
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SPECIES USED IN THE PLANTINGS

Genus	Species	Common Name	Growth Form
Alocasia	brisbanensis	Cunjevoi	Understorey
Alpinia	caerulea	Native Ginger	Understorey
Alyxia	ruscifolia	Prickly Alyxia	Shrub
Castanospermum	australe	Blackbean	Tree
Cordyline	petiolaris	Broad-leaved Palm Lilly	Shrub
	rubra	Red fruited-Palm Lilly	Shrub
	stricta	Narrow-leaved Palm Lilly	Shrub
Crinum	pedunculatum	River Lily	Understorey
Dianella	caerulea	Blue Flax Lily	Groundcover
Dysoxylum	fraserianum	Rosewood	Tree
Melicope	elleryana	Pink Euodia	Pioneer Tree
Flindersia	schottiana	Cudgerie	Tree
Harpullia	pendula	Tulipwood	Tree
Gmelina	leichhardtii	White Beech	Tree
Hymenosporum	flavum	Native Frangipani	Tree
Tripladenia	cunninghamii	Kreysigia	Groundcover
Lomandra	spp	Mat Rush	Groundcover
Mallotus	discolor	Yellow Kamala	Tree
Melia	azaderac h	White Cedar	Tree
Pittosporum	multiflorum	Orange Thorn	Shrub
	revolutum	Hairy Pittosporum	Shrub
	undulatum	Sweet Pittosporum	Shrub
Polyscias	elegans	Celery Wood	Tree
	murrayi	Pencil Cedar	Tree
Stenocarpus	salignus	Scrub Beefwood	Tree
	sinuatus	Firewheel Tree	Tree
Syncarpia	glomulifera	Turpentine	Tree
Synoum	glandulosum	Scentless Rosewood	Tree
Toona	ciliata	Red Cedar	Tree

Risk Management for Farm Forestry:

Tips for farmers

by A. Stewart.

This article was sent to us by Rowan Reid of Melbourne University, many of you may know him through the Master Tree Growers Program. He is also editor of the Agroforestry News copies of which can be obtained through SFFA by contacting the office.

The article is hosted on www.overstory.org a site well worth visiting for all farm foresters.

THE OVERSTORY #151--Risk Management for Farm Forestry: Tips for farmers by A. Stewart.

Contents:

- : INTRODUCTION
- : NETWORK: INCREASE YOUR KNOWLEDGE
- : SELECT A LOW RISK SITE FOR YOUR TREES
- : USE YOUR AGRICULTURE TO REDUCE YOUR FORESTRY RISKS
- : AIM FOR A QUALITY PRODUCT SUITED TO MANY BUYERS
- : KEEP YOUR OPTIONS OPEN AS LONG AS POSSIBLE
- : KEEP AN EYE ON YOUR TREES AND GOOD MANAGEMENT RECORDS
- : TREAT THE TIMBER AS A BONUS
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- : ABOUT THE AUTHOR
- : WEB LINKS
- : RELATED EDITIONS OF THE OVERSTORY
- : PUBLISHER NOTES
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INTRODUCTION

Plantations are variously susceptible to such risks as drought, pestilence, vermin, disease, fire, flood and wind as well as poor management and neglect. Even if they are well managed and grow well there are still

market risks. Fortunately, farmers are well placed to minimise risk by reducing costs and carefully designing their forests so as to capture multiple benefits. Good design can provide real benefits in the short-term which make waiting for the trees to mature much more enjoyable and far less risky. Below are some of the ways farmers can 'insure' against risk associated with growing trees for timber - while saving on the premiums.

NETWORK: INCREASE YOUR KNOWLEDGE

Develop and maintain knowledge about farm forestry in your area including the available markets. Learning from others allows you to adapt their experience to suit your own circumstances and ensures that you have a clear vision of what you are trying to produce. It also provides the opportunity to avoid making the same mistakes yourself.

A useful means of exchanging information and discussing ideas with others is via agroforestry and farm forestry networks. Networks combine landholders, industry and government people interested in agroforestry. Collectively, networks produce and share information providing a link into what is happening in other areas. If your area doesn't have a network, start one.

SELECT A LOW RISK SITE FOR YOUR TREES

Site selection includes considerations of soil type, climate, rainfall, topography, alternative land use options, adjacent land uses and access for harvesting. Clearly some sites, such as those close to roads or native forest, are at greater risk of fire than those surrounded by summer crops or grazed pastures.

Land with little or no value for agriculture may be quite suitable for trees. Alternatively, land fenced out from erosion control or shelterbelts may be ideal for timber production. Using such land reduces economic risk by reducing the opportunity costs of lost agricultural production. In fact, most farmers identify as much as 10% of their farms that can be planted to trees with no loss of agricultural production.

Roads and creek crossings required for extracting logs can be expensive. Small areas or mixed species planting are more expensive to harvest than large areas. The more expensive the harvesting costs the greater must be the value of the product if harvesting is to be viable. Log size is the key. Research suggests that small scale manual harvesting is only likely to be viable if tree diameters are large (say over 45 or 50 cm).

USE YOUR AGRICULTURE TO REDUCE YOUR FORESTRY RISKS

The simplest thing a farmer can do to reduce the fire risk is to graze in and around their plantations or grow summer crops beside them. By using (or adapting) their existing equipment, farmers can reduce the costs of establishing and managing their forests. Those farmers with employees may even find that forestry work provides an opportunity to keep their workers fully engaged during the quiet times or when waiting for other jobs to start.

AIM FOR A QUALITY PRODUCT SUITED TO MANY BUYERS

To attract market interest farmers must be able to differentiate their product from that available from native forests or industrial plantations. The most effective way is to ensure your trees best match the market specifications. For sawlogs this may mean minimising defects (knots, gum veins, bends, end splits and other timber distortions) and maximising log diameter-within limits.

High value logs can also be transported further. The costs of harvesting and transport can make a standing tree worthless for firewood, chip or pulp markets at more than 200 km from market whereas high quality sawlogs may still be valuable at more than 400 km. This opens up many more buyers and the opportunity for farmers to sell into more competitive markets.

KEEP YOUR OPTIONS OPEN AS LONG AS POSSIBLE

When starting out it is hard to predict which species or provenance is going to be the best for you and your site. This is especially important if the soil varies over the area or if little is known about which trees produce the best products. Rather than taking a stab and picking just one species or provenance it may be worth planting a mixture. When it is time to thin, you will be able to keep the best performers and cull the rest thereby putting off the tough decisions for 3 or 4 years.

Another way of keeping your options open is to aim to produce a product that is suited to more than one market. A forest managed for sawlogs can still be harvested for pulp but the reverse may not be so.

KEEP AN EYE ON YOUR TREES AND GOOD MANAGEMENT RECORDS

Farmers are able to keep an eye on their trees. Problems caused by pests, wandering stock or disease can

be spotted early. Written records documenting all stages of management will help verify past management and the quality of your stand when the time comes for marketing. Buyers may want to know the genetic origin of the trees or the thinning and pruning history. They may also have concerns about any hidden defects caused by fire, disease or nails. You can allay their fears by providing a documented history of the stand including dated photographs. The information will also allow you to learn from your own experience.

TREAT THE TIMBER AS A BONUS

What if there is no market when your trees are mature or the price being offered is too low? If your trees are providing other benefits it may not matter. As farmers we are able to capture a wide range of environmental, agricultural and aesthetic benefits from our trees. We also have sites on our farms where we need trees. Having built the fences and planted the trees the only additional cost required to make the trees commercial is the management. Compared to timber investors who are dependent on receiving a commercial return that pays for the land and all the management costs farmers can avoid most of the risks by integrating their trees into their farms and ensuring they get a range of benefits along the way.

ORIGINAL SOURCE

This edition of *The Overstory* was adapted with the kind permission of the author from the original:

Stewart, A. 2003 Risk Management for Farm Forestry - Tips for farmers.
Agroforestry News Autumn 2003 - Volume 12, Issue 1.

For more information about the excellent periodical *Agroforestry News*, visit:
<http://www.agroforestrynews.com.au/>

ABOUT THE AUTHOR

Andrew Stewart and his wife Jill work and manage the family grazing property of "Yan Yan Gurt West," situated in southern Victoria, Australia. The property has integrated forestry with grazing enterprises. Andrew is coordinator of the Otway Agroforestry Network and has worked with the network since its inception ten years ago. Andrew is also the Victorian Farmers Federation Farm Forestry Development Officer. Andrew has a Bachelor of Agricultural Science, a Diploma of Education and a Graduate Certificate of Forest Science (Farm Forestry).

WEB LINKS

The Australian Master TreeGrower (MTG) Program is an educational program for landholders interested in the development of farm forestry:

<http://www.mtg.unimelb.edu.au/>

University of Hawai'i's College of Tropical Agriculture and Human Resources' Hawai'i Forestry Extension has extensive resources for farm forestry:

<http://www.ctahr.hawaii.edu/forestry/>

Mississippi State University Extension Service offers "Forest Management Alternatives For Private Land-owners" and other extension materials for prospective farm foresters at: <http://msucare.com/forestry/index.html>

New Zealand Farm Forestry Association - A Network of Successful Tree Growers serves members throughout New Zealand: <http://www.nzffa.org.nz/main-p.html>

Australian Rural Industries Research & Development Corporation JOINT VENTURE AGROFORESTRY PROGRAM has a large amount of specific information for farm forestry:

<http://www.rirdc.gov.au/programs/aft.html>

Irish Forest Service The Farm Forest is a step-by-step guide for farm forestry: <http://irishforests.com/farm/>

RELATED EDITIONS OF THE OVERSTORY
The Overstory #148--Markets for farm forestry products and services

The Overstory #121--Getting Started in Farm Forestry

The Overstory #112--Farm Forestry Extension

The Overstory #98--Integrating Forestry into Farms

<http://www.agroforestry.net/overstory/overstory98.html>

The Overstory #88 - Revegetation Planning for Farm Forestry <http://www.agroforestry.net/overstory/overstory88.html>

The Overstory #73--Buffers, Common-Sense Conservation <http://www.agroforestry.net/overstory/overstory73.html>

The Overstory #67--Optimising Commercial Timber Potential for Farm Forestry <http://www.agroforestry.net/overstory/overstory67.html>

The Overstory #59--Choosing Species for Timber Production and Multiple Benefits <http://www.agroforestry.net/overstory/overstory59.html>

The Overstory #56--Integrating Understory & TreeCrops <http://www.agroforestry.net/overstory/overstory56.html>

The Overstory #48--Farm Forestry <http://www.agroforestry.net/overstory/overstory48.html>

The Overstory #36--Silvopasture <http://www.agroforestry.net/overstory/overstory36.html>

The Overstory #32--Multipurpose Windbreaks <http://www.agroforestry.net/overstory/overstory32.html>

FROST RESISTANCE GUIDE

By Mark Dunphy

(The following article is reproduced from the Big Scrub Landcare Group Newsletter)

This list is for trees planted 2 to 6 months before frosts. Tree heights must reach not less than 300mm, with a stem diameter of not less than 10mm. For trees greater than 300mm frost resistance will increase.

Severe frost (less than -5°C), repeated and open to early morning sun:

Sally Wattle (*Acacia melanoxylon*)

Corkwood (*Duboisia myoporoides*)

Silky Oak (*Grevillea robusta*)

Water Gum (*Tristaniopsis laurina*)

High frost (-2°C to -5°C), occasional and open to early morning sun:

Red Ash (*Alphitonia excelsa*)

Hard Quandong (*Eleocarpus obovatus*)

Native frangipani (*Hymenosperum flavum*)

Sweet Pittosporum (*Pittosporum undulatum*)

Moderate frost (0°C to -2°C), occasional and open to early morning sun:

Creek Lilly Pilly (*Acmena smithii* major and minor)

Common Acronychia (*Acronychia oblongifolia*)

Brush Ironbark (*Bridelia exaltata*)

Brown Kurrajong (*Commersonia bartramia*)

Sandpaper Fig (*Ficus coronata*)

Teak (*Flindersia australis*)

Cheese Tree (*Glochidion ferdinandi*)

Umbrella Cheese Tree (*Glochidion sumatranum*)

Guioa (*Guioa semiglauca*)

Foambark (*Jagera pseudorhus*)

White Cedar (*Melia azederach*)

Crow's Ash (*Pentaceras australis*)

Hollywood (*Pittosporum rhombifolium*)

Firewheel Tree (*Stenocarpus sinuatus*)

Red Cedar (*Toona ciliata*)

Weeping Lily Pilly (*Waterhousia floribunda*)

Slow species - moderate to high frost tolerance; however they will take several years to be large enough to tolerate severe frosts:

Hoop Pine (*Araucaria cunninghamii*)

Twin-leaved Coogera (*Arytera distylis*)

Red Kamala (*Mallotus philippensis*)

Plum Pine (*Podocarpus elatus*)

Steelwood (*Sarcopteryx stipata*)

Francis's Water Gum (*Syzygium francisii*)

Blunt-leaved Steelwood (*Toechima dasyrrache*)

North Coast Forest and Wood Festival ????

The SFFA committee is working towards the staging of a **North Coast Forest and Wood Festival** for November next year. However in order for this to happen we will need the support of all our members as well as that of government, local business and the local community. Below is the plan as it stands to date. We are keen to get your response to this plan and consider how you can help.

The association held two such successful events, although on a smaller scale back in 1993 and 1995. Since then many of you have suggested that we stage this type of event again. Finally we have found the interest and energy amongst the committee members to have a go.

The benefits of such an event clearly would flow to all those involved in forestry and wood work as well as to the local community and beyond. However to be successful we will need your support so let us know of how you and others can help.

As a lead up to this event SFFA is joining Lismore's **Herb Festival**, Lismore City Council and Especial Events on the 20 & 21 August this year and staging a **Mini Forest and Wood Expo**. Included will be displays by world renowned Robert Dunlops, Tony Kenway, Grant Vaughan and Don Metcalf as well as that of Southern Cross University's Forestry School, Eastern Forest Nursery and SFFA. So come and join us at our Marquee and have a look and chat about next years event.

Below is an outline of the North Coast Forest and Wood Festival draft plan:

Venue :Lismore

Festival start date: Saturday: 4/11/ 2006 finish:

Sunday: 5/11/ 2006

The purpose of the **North Coast Forest and Wood Festival** is to provide three (3) major themes:

Theme 1 :The Subtropical Farm Forestry Association has recognised the need to educate the general public about sustainable use of native rainforest timbers

- To provide educational resources and information both on historical and current research information, for the community of the Northern Rivers on farm forestry practices e.g. planting of trees, sustainability, past history (early wood cutters in the region) and future directions.

- To promote the sustainable usage of native and weed timbers and forestry as a viable alternative use in the

region e.g. furniture, flooring, ornamental displays & craft etc.

- To share information on forestry issues and strategies currently being undertaken in the region e.g. perennial tree crops, sustainability, economic viability and increased employment.

- To showcase innovative models of farm forestry in the region e.g. commercial, ecological, within small and large landholdings

Theme 2 : The Subtropical Farm Forestry Association has recognised the need to show case and educate the general public about the products of the rainforest

- To promote the products of the forest and to embrace agricultural enterprise within our region, such as coffee growers, macadamia plantations, organic based growing; indigenous plants such as wild bush foods eg Davison plums, fingers limes, and lemon myrtle.

- To show case local and international renowned wood artisans in the North Coast region. To increase local community awareness of The North Coast's uniqueness in the sense of residing locally, many world-renowned woodworkers.

Theme 3 :The Subtropical Farm Forestry Association has recognised the need to promote to the general public, the art of caring for forest timbers

- To promote farm forestry and eco-tours, land care information, native plants and threatened native species both plants and animals, weed and land care information, demonstrations and workshops, heritage woodcrafts and bush furniture. As well as promoting the local regions achievements in terms of growing forests and high value timber.

- The North Coast Forest and Wood Festival will be an annual ongoing event. The Subtropical Farm Forestry Association has made a commitment to the ongoing fundraising and sustainability of the Festival. There is strong community support for the festival as demonstrated by the many letters of support from both community groups, government organizations and private businesses.

Target Audience include:

- Rural farm foresters and hobbyist farmers

- General public interested in art and forest products

- Professional associates eg polyculture, agroforestry, Southern Cross University

- Private businesses eg plantation businesses, farm machinery and tools, timber milling etc

- University – Southern Cross University (SCU)

Lismore NSW

- Schools – high school students, TAFE students, wood hobbyists, woodwork clubs, professional wood craftsmen, furniture makers and builders.

- Bushfood producers and suppliers

- Local community and interstate visitors & tourists

- People with an interest in environmental practices

“FOREST ART – a valuable resource”

Project start date:.. Saturday 4/11/06
finish: Sunday 5/11/06

One of the key events of the festival.

‘Forest Art – a valuable resource’

Forest Art – a valuable resource presents to the community a visual feast by some of Australia leading wood artisans, ‘Forest Art – a valuable resource’ is cultural event open to all people who want to be visually stimulated by the amazing talent and creativity of our world renowned and celebrated woodwork artists. The ‘Forest Art – a valuable resource’ project is an important way of bringing the arts, audiences and whole communities together. It gives communities a creative focus, helps celebrate achievements and forge community identity, and is of significant assistance in generating increased tourism. The ‘Forest Art – a valuable resource’ project further celebrates the contribution our native rainforest timbers have made, and continue to make, to supporting life and living throughout Australia.

The North Coast of NSW is unique in the sense of having many world-renowned woodwork artists residing in our local region. The Northern Rivers has produced many internationally renowned wood artisans, that through the ‘Forest Art – a valuable resource’ Project will display a kaleidoscope of beauty and wood craftsmanship. Unfortunately these wood artisans are not well known and recognised within their local community. Lismore is proud of the achievements of these artists and ‘Forest Art – a valuable resource’ project will celebrate our artist’s achievements and provide an opportunity for these celebrated artists to share their skills and knowledge. At the ‘Forest Art – a valuable resource’ project artists and exhibitors will exhibit woodwork pieces made only from sustainable harvested local native timber species, i.e. from salvaged timbers, recycled timbers, farm forests, weed timbers, and plantations. This event is in keeping with the overall aim of the Festival, promoting sustainable usage of our precious native timbers.

The ‘Forest Art – a valuable resource’ project is broken up into the following three areas:

- 1 Geli Art Exhibition
- 2 Master Classes
- 3 ChainSaw Sculpture



1. Geli Art Exhibition: (Geli - our regions aboriginal Bungalung name for ‘wood’)

A Woodwork Art exhibition will held at the Lismore Show Grounds, Main Pavilion to show case both our local, world renowned wood artists as well as celebrated wood craftsmen’s from across Australia. Woodwork pieces will be displayed throughout the two-day Festival – North Coast Forest and Wood Festival 2006. The wood exhibition aims to attract the best woodworkers Australian wide. Four featured woodwork artists (see key creative personal listed below) will be highlighted, with a spectacular display celebrating our local talent and the combined achievements of these



Rocking Chair
bought by the
Queensland Art Gallery
1991

Robert Dunlop

**Works by
Robert Dunlop**

world-recognised artists (i.e. photographic display of artists works that have been exhibited overseas and nationally). The four artists will also submit pieces of their current work as part of the exhibition. The best wood artisans from local and interstate will be invited to exhibit several items each for display in the Geli Art Exhibition. It is anticipated that over 40 pieces will be submitted.

All wood exhibitors are expected to use sustainable harvested native timbers - from farm forestry plantations or salvaged timbers. Exhibits constructed from "weed" timbers, such as camphor laurel, and recycled timbers are also welcome.

A number of different exhibiting categories will exist such as:

- Wood hobbyists, wood work clubs
- Year 12 high school student & TAFE students
- Wood artisans
- Furniture makers(from fine furniture to bush furniture)

2. Master Classes

The four-featured wood artists will also be conducting 'Master Classes Workshops' (3 hours each) over the 2 days of the Festival.

Each master class workshop will be conducted on the Festival premises in workshop tents. Aims and Objectives will be included for each of the sessions. Practical skills will be main feature of these workshops.

- 1 Philosophy of salvaged timber - How to create a masterpiece
- 2 Amalgamation of contrasting timbers - How to create a masterpiece
- 3 Fruit Tree Timbers - How to create a masterpiece
- 4 Weed Timbers - How to create a masterpiece

These workshops will be run consecutively over the 2 days. Registration to the workshops will be required, with limited numbers of between 10 -15 participants for each Master Class. Participants will be included from the general public, woodworking clubs, woodwork hobbyists, school students, agricultural societies etc. These workshops will provide demonstrations on a number of distinctive woodcraft styles, focusing on the tools and techniques required to create masterpieces. These Master Classes provide a wonderful opportunity for local participants to gain professional development in highly specialised techniques that are rarely available in such an accessible and affordable manner. Participants will be able to learn from the knowledge, artistry, skill and talent of these four master craftspeople.

3. Chain Saw Sculpture –

‘WATCH THE WOOD CHIPS FLY’

A chainsaw artist will create magnificent carvings using a chainsaw, which has been considered in history as a weapon of mass destruction within the timber industry. The Chainsaw has in the past been regarded solely as an instrument for felling and trimming trees; the chainsaw has now become a creative tool in the hands of many carvers around the world.

This enthralling display is guaranteed to delight participants to the Forest and Wood Festival 2006.

Outline

The chainsaw sculpture artist will give visual demonstrations to the general public throughout the two-day Festival. Chainsaw sculpture is an art form that demonstrates speed and accuracy of woodcarving. The general public will be provided with an opportunity to watch an artistic transformation take place before their eyes - a piece of recycled timber to a magnificent sculpture of art.

Individual chainsaw art sculptures will take place 5 x a day (1-hour duration). 10 sculpture pieces will be presented over the 2-day festival.

Those involved to date include:

- Martin Novak SFFA President – Event Organiser Farm forestry
- David Cameron SFFA Committee Member Farm forestry
- Sara Hurren Event Manager Festivals
- Anita Mansfield Event Manager Festivals
- Graham Bird Manager EnviTE Training
- John Grant SFFA/SCU R&D
- Alex Heathwood Committee Member SFFA
- Rob Latham Ecofurniture Wood design
- John MacGregor-Skinner Northern Rivers Private Forestry
- Don Metcalf Solar Slabs Wood design
- Doland Nichols SCU Senior Lecturer Forestry Mixed species
- Greg Steel Timber Slab Factory Natural Wood
- Jerry Vanclay Prof. SCU Forestry Program Head Sustainable forestry
- Grant Vaughan Local Sculptor Wood Art
- Tony Parkes Big Scrub Lancare Chair Landcare
- Cliff Pieffer BioEnergy Alternative energy.
- Mark Jackson Carbon Pool Carbon Credits



MEMBERSHIP RENEWALS are now due

Please post cheque or money
order to
PO Box 1320 Lismore 2480

Please refer to back page
for membership prices

**We need your continued support
to survive!**

**We have many exciting plans for the
future which will benefit all members of
the Association**

A.G.M.

The A.G.M. will be held on
Wednesday September 7, 2005 at
Lismore Workers Club
commencing at 6.30 pm.
Dinner to follow at 7.30 pm at
'Fire in the Belly' Restaurant

**We hope to see many of our members at the
A.G.M. to discuss the exciting things that we
are planning for the future of the S.F.F.A.**

Agroforestry Newsletter

is now available at the SFFA office for
\$3.00 per copy, which includes gst and postage.
Limited copies available.

Contact the office for your copy.

Tree Profiles available from S.F.F.A.

Red cedar § Blackbutt § Tallowwood § Flooded gum § Spotted gum § Teak § Cudgerie § Bennetts ash §
Yellowwood § Hoop pine § Bunya pine § Rosewood § Red bean § Rusty mahogany § Sthn silky oak § Hills
silky oak § Beefwood § White mahogany § Red Mahogany § S thn mahogany § Swamp mahogany § Grey
gums § Syd. blue gum § Forest red gum § Hickory wattle § Marblewood § Blackwood § Mountain wattle
§ Blue quandong § Blueberry ash § Hard quandong § Silver quandong § Pencil cedar § Celerywood §
Ribbonwood § Deep yellowwood § White cedar § Black teak § Firewheel tree § Scrub beefwood § Prickly
ash § Nthn silky oak § Red carabeen § Rose marara § Maidens blush § Yellow carabeen § Olivers sassafras §
Rose maple § Rose walnut § Bollywood § White beech § Qld white beech § Grey Teak § Kauri pine § Brown
Pine § White Booyong § Black Booyong § Flame Tree § Camphor laurel § Jackwood § Brown bolly gum §
Red bloodwood § Pink bloodwood § Brown bloodwood § Native Tamarind § Foambark § Tulipwood §
Francis watergum § Purple cherry § Blue Lillypilly § Dunns White Gum § Gympie Messmate § Turpentine §
Creek Sandpaper Fig § Moreton Bay Fig § River Oak § Forest Oak § Swamp Oak

Most of these profiles are available in a booklet form.

Contact the office - sffa@ceinternet.com.au or 02 6628 4372.

FF Manual and Planner for Subtropical Eastern Australia, *The planner is useful in simplifying the process of preparing business plans
necessary in order to be eligible for government incentives such as the tax incentives.* **\$55.00 plus \$7.30 p & h including GST**

'Farm Forestry Seminar and Design Workshop' *Information for farmers and landholders on the growing of cabinet timber woodlots,
inc comprehensive species lists.* **\$18.00 inc p & h & GST**

'Profiles of trees for Subtropical Farm Forestry' *Information includes botanical descriptions, wood characteristics and timber value.*
\$15.00 inc p & h & GST

'Farm & Community Forestry - from production to ecology' *A seminar presented by S.F.F.A. - Selected papers.*

\$12.00 inc p & h & GST

\$48.95 inc p & h & GST

\$2.20 per copy or \$40.00 full set inc p & h & GST

Australian Timbers - Ashley Sewell.

Back copies of SFFA Newsletters .

Getting Started in Farm Forestry - AFG & DPIE .

Plantation for Australia: The 2020 Vision .

Wood & Paper Industry Strategy.

\$5.00 p & h

\$5.00 p & h

\$5.00 p & h

*Should you wish to make a purchase please forward your cheque made payable to
S.F.F.A., PO Box 1320 Lismore 2480. Allow 14 days for receipt.*

Subtropical Farm Forestry Commercial Services Listing

ACTIVITIES	BUSINESS NAME	CONTACT PERSON	CONTACT
Education & Research	Southern Cross University	Forestry Department	02 66 203 000 www.scu.edu.au
Consultancy	Wombat Soil & Environmental Surveys Pty Ltd	John Grant	66 895 596
Nursery	RJ & JJ Hibbens	Manager	66 333 252
Timber	Solar Slabs	Don Metcalfe	66 293 226
Nursery	Rosebank Organics	Manager	66 291 214
Consultancy	Bioenergy Australia Ltd	Cliff Peiffer	08 9225 7888 cliff@bioenergyaustralia.com.au
Seed Supply	Forest Futures	Peter Page	02 9342 6415

SFFA MEMBERSHIP APPLICATION FORM

Name: _____

Address: _____

email: _____ phone: _____

Cheques should be made payable to SFFA and posted to PO Box 1320 LISMORE NSW 2480

FULL TIME STUDENTS \$16.50 - INDIVIDUAL \$33 - BUSINESS \$66 - CORPORATE \$132
Inc gst

Membership renewals due 31st August each year



Membership is now due.

Please return the form below with your remittance
as soon as possible.

With thanks,

The Committee,
Subtropical Farm Forestry Association

SFFA MEMBERSHIP APPLICATION FORM

Name: _____

Address: _____

email: _____ phone: _____

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FULL TIME STUDENTS \$16.50

INDIVIDUAL \$33

BUSINESS \$66

CORPORATE \$132

includes GST

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