



**Association of
Societies for Growing Australian Plants**

**RAINFOREST
STUDY GROUP**

PO Box E327 St James NSW 2000

Newsletter No. 6

March 1988

Dear Study Group Member,

Thank you for your great forbearance in waiting for the arrival of this Newsletter. I apologize for the lengthy delay between numbers and hope that we will be able to communicate through the Newsletters on a much more regular basis.

In the preparation of material for this Newsletter I have had splendid assistance and encouragement from David Jenkinson, Marion Kearns and David Thomas. At an adhoc conference on a recent rainy afternoon we tangled with the issue of Study Group Newsletters and Study Group directions. Your correspondence and views on these matters would be most welcome. To help this discussion along we are having a casual social meeting of interested members on March 27, 1988 - see below.

These are the results of our discussions:

These Newsletters are produced to disseminate information and to discuss ideas, and will only be successful if members of the Study Group have an input by contributing material for publication. It is hoped to put together newsletters on a regular and fairly frequent basis, but to do so requires a full and regular supply of publishable material. Please write down anything you think is noteworthy about your own experiences growing Australian rainforest plants, visiting sites, conservation, politics - other members are sure to have similar interests and queries.

Our adhoc conference proposed to organize future Newsletters around particular column headings which would appear on either a regular or occasional basis and these include:

"Help Wanted" or "Problem Clinic" - requests for information or suggestions that could be answered in future editions.

"Correspondents' Reports" - contributions from members as to what is happening in their districts such as unusual events, new parks and reserves, bird/insects/fruitletting/ flowering activities, and other items of general interest.

"Interesting spots" - brief descriptions of areas that are worth looking at for their interest to the RF Study Group member.

"Meeting Places" - future events that may be of interest to members, or of general offers of assistance to members who may be visiting your area.

"On The Road" - resumes of holidays, trips or tours of distant places of interest.

"Book Reviews" - brief descriptions of publications that you feel are relevant to our activities.

"Plant of the Month" - a detailed summary of the importance of a plant, or details of how to identify particularly difficult species, etc.

"Swaps/requests/offers" - People could request surplus plants for planting projects, offer same, or swap to acquire particularly wanted plants.

"Propagation reports" - how to grow some of those difficult ones.

"Wanted Known" - anything you want to communicate.

"Associated Ecology" - plant/animal/insect associations, climatic conditions, geology, vegetation changes etc.

"Social Events" - reports of activities, meetings or other happenings and if you would be prepared to organize get togethers, field trips, assisting with projects of other members such as planting, restoration, care and maintenance of bushland or replanting - are some ideas

"Walking trails" - information/descriptions

"Bits and pieces" - anything else

Special items or one-offs could cover a particular place and be as detailed an investigation as the write up on Wingham Brush in Newsletter #1. Maybe country members could arrange a contribution from a local forester of an area within his administration. Other suggestions could be information on effective seed handling and germination techniques; construction of hotboxes, cheap glasshouse substitutes, propagation frames and other aids.

SWAP DAY - BARBEQUE - SOCIAL MEETING - GROUP DISCUSSIONS

David Jenkinson has generously offered to host a casual meeting day for members at 18 Skenes Avenue, Eastwood. .BYO food, drinks, plants, seeds and enthusiasm, and trade plants, ideas and experiences

11am - 3pm Monday April 4th Phone 85 6015

HORTICULTURE

Taronga Park Zoo gets a rainforest plantation for its tropical birds

Although rainforest plants have always been a significant component of the gardens at the Zoo, the major impetus in collective rainforest planting has been the upgrading of the Rainforest Aviary, where we have been able to display a representative collection of sub-tropical flora typically found on the north coast of NSW. This will provide a 'home away from home' for a variety of rainforest birds.

Originally planted 17 years ago with fast growing species such as *Ligustrum lucidum*, *Bambusa balcooa* and *Strelitzia nicolai*, the aviary quickly became a lush cosmopolitan jungle. Removing these 'weeds' although a time consuming job, enabled us to become well acquainted with the ups and downs of the site.

The plant material came from a number of sources. Tubestock from Terania Creek Rainforest Nursery were potted on and in six months were at a size ideal for planting out. A number of advanced plants, such as *Archontophoenix cunninghamiana*, *Toona australis*, and *Diploglottis australis* were purchased from various north coast nurseries.

We also undertook a collecting trip to Wild Cattle Creek State Forest, north of Dorrigo, where a variety of ferns, mainly *Blechnum* spp., and seedlings were salvaged from areas earmarked for logging. It also gave us the opportunity to observe at close hand the incredible diversity of the rainforest and we returned even more inspired and motivated.

Altogether approximately 580 plants and 60 species have so far been planted in the Aviary. This will be added to in the future, especially with the introduction of orchids and epiphytes. With the generous application of Dynamic Lifter, a thick layer of mulch and an automatic watering system suspended high above the ground on the supporting girders, the plants have thrived. The pink flush of new growth is now a common and reassuring sight.

The graphics for the aviary will highlight the importance of conserving our remaining rainforests. We expect that, as the rainforest grows, so will its role in educating the public, and will increase their awareness of the rich diversity and value of this precious inheritance. It certainly has had that effect on all those involved in the project.

Michael Smee, Horticulturist

Rainforest Plants in the Royal Botanic Gardens, Sydney

Many rainforest plants are grown in the Royal Botanic Gardens, Sydney. Because they are grown in accessible garden beds and are clearly labelled, one can readily observe the features of each plant and so recognize them later growing in their natural habitats.

It is well worthwhile observing the exotic- plants too because they add to one's knowledge of rainforest plant families, and often have representatives in Australia. One also learns general things about rainforest plants, their adaptations to their living conditions. It is interesting and impressive to see a mature tree of the species one has just raised from seed or bought in a small pot. As one cranes one's neck to see the top of the tree, the sheer size and grandeur of some of our native species becomes apparent, and one rapidly reduces the number of trees one had thought could be grown on a suburban block. How lucky are those members with a decent sized piece of land, especially the country members; they need not scale down their ambitions!

Seed is now available from the Gardens collected by volunteers from the Friends of the Royal Botanic Gardens, Sydney, and distributed to their members on request. This is a new service but eventually may be useful to RF Study Group members. (In the meantime they surely won't mind if the odd seed is collected from the path, one hopes.)

In the Visitors' Centre at the Gardens many helpful leaflets are available for a mere 20c each. The 'Rainforest Walk' one will be of interest to study group members. This leaflet describes a walk one may take to see as many of the NSW rainforest trees as possible in 1.5 - 2 hours. The useful leaflet gives notes on each of the tree species, mostly with information on flowering and fruiting times.

Study Group members would enjoy this walk.

Marion Kearns

SEED AVAILABILITY

Many members would be keen to obtain seed direct from those who can obtain particular species, and of course it is difficult to maintain a seed bank of those seeds that lose their viability virtually as soon as they are collected. So, direct dealing is necessary.

Can we have some suggestions and discussion of this matter - how many people would be interested in being involved in a direct swapping scheme anyway ?

(David Jenkinson)

ILLAWARRA RAINFORESTS

BUDDEROO NATIONAL PARK MINNAMURRA FALLS SECTION

The first European eyes to see Minnamurra Falls were probably those of the cedar getters. Although Red Cedar (*Toona australis*) was occasionally found in the Sydney area - such as at middle Devlins Creek in Cheltenham, and along parts of the upper Hawkesbury River - it more commonly grew in areas of better soil and/or rainfall from Milton (NSW south coast) to North Queensland.

Being close to Sydney, the Illawarra Region - which includes the Minnamurra area - was one of the first to be exploited for its valuable stand of Red Cedar.

The first recorded visit to Minnamurra Falls was in 1896 when the Hon. J. Carruthers - the then Minister for Lands - named the falls. Two years later 47 acres surrounding the falls were declared as reserve.

On 3rd October 1986 Kiama Council passed control of Minnamurra Falls Reserve to the NPWS when the reserve was incorporated into the new Budderoo National Park. This park is of approximately 5700 hectares and lies on the plateau between Macquarie Pass NP, Barren Grounds Nature Reserve and the Morton National Park. The Minnamurra Falls area (401ha) represents only a small portion of the national park and, like most of the other rainforest sections, is located in a gully and on the incised escarpment.

Budderoo NP is located 130km south of Sydney, 5km west of Jamberoo.

The rainfall at Jamberoo is 1362mm p.a. At Minnamurra Falls the rainfall is probably in excess of 1600mm owing to the uplift of rain clouds by the escarpment.

The combination of an eastern aspect, protective valley, diverse soil types and high rainfall has allowed the development of four rainforest subforms. These are:

1. Subtropical/Warm Temperate Rainforest

This occurs on the alluvial flats up to Birds Brush Track (110 -170m alt.). This subform is common throughout the east coast of NSW on soils which are too poor to support ST RF but richer than is typical for WT RF - thus allowing a mixture of both subforms to coexist. Here the soil is derived from Kiama Tuff, enriched from the interbedded volcanics above.

Other examples of this subform (named "Gully Rainforest" by George Baur of the NSW Forestry Commission) are found at Mt. Warrawalong and Gap Creek Flora Reserves near Newcastle, Bruxner Park Flora Reserve and Woolgoolga Creek F.R. near Coffs Harbour and Terania Creek in Nightcap Range National Park near Lismore.

At Budderoo National Park the subtropical species are typically: Red Cedar, Small-leaved Fig (*Ficus obliqua*), Soapy Box (*Citronella moorei*), Tamarind (*Diploglottis australis*), and Flame Tree (*Brachychiton acerifolius*). The main warm temperate species are Coachwood (*Ceratopetalum apetalum*), Sassafras (*Doryphora sassafras*), Jackwood (*Cryptocarya glaucescens*), Bolly Gum (*Litsea reticulata*), Silver Quandong (*Elaeocarpus kirtonii*) and Featherwood (*Polyosma cunninghamii*).

These species reach their known southern limit here: Native Hydrangea (*Abrophyllum ornans*), Hibiscus heterophyllus and *Helicia glabrifolia*. It is also one of the few sites where Southern Socketwood (*Daphnandra* sp.3 aff. *micrantha*) is found.

2. Riparian rainforest

"Along and overhanging the Minnamurra River there is a characteristic assemblage of species which extend at least to the top falls at 290m altitude. These include: Creek sandpaper fig (*Ficus coronata*), Brown Beech (*Pennantia cunninghamii*), Grey Myrtle (*Backhousia myrtifolia*), Water Gum (*Tristaniopsis laurina*), Brush Cherry (*Syzygium paniculatum*) and Wild Quince (*Alectryon subcinereus*)." Alex Floyd

3. Warm Temperate Rainforest

This subform occurs on the poorer soils derived from Kiama Tuff (170-220m) and the Illawarra Coal Measures (280-400m). Coachwood is dominant with Jackwood, Bolly Gum, Sassafras, Crabapple (*Schizomeria ovata*), Scentless Rosewood (*Synoum glandulosum*), Yellow Ash (*Emmenosperma alphitonioides*) and Lilly Pilly (*Acmena smithii*),

4. Dry Rainforest

Although this term is apparently self-contradictory, it describes a rainforest type usually made up of subtropical species which are growing in high rainfall areas on excessively drained or periodically dry sites, or in low rainfall areas on soils of medium to high fertility. Often this subform does not have the attractive development of moister rainforest types, being made up of numerous small-stemmed trees 5-15m high.

Dry rainforest near Minnamurra Falls occurs on very steep slopes near the upper falls on latite soil (270- 280m). Typical species are: Grey Myrtle, Red Olive Berry (*Cassine australis*), Shatterwood (*Claoxylon australe*), Veined Mock Olive (*Notelaea venosa*), Yellow Persimmon (*Diospyros australis*), Whalebone Tree (*Streblus brunonianus*), Red Ash (*Alphitonia excelsa*), Yellow Acronychia (*Acronychia oblongifolia*), Guioa (*Guioa semiglaucula*) and Black Apple (*Planchonella australis*).

Owing to the favourable conditions of climate, aspect and geology, the flora near Minnamurra Falls is unusually diverse for this latitude - boasting of 73 tree species, 29 shrub species, 85 herb species, 42 vine species and 29 epiphytic or lithophytic species. In total there are 89 fern species.

There is little wonder this area has been popular for so many years with tourists and local residents.

(Appreciation is expressed to NSW National Parks and Wildlife Service for permission to use parts of the excellent internal unpublished Illawarra report prepared by Alex Floyd in 1981.)

David Thomas

BELLINGEN ISLAND RAINFOREST

This is a remnant of the original lowland subtropical rainforest of the NSW north coast and is located within the town boundaries, on the Bellinger River.

In early 1984 a number of local residents became very concerned at the deterioration of the island, and formed the Bellingen Island Regeneration Volunteer Group - and commenced work to restore the eastern end of the site. The western end is privately owned.

Between nine and twelve members attend weeding sessions one day a week on a voluntary basis, using the proven Bradley method of bush regeneration. The only community funding to date has been a CEP grant that employed three people for six months. Degradation of the site commenced with cattle grazing activities and has been accentuated by floods, recreational activities, removal of buffer vegetation allowing wind damage - tree falls and canopy disturbance resulting in weed infestation in the disturbed areas. More than fifty species of introduced weeds are found, with Camphor Laurel (*Cinnamomum camphora*), Privet (*Ligustrum* sp.), Wandering Jew (*Tradescantia alba*), and Madeira Vine (*Anredera cordifolia*) being very common and particularly troublesome.

Native regeneration is very strong once the weeds are removed. Toona, Ehretia, *Ficus coronata*, *Dendrocnide*, *Melia* and *Pothos* are early colonisers that germinate in large numbers, Some planting has been carried out on boundaries and severely damaged spots using only local species propagated from seed collected in the area.

To date over sixty endemic trees and shrubs have been identified, twenty-three climbers and many ferns and smaller plants.

Further information on the project can be obtained from the Group at PO Box 153 Bellingen 2454.

A plant species list will be published in a future newsletter.

(David Jenkinson)

DISCOVERING NEW SOUTH WALES RAINFORESTS : A TOURING, WALKING AND CYCLING GUIDE.

Edited by Jeff Angel and others; Total Environment Centre and Rainforest Publishing Sydney 1985 ISBN 0959050701

\$10.95

This book, very valuable to all those interested in NSW rainforests, has been out for several years now, but is still worth drawing to the attention of members who may have missed it. The book starts with three general chapters on the rainforests in NSW. Chapter 4 tabulates all the rainforest areas in the state with brief summary information and maps showing their locations.

The rest of the book describes rainforests in specific areas of the state. Special geological features, flora, fauna are discussed and illustrated with maps, drawings and photographs. How best to see the areas, by car, then walking or cycling, and where to camp, are clearly explained.

The book is highly recommended for study group members.

Marion Kearns

QLD. REPORT

The following notes are from Mrs Jan Sked of the Pine Rivers Group in south east Queensland. Mrs Sked has published a lot of material on native plants including an excellent guide to establishment of rainforest plants in urban conditions.

"... we have started the Expo '88 plantings and are using mature trees (mostly rainforest species) and palms in many of the plantings. Major trees planted so far include - *Waterhousia floribunda*, *Syzygium luehmannii*, *Xanthostemon chrysanthus*, *Lophostemon confertus*, *Macadamia integrifolia*, *Ficus hillii* - plus various *Casuarinas*, *Melaleucas* and *Banksias*. The "epiphyte forest" is going to be fabulous, with masses of epiphytes, climbers and ferns from the Queensland rainforests."

"... We have three types of rainforest here in the Pine Rivers Shire [west of Brisbane - Ed.] - the subtropical rainforest of the upper slopes of the D'Aguilar Range, the lowland riverine rainforest of the valley streams and the odd patch of dry vine forest on the lower slopes. The subtropical rainforest on the ranges is reasonably well preserved in National Parks, but the other two types are gone, except for a few small, scattered remnants, mostly on private property, and so subject to the whims of the owners. I have catalogued most of the species in all the known remnants. It is distressing to see the degradation of some patches through the infestation of weed species. I have tried to interest some of the local organizations in cleaning up the areas, but so far no success. It would be a massive undertaking, but not impossible.

"... I have a cluster of *Callitris baileyi* seedlings waiting to be potted up. I collected the seed from a remnant of the Rosewood Scrub near Ipswich in southern Queensland. This small tree appears to be little known, but it is an excellent one for horticulture. I have one in the garden which is coming along nicely, although still only small and fairly slow growing. Growing in their native dry rainforest, they are very shapely small trees, reaching about 6 metres in height. According to Jones & Elliot in the "Encyclopaedia of Australian Plants", they are "restricted to the coastal ranges of north-eastern NSW and south-eastern Qld. Little known in cultivation." I have only seen it growing in the Rosewood Scrub.

ACCOMMODATION FOR VISITORS TO EUNGELLA NATIONAL PARK
in the Mackay Region: Wallaumarra Rainforest Sanctuary,
Dalrymple Heights via Mackay, Queensland . Phone 079-584558
for bookings and tariff