



ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

RAINFOREST STUDY GROUP

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" Australian Rainforests present a bewildering array of life forms and species of both plants and animals "

SUBSCRIPTIONS

Some are now due for payment, others are still overdue. A red square on your Newsletter indicates that your renewal should be paid. Several people whose subs. are well overdue have been deleted from our membership.

NEW MEMBERS

We welcome the following people to the Group and trust that much of mutual interest will be gained. I look forward to receiving items to pass on to our membership via the regular Newsletters.

Philip Baxter Kenmore. Oliver Carter Toowoomba. Beverle Croft Tyagarah. Philip Hartstein Randwick.
Nick Hockey Bowraville. Shirley Johnston Montecollum. A B Stockley Coogee. Nola Soliman Parramatta.
Stephen Tornquist Termeil. Brent & Denise Vieritz Greenbank

Full addresses will be found in the attached up to date List of Members.

STILL WANTED - A SYDNEY CO-ORDINATOR

It would assist me somewhat if I did have a contact person there. Also could I make another request for a member in Melbourne or nearby to organise a few activities to involve our Victorian members ?

NEXT NSW MEETING SUNDAY 21ST OF JUNE

Led by Robert Payne to look at Rainforest at Palmgrove near Gosford. Meet at the OLD Pacific Hwy., corner of Ourimbah Creek Rd. (just a little north of the village of Ourimbah) at 9 am. Barbecue lunch so please bring the necessaries. Robert's phone number is 043 42 3318 if you get into any strife.

BRISBANE MEETINGS

Saturday 11th July. Probably at Gatton College. Saturday 12th September. A guest speaker will be arranged. Further details will be listed in this months Qld. Bulletin or phone Ron Twaddle at 07 379 8105.

COMBINED NSW & QLD WEEKEND 10TH & 11TH OCTOBER (PLUS A COUPLE OF DAYS ON EITHER SIDE)

Here at magnificent "Booyong". Please let me know beforehand so that I can get a few things organised though.

REPORT ON THE MAY WEEKEND IN NTHN. NSW

About 20 people met at Nicholsons' nursery, Terania Creek on the Saturday morning. Nan Nicholson led a walk through Rainforest to a huge rock overhang on the nearby escarpment, part of Nightcap Nat. Park. Others took the opportunity to inspect "Irma's Gully". After a look through the Nursery some had to return home but most drove back to Bill & Alisons' place at Meerschaum Vale for a most enjoyable meal and an overnight stay. Sunday was more leisurely, looking at the garden (very many species there), then a stroll along the nearby creek with its host of palms and many well-butressed *Sloanea woolsii* trees, as well as other wonderful plants. About 10 Brisbane members came down, meeting people from Far North Coast Group and the two of us "southerners". Our thanks to Bill, Alison, Nan and Hugh for their hospitality. A most enjoyable weekend

SEEDS NOW AVAILABLE

From Esther Taylor (74 Francis St Raymonds Hill Ipswich 4305) --- *Ailanthus triphysa* *Alpinia caerulea* *Austromyrtus dulcis* *Callitris baileyi* *Cissus antarctica* *Cordyline cannifolia* *C. congesta* *C. stricta* *Croton verrauxii* *Ehretia acuminata* *Elattostachys nervosa* *Erythrina vespertilio* *Eucryphia moorei* *Eustrephus latifolius* *Ficus coronata* *Geitnoplesium cymosum* *Hibiscus heterophyllus* *Linospadix monostachya* *Mallotus philippensis* *Melia azerdarach v. australasica* *Pandorea jasminoides* *Pittosporum phylliraeoides* *P. rhombifolium* *Premna lignum-vitae* *Stenocarpus sinuatis* *Syzigium paniculatum* *S. oleosum* *Tecomaria floribundum* *Toona australis*
Please send a S.A.E. with your request

And from the Leader there are further seeds available (as I forgot to take them up to Terania Creek). Some of them are a bit old but they seem to be in good condition; anyway it would be good if others could try them as at least for a "viability test". They've been in a fridge since they were collected. Species available --- *Acronychia oblongifolia* *Alpinia arundelliana* *Buckinghamia celsissima* *Callitris macleayana* *Cassine australis* *Cissus hypoglauca* *Commersonia bartramia* *Euodia micrococca* *E. elleryana* *Glochidion ferdinandi* *Hibiscus tiliaceus* *Hymenoporus flavum* *Morinda jasminoides* *Pararchidendron pruinatum* *Pittosporum revolutum* *P. venulosum* *Pongamia pinnata* *Trema aspera* *Schizomeria ovata* *Trochocarpa laurina*.

NEIL MARRIOTT AND THE POLYSCIAS MURRAYII

Among other news from Neil, he mentioned that he was inundated with offers of plants from all quarters, now has a handfull growing on and will pick up more when he travels North in July (to see a bit of sunshine?). They haven't yet sold the Nursery but the Rainforest plantings at "White Gums" are growing rapidly and creating a great deal of local interest, many of the visitors heading off home to create their own little bit of rainforest on their own property. This happens particularly on hot Summer days when it feels, as you step into the rainforest, that you are entering an air-conditioned room. The local bird population has also grown to appreciate it too, with flocks of Parrots, Honeyeaters and many other species congregating in the cool shade during hot days, and roosting during the night. However recently a Brown Goshawk has also taken to the area, creating much havoc with the other birds!

(I read in the Victorian Region's March Newsletter that Neil has been appointed Conservation Officer. Congratulations Neil, you will have your work cut out if your State is as bad as NSW in environmental protection. Keep on their hammer !)

NEWS FROM MEMBERS

Even though *Erythrina* sp. Pine Mountain comes from sunny Queensland, it obviously grows a lot better in Sweden than it does in Sydney. Thomas Carlsson writes that from seed we sent him a year ago, all are doing very well (in a glass-house) and are around 15 cm high ! Those at Eastwood that survived the seedling stage are really battling. Maybe Thomas has a very green thumb.

Jo Benyon reckons it gets pretty cold around the NSW south coast in winter so plans to visit some of the Rainforests of the north coast, particularly on the Dorrigo. Gets a bit chilly there too, Jo. She also mentions that re Southern Limit of Plants in the Shoalhaven Shire (N/L 16), *Crinum pedunculatum* was found growing at the edge of the beach in Murrumbidgee National Park, just south of Pretty Beach by a group from Canberra SGAP Group that she was with. Jo also points out that *Callicoma serratifolia* is in good numbers along the creek on their Milton property, and further south than the nominated Wreck Bay.

It wasn't a real good idea for Evan Weatherhead to build a new glass-house, he has run out of room to plant out all the things that he has successfully propagated! But he got wind of a brand new spot to pass off some of the surplus — at Sam Jack's new place up north. After that, Evan has got his eye on a daughter's home in Canberra and is creating a garden there, too. Probably a great little spot for a cool temperate forest, eh? He adds that the first R F plantings in his Blaxland garden are now approaching 10 to 15 feet high.

Dean Pryke recently obtained some publicity for the Rainforest cause in a "Homemakers" section of the local press. They pointed out that in between his occupation as a Bush Regenerator with the NSW NP&WS, Dean is growing a total of 83 species of R F plants and that the garden looks like a small chunk of the Illawarra Escarpment has been transplanted to it.

Wondered whether the rainforest depicted on John Kaminski's note to me was on his own place at Dayboro Qld., or if it may be a photo of another area? Come clean John, are you hiding such a beautiful spot from your fellow members?

A note from Betty Rymer of Sydney listed her success with seed obtained from the Group. *Morinda jasminoides* came up like weeds, *Pittosporum venulosum* were good, and in common with many others who tried the *Syzygium paniculatum* had good results from those. The *Cassine australis* though, have not yet germinated. They are a tough nut to crack (literally): anyone out there got some clues on how to treat the seed? (Whenever I have tried to break the casing I've generally destroyed the seeds within. Ed.) Another little problem for Betty is that although *Syzygium wilsonii* bloomed extremely well, the foliage looks terrible with its good covering of scale and soot. Any suggestions on this, but avoiding the use of nasty chemicals would be helpful.

New member Stephen Tornquist of Termeil, NSW South coast, tells that growing R F plants has been a long time hobby and he now has a large collection, many planted out as an arboretum, that is doing very well. A reminder Stephen — don't forget to send a list to Esther Taylor for the Groups records.

Another newbie, Nola Soliman, has also been interested in R F for a good while and has tried lots of seed with mixed results. She also had problems in obtaining particular seed of plants she liked, but has since been in touch with Esther who referred Nola (and also Judy Elliott) to Alex Lyons further north who is growing many of the desired species. Alex told me that he has referred both of these girls to an appropriate source who should be able to assist them.

Sydney will soon be deserted! Another couple of us have seen the light (or maybe the increasing levels of pollution), and like a bolt of lightning streaked north. Ken and Joan Jones, long time members of the Group have moved to Beerwah in South East Qld. They came down to Lismore for the outing to Terania Creek. Can't keep away from NSW after all, eh?

Patrick Bennett says that the Ipswich Qld. SGAP Branch is setting up a display at the local show this year again, and that a Rainforest theme will be followed. Again good publicity, and we all hope that they get lots of interest from the visitors. Hopefully Patrick will send us a rundown of its success and the results from all their hard work.

Judith Brass is interested in butterflies also and has very kindly sent me a number of items for a Butterfly of the Month series. Thank you for this Judith — the first of these appears elsewhere in the Newsletter

There really is a lot of activity in southern Qld. Judy Elliott has 4 acres of an acreage estate at Ocean View near Dayboro that was formerly pasture with only a remnant few *Acacia melanoxylon*. However she has organised a community project that she is co-ordinating, and with the assistance of the Forest Service who are providing free trees on a grand scale (up to 1000 trees per block plus another 5000 for the community). 28 of the 32 residents or owners have submitted a plan and it is great that every one of them intends to plant a Rainforest area. Planting will be carried out over 2 years and it is hoped that the local Council will also participate and supply trees for the verges. Everyone is hoping that 160 acres of bare grassland will be transformed into a place of beauty to be admired, and as a home for many birds and animals. Judy is very aware that there is a lot of hard work ahead for all involved, but knows that it will all be worthwhile. I am sure that we all hope that it will be an outstanding success and be an inspiration for other communities and groups to organise similar projects.

Ross McLeay says that you know that autumn in Bellingen is not far away from the first appearance of the Top Knot or Flock pigeons. They turned up in mid-March; wonder what fruits around there in good enough numbers to attract them? In addition a very unusual bird paid them a visit — a Long-tailed Koel, a New Zealand migrant presumably blown off course. Didn't go over too well with the resident Lewin's Honeyeaters who were quite violent in their attack on the interloper.

We have a request from Jim Ransom of Sydneys north. Could we run a list in the Newsletter showing name and address of nurseries that carry a good range of R F plants ? Sounds a good idea to me, particularly as Jim points out that people just beginning in rainforest would appreciate information on where to go, particularly if they want certain species or species that are not commonly available. I have started this list that will appear further on: those aware of others in the trade who would fit the bill may like to let me know the details for publication in future N'letters. Jim (of 5 James Rd Brooklyn 2083) also enquires as to whether Garry Sankowsky still operates the Zodiac Nursery at Tolga near Atherton, if so could you let him know the current postal address?

A note from Norm McCarthy says that he is now off the sick list after two small but debilitating operations and is bouncing back better than ever. Great news Norm, keep it up! He also reckoned that it was time we left Sydney's smog — he did it in 1951.. Norm also advises using "Fongarid" as a drench after transplanting rainforest seedlings to avoid fungal problems as these can start immediately after root disturbance. (I've often wondered why I have lost apparently healthy seedlings after potting on and am therefore grateful to now be aware of the likely cause, and the remedy. Ed.)

Nerida Silke mentions that like many others she really enjoys our Newsletter but would like to have some local personal contacts. Been to a Brisbane excursion but these are more than an hours drive from Mudgeeraba. It has been some time since a listing of the current membership has been published, so I had better organise this really fast.

August Fricke has a young Rainforest near Nambour that is now 18 months old and is taking up much of his free time. This is why he has not been able to contribute to our Newsletter because of this and other commitments, but does get a lot from the N ewslatters. The Nambour planting is on an acre of ground.

One of our new members, Nick Hockey, mentioned that he and his wife, Julie, run the wholesale nursery 'Dancing Palms', initially growing R F plants in tubes and small pots but the public didn't respond. They are now opting out of these sizes and are going into 40 litre grobags requiring less overall maintenance but better profit long-term. They would like to obtain a good supply of Nth. Qld. Proteaceae to try in this method. They have planted a lot of R F trees on the property but expect that it will be a few years before the place starts to look like they want it to.

Another who has just joined, Shirley Johnston, is very involved with trying to replant a hillside of the original "Big Scrub" that was cleared about 100 years ago at Montedlum, and says that Rainforest plants and trees have become a large part of her life.

THREATS TO THE FOREST (PART TWO)

The previous newsletter gave an outline of many factors that affect Rainforest and concluded that the greatest and most widespread changes are caused by logging. It troubles me that the timber industry and its puppets & apologists within the community, administration and government are constantly justifying the so called "sustainable" activities because trees "grow back". A typical statement goes something like - "We have been working in this forest for over a century and you cannot see any changes, all the animals are there and the trees have grown back". Or. "The area was logged in the 1930's so what are the Greenies on about? This is not virgin forest". They use many contradictions in their arguments - on the one hand logging has no effect on the natural environment; but on the other, it is not in a natural state anyway.

What they never mention, either because they are unaware of the history of their industry, or else they deliberately conceal the facts or are too bloody stupid to be aware of the events they are setting in train whenever a forest is exploited. To the best of my knowledge they have never said that until about 30 years ago, the industry consisted of mainly small operations, men who worked in the forest in pairs or small groups using axes, or perhaps cross-cut saws. Because of the hard manual work involved, they ensured that only sound, high quality trees were felled. In addition the small sawmills used every log very carefully and economically, so that the minimum of waste was produced. Also, due to poor access as roads were few and far between, trees were not usually cut down in rough areas or on difficult terrain where retrieval would have been too time consuming. Logs were removed by "snigging" through the bush by the use of teams of oxen originally, later on with small, by today's standards, tractors. But most importantly, we must remember that in those early days virtually every area was weed and pest free, so long term damage was avoided.

Today, all this has changed. The industry uses huge bulldozers to push roads through heavily timbered, steep or previously inaccessible sites, pushing spoil into nearby gullies, creeks and other watercourses, soon to cause erosion of varying degrees. All around are weed banks ready to colonise disturbed places (just look at the almost instant coverage by, e.g. Lantana, Inkweed, Crofton, Wild Tobacco etc that spring up everywhere) ; animals such as feral cats and pigs, foxes, rabbits etc that are constantly extending their range. Chain saws now allow trees to be cut down effortlessly, in just a few minutes. Mills have tended to become very large concerns with an insatiable appetite for logs due to the need for a return on the big capital invested, but where sophisticated machinery and equipment has ensured fewer employees required, causing constant job losses.

Large machinery and high output has resulted in much more waste than previous techniques, many mills obtain less than a 40% saleable product from their logs. The rest is wasted. The end result of these modern operations in the forests are changes to water run-off rates and a reduction in stream quality. And, of course, in the guise of protecting the resource the forests are criss-crossed with firebreaks and trails, with regular frequent 'control' or 'hazard reduction' burns carried out.

Forestry Depts. take great pride in their 'awareness' of the needs of animals in announcing that certain habitat trees are left as homes for the larger animals that require nest hollows that are usually only found in very old and degenerating trees. What they don't say, but sometimes privately admit is that once these old trees die and collapse (and they are extremely prone to lightning strikes due to being much higher than the surrounding habitat), there are no trees old enough left to replace them. This is because every large tree that is approaching maturity is cut down due to the economics of the situation, and to satisfy our voracious demand for timber products. So there is no following generation of mature trees that are also on the way out, shedding limbs to produce hollows and nest sites, as well as building up debris on the forest floor again providing habitat and shelter for a different group of animals.

The loss of large trees in general, but particularly of sought after or commercial species, alters the local ecosystems and changes the forest composition over time, leading to an altered habitat beneficial to certain animal, plant & insect species, but detrimental to others. This leads to a further change to symbiotic (mutually reliant) relationships, often extremely gradual but nevertheless leading eventually to major environmental changes at a greatly accelerated rate, far faster than has been seen by natural evolutionary changes.

The end result of forestry activities, the way that they are carried out in our current exploitive stage, is that all of those natural places are simplified and are unable to withstand even minor natural or man-made disturbances to an extent that they are completely changed. It may take centuries for this to happen and there will be no apparent change to our generation, or to that of our children. But it may, and in many places it has already done so, take only a few short years.

Do we really care ?

GROWING NATIVE WEEDS BY TIM LOW FROM " URBAN ECOLOGIST "

There are times when the best intentions can lead to the worst mistakes. In Southern Australia for example growing native plants, normally considered ecologically desirable, is creating major ecological damage. I've just finished reading a disturbing report on the vegetation of Langwarrin Flora & Fauna Reserve south of Melbourne. According to the author, government botanist David Cheal, the reserve has a severe weed problem, and 'The most troublesome weed species (those which are now grossly altering native plant communities or preventing their regeneration) are *Acacia longifolia* (Sallow Wattle), *Leptospermum laevigatum* (Native Willow), *Pinus pinaster*, *P. radiata* and *Pittosporum undulatum* (Sweet Pittosporum)

Anyone who knows plants will realise that, apart from the two pines, these 'most troublesome weed species' are all Australian natives. They are ornamental trees native to other parts of Aust., that have been introduced by gardeners in nearby towns, and have spread into the bush, upsetting the natural balance. Disturbance to the reserve, and especially changes in burning, have given them an edge over the original heathland plants. The native willow is from W. A. The other species grow naturally in Victoria, but not in the region of the reserve. There are another 3 exotic wattles running wild in the park: Cedar wattle from the Blue Mountains, Gosford wattle from Gosford, & Golden wreath wattle from W A, but these are minor weeds.

The native weed problem at Langwarrin is so serious that David has advocated slashing and burning, & even spraying with 2 4 5 T. Otherwise the original heathland plants may disappear. A very rare bird, the southern emu wren, is also threatened. It lives in special she-oak heaths which are vanishing under choking stands of sallow wattle.

In the Mount Lofty Ranges behind Adelaide the native forest is being sullied by an extraordinary range of exotic natives, including wattles, grevilleas, hakeas, sweet pittosporum. Around Melbourne the worst native weeds are Cootamundra wattle from NSW and the eastern sweet pittosporum, which is engulfing eucalypt forests, aided by introduced blackbirds that spread the seeds. So dense is the foliage of sweet pittosporum that it shades out other plants.

Sydney and Brisbane are faring better than the southern cities, although Brisbane has a growing problem with the Nth. Qld. umbrella tree, now a significant weed on Moreton and other islands. Exotic natives are becoming a problem in Australia because the country is so large and the definition of 'native' is so ambiguous. A gardener in Sydney may plant a WA wattle and proudly proclaim it to be a native. Yet its native habitat is further from Sydney than Istanbul is from Amsterdam, and a Turkish plant grown in Holland would hardly be considered a 'native'.

So far, exotic natives are not behaving as atrociously as certain overseas shrubs such as lantana, blackberry, bitou bush, groundsel and gorse. But they are more likely to become a greater problem as more gardeners plant native species which are then spread about the country. Inevitably a share of these will become weeds.

PRESERVING LOCAL WILDERNESS. Inner city gardeners need not worry about what they plant. But those living near bushland should carefully consider sowing only those Australian plants that actually grow in nearby bush. This, surely is what 'growing natives' should be about: preserving the integrity of the local wilderness. Gardeners should be especially wary of plants which are proven pests. Among the wattles particularly, there are many dubious species which have become weeds, not only in Australia, but in South Africa, Europe and wherever they have taken root. The following in particular should be blacklisted: *Acacia baileyana*, *A. cyclops*, *A. dealbata*, *A. decurrens*, *A. elata*, *A. longifolia*, *A. mearnsii*, *A. podalyfolia*, *A. prominens*, *A. saligna*. Around Adelaide and Melbourne some of these wattles are even hybridising with each other and with local species.

GROWING NATIVE WEEDS (CONTINUED)

Sweet pittosporum and bluebell creeper (*Sollya heterophylla*) should definitely be avoided. Coast tea-tree should never be planted west of its natural range in central Victoria (although no-one is sure anymore where its natural distribution ends). Hakeas, kangaroo apples (*Solanum*), native willow and cadaga (*Euc. torrelliana*) are risky. On the other hand, the banksias, melaleucas, kunzeas, angophoras, kangaroo paws and others appear benign.

• INCREASING PUBLIC AWARENESS. The Society for Growing Australian Plants, and the nurseries which sell these plants, have done little to explain the risks. Many conservationists find the issue conceptually troubling: how can a native plant be an exotic pest? they complain. The most aware people are government botanists in Melbourne and Adelaide, concerned with the integrity of national parks and forests in their states.

The issue needs a higher profile, and much more public awareness. It is ironic but true that most native gardeners would be sympathetic to the problem, if only they understood.

(From the Wildflower Society of Western Australia Newsletter May 1992)

CONGRATULATIONS BILL PAYNE ! YET ANOTHER ISSUE OF "AUSTRALIAN PLANTS" (MARCH 1992) EMPHASISING RAINFOREST

This issue - Volume 17 No. 130 is really great. Much space is given to edible species varying from trees to vines and gingers, wine-making from Davidson's Plum, tropical gardens and species descriptions. Much of the information was contributed by Harry Dick of Cooktown, various other items by friends of our Group including Gwen Harden, Yuruga nursery, Hugh and Nan Nicholson, and others expert in their subjects.

There certainly is a wealth of information in this journal, we should all read it thoroughly and ensure that it is kept with our other reference material. Maybe our Study Group could become involved by supplying material for a future issue ?

ASSISTANCE SOUGHT

Bart Hacobian asks if *Darlingia ferruginea* will flower in cooler areas ? He has an advanced plant in a 12" pot, but is not game to plant it out as he understands that it is a winter flowerer

In addition, there are a few problems with *Commersonia bartramia*. It grows strongly in autumn, then dies back in spring. He feels that the same thing happens with this species in Sydney's Botanic Gardens. Any ideas on critical factors determining success or failure of this colonizer ? Bart adds that his plant is in a spot where it receives morning sun but shaded from early pm. It hasn't produced any suckers, although grew fast to 5 m in the first two seasons. Very sparse flowering and this year it died back to 3 m.

By comparison a *Commersonia fraseri* has suckered profusely (don't they all?), grown to 7 metres by about 8 m wide and flowers heavily. Only 3 years old, being planted out in Sept. '90 as a rooted cutting just 3" high. It receives almost full sun and leaves are occasionally chewed up by 2 pests, one is a small Chrysomelid beetle (relative of the Pittosporum beetle), the other are caterpillars of a moth of family Noctuidae. *C. fraseri* at the Canberra National Botanic Gardens are regularly eaten by caterpillars of a different moth - family Bucculatricidae.

Send me your thoughts on these subjects so that we can let Bart and the rest of our readers know.

1992 TROPICAL AND SUBTROPICAL RESIDENTIAL RAINFOREST SCHOOL

This school is to be held by Mackay Branch of SGAP at Seaforth Recreational Camp 50 km north of Mackay from 26th to 29th Sept. and then at Eungella from 30th Sept. to 2nd Oct. It includes tuition in the use of floral keys, and field excursions to examine various rainforest types in the district. Seaforth accommodation is dormitory style, maximum cost of \$200 will cover everything. Shared rooms with private bathrooms has been arranged at Eungella is limited, the maximum cost to be \$125

Principal tutors will be Dr. Betsy Jackes from the Botany Dept. of James Cook Uni. and W.J.F. (Bill) McDonald, Senior Botanist at the Qld. Herbarium. The maximum number of participants is limited to 40. It was meant that interested people should have booked by 30th April, but if you would like to attend, contact Irene Champion, 20 Swift St, Slade Point 4740 to enquire.

From SGAP Qld. Bulletin March 1992. (Ron Twaddle was at last years course and learned a lot. This one will no doubt be just as good.)

KIMBERLEY RAINFOREST BOOK - KIMBERLEY RAINFORESTS OF AUSTRALIA edited by N.L.MCKENZIE, R.B.JOHNSTON & P.G.KENDRICK

Published in Oct. 1991 by Surrey Beatty & Sons, Sydney in association with CALM and the Dept. of Arts Heritage & Environment,

In their preface McKenzie and K J McNamara state - "The Kimberley is one of the last great wilderness areas on earth. --- Its rich tapestry of tropical plants and animals and the great complexity of its landscapes are a natural historian's wonderland. --- Its North-west is so rugged and trackless that the composition and distribution of its flora and vertebrate fauna have only been fully revealed during the past 25 years. Indeed the presence of rainforests in Western Aust. was not recognized until 1965". (Although pioneer Julius Brockman gave an account of rainforest patches behind the coastal dunes on the Dampierland Peninsula north of Broome in 1880)

In 1986 more than 1500 patches of rainforest were identified from Landstat images. The three year ecological survey by CALM in association with 15 scientific specialists sampled 95 of these patches that range in size from just a few tree canopies to 100 ha (averaging about 4 ha). Four major categories of "raingreen" Monsoon forest were identified: on hillsides and scree-slopes, along swamps and rivers, patches on coastal sand dunes, and in gorges and gullies. Some isolated patches were found almost 300 km from the coast. The total rainforest area of about 8,000 ha is only 0.005 percent of the whole Kimberley landscape of 170,000 square kilometers.

Botanists collected 453 species of flowering plants, or 24% of the number of species in the entire region. Of these, 150 species were confined to the rainforest patches. There is nothing novel or bizarre about the floristics as these species are normally found in tropical Australia. Only one endemic shrub species *Hibiscus peralbus* (Malvaceae) is known from the Kimberley rainforest. Nineteen new reserves that include a cross section of rainforest patches have been proposed. Although many of these are in the inaccessible north-west corner of the proposed Carboyd Nat. Park near Lake Argyle, and Dampierland, to the north of Broome, some would be easily accessible to the run of the mill traveller. A few of the proposed reserves are associated with Aboriginal Reserves.

The 21 chapters include landforms and soils, floristics, earthworms, land snails, invertebrates such as scorpions & spiders etc, reptiles & amphibians, avifauna, mammals, and Wunambal words for Kimberley plants and animals via the auspices of Geoffrey Mangglamarra. The text is not too jargonistic, easily understood by the enthusiast. Wildflower enthusiasts would appreciate chapter 6 on Floristics and Phytogeography, with the Ecological Survey chapter 1 as an aid to interpreting localities. If members could procure reprints of these two chapters they would gain a worthwhile addition to their botanical literature. However as the complete publication retails at more than \$90 it is well outside the price range for most of us, although it may be a valuable addition for branch libraries. Neil Coy.

(From the Wildflower Society of Western Australia Journal Feb. 1992)