



Trees for the Evelyn and Atherton Tablelands Inc

The right tree in the right place for the right reason

T R E A T

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Newsletter Storm Season October - December 2003

Opening Day a Big Success

Good weather and a good crowd made the opening day (on the 22nd August) of the new CTR Offices and the TREAT Visitor Centre a great success.

CTR had the grounds (and office) in good order with extra touches here and there; Christina got her leadlighting mounted outside the Visitor Centre; and Kaisa and Stan had the display in the Visitor Centre up and ready for viewing.

Over 100 people came to the event, which started with a welcoming morning tea in the nursery.

About 10 am we all moved to the slope outside the new building and listened to the opening speeches. Stephen Garnett, Senior Principal Conservation Officer QPWS Cairns acted as Master of Ceremonies.

Warren Canendo, a Ngadjonji man, welcomed everyone on behalf of the traditional owners. Clive Cook Regional Director QPWS, spoke of the energy and enthusiasm of the CTR / TREAT combination and the commitment of EPA (Environmental Protection Agency) to continue and strengthen this partnership. Barbara Lanskey, President of TREAT, thanked all involved in the creation of the Visitor Centre.

Clive Cook cut the green ribbon across the entrance to the Offices and Visitor Centre and declared the building open. A tree planting ceremony was then held at the back of the building to mark the occasion. In 1987 Peter Stanton, then Regional Director QPWS, planted an *Atheronia diversifolia* for the opening of the present nursery.

This time, three trees were planted. Elders Emma Johnston and Jessie Calico, Ngadjonji people, planted a *Syzygium canicortex*; Clive Cook and TREAT's co-founder, Joan Wright, planted a large *Agathis atropurpurea*; and immediate past CTR manager Nigel Tucker and assistant manager Tania Simmons planted a *Waterhousea mulgraveana*.

Following the tree planting, a barbecue was available at the nursery and there was time for viewing the Display, talking and catching up with friends. Everyone declared the Display was fabulous, and TREAT and CTR were very happy with the success of the morning.

FIELD DAY

Saturday 25 October, 2003

A rainforest walk to the Stockwellia Trees - *Stockwellia quadrifida* (Myrtaceae)

Meet at 1:45pm at Butcher's Creek State School

Walking time about 3 hours there and back

Mostly gentle slopes except for the last 200 metres where the slopes are slightly steeper

BRING WATER

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Halloran's Hill Field-day

By Joan Wright

David Johnson and Tony Irvine lead a very successful field-day on Saturday, September 6th, attended by more than 50 people.

The aim was to learn about the volcanic activity which had formed the topography of the Atherton tableland in time past. First, a quarry in the Herberton Range was visited, where David explained the geology of the whole area before the volcanoes altered the landscape so profoundly. Tony then drew attention to the open forest of eucalyptus and casuarinas which grows on the soil made by the weathering of the ancient granite rocks.

Next stop was Wongabel Forest. Here David showed how different the black basalt rocks are from the granite rocks. Tony led a walk into the forest where he pointed out the trees which characterise Mabi forest. (Type 5b, Webb and Tracey.)

When we reached Halloran's Hill we were impressed with the view of volcanic hills, cinder cones and fertile agricultural land. David outlined the action of the volcanoes whose lava formed the hills and the land. It was interesting to learn that the Pinnacles. (cinder cones) are much younger than Halloran's Hill and cannot be dated by the method which was used for the Hill.

The group visited the Mabi forest in the crater of Halloran's Hill where the shelter from the cold wind was much appreciated! As well as the information David and Tony provided about the formation of the crater and the Mabi forest growing in it.

TREAT thanks David and Tony sincerely for an illuminating afternoon.

Professor David Bellamy's Visit

By Joan Wright

Professor David Bellamy paid a short visit to the nursery and saw our new display during his time on the Tableland in September. He was here to open the "Wildlife Week" at the Mareeba Wetlands.



Professor David Bellamy with TREAT members

Those who were able to be there on Saturday September 20th shared afternoon tea with David Bellamy and his host, Tim Nevard, of Mareeba.

David talked of many interesting projects in which people in England and other places, are working as we are, to repair our environment. It seems that, in that small island, people are very much aware of the vital necessity of restoring natural things and there is more financial help available to them at present there than is offered in Australia.

David Bellamy said that he is so often invited to talk to groups like TREAT who are "doing something" that he wishes he could do more to talk to others who are not "doing something."

TREAT members who met him were delighted with his warm personality and his enthusiasm for, the active conservation cause. He went away with a new TREAT shirt looking very fine and a good ambassador for tree planting!

COCKATOOS AT THE TOLGA SCRUB

Contrary to all expectations, the cockatoo numbers in the Tolga Scrub were reduced by about 90% of the judicious use of birdfrite. The Atherton Shire Council sought the permit but it was a very cooperative effort involving several community groups and OPWS. Tolga Bat Rescue and Research Inc coordinated the monitoring of the impact on the bats. Glen Holmes and Graham Harrington were both involved in cockatoo counts. TREAT members were also involved in various roles during the 6 week trial.

Initially shooting commenced late afternoon, but after about 3 weeks we trialled midmorning. After 3 days of shooting in both time slots, the cockatoos rapidly learned that we were persistent and would leave after a few shots. Very little birdfrite needed to be used and there is ample left for next year should it be necessary.

There were a small recalcitrant group of repeat offenders, no doubt now quite deaf, who persisted in occupying the Scrub.

An Energy-giving Fruit of the Month

Our three friends, Betty Bunjil, Danny Janggaburru and Sam Mcoy were walking through the forest on their way home. They ate an early lunch as they had expected to be out of the forest by 2.00 pm.

On their way back, they had taken a wrong turn. They eventually picked up the track that would take them out but it was now 4 o'clock and there was probably still about an hour and a quarter's walking to go. Sam muttered "I wish we hadn't had an early lunch. I am as hungry as hell now!" Betty and Danny sympathised as they too were feeling peckish.

Betty suddenly looked ahead. She could see a tall strangling fig emerging from the top of a Northern Silky Oak (*Cardwellia sublimis*) tree. The fig had large roundish, orbicular leaves that were up to 22.5 cm long x 14 cm wide, with the odd smaller leaf around 11 cm long by 9 cm wide. "Banbu!" she exclaimed. "It is often fruiting at this time of the year and we may be in luck." Betty is a Ngadjonji lass and "banbu" is her language name for the tree. Betty hurried forward until they were underneath the fig's canopy. "Look, there are plenty of ripe fruit on the ground."

Sam was a bit sceptical as he looked down and saw some dull blackish elongated fruit, ranging in size from 40-70 mm long x 13-28 mm wide, with darkish spots on the skin, and a small pinkish brown nipple at the end. The fruit actually looked like rather elongated mammary glands which jumpers would really strain to contain. But even that association didn't seem to make them look attractive to Sam. There was a hole in the base of each fruit where it had shed from its stalk that was still attached to the branches of the tree. Betty picked up a soft black fruit and tapped it on a stick. Rather large, irregularly shaped, gritty seeds 3 mm long x 2 mm wide fell out. Betty explained to Sam that the fruit was better to eat if the granular seeds were removed and the best time to eat the fruit was when it had turned black.

Dubiously, Sam picked up a fruit, removed the seeds and noticed that as well as feeling soft, the fruit had green flesh underneath the black skin. He shut his eyes, hoping for the best as he bit into the fruit. His tentative approach to the fruit, highly amused both Betty and Danny. Sam exclaimed "Why, its got a really sweet taste something similar to a date or dried fig. It's probably not as sweet as the commercial fig but it is still okay to eat and like dates and figs it is quite filling." "Well it is a fig" replied Betty. Whilst they were eating the fruit, Danny pointed out the smooth red and cream stipules on the ground which ranged in size from 4.5 - 12.0 cm long. These structures were shed as each new leaf unfolded. Danny, a Yidinji man said their name for the fig was "buda" which also meant blanket in his language and they used to make blankets from the bark of the trees, hence "buda" tree. Betty also confirmed that her people made blankets from the bark and she thought the English common name was Banana Fig because the fruits go through a yellowish stage and their shape is slightly suggestive of a small, short banana.

The "banbu" and "buda" of the Ngadjonji and Yidinji people respectively is called *Ficus crassipes* scientifically. It grows in wetter rain forests, particularly in the Hypsi Forest (Complex Mesophyll Vine Forest, Type 1 b) and in the higher altitude Type 5a, Complex Notophyll Vine Forest where it is one of the fewer mesophyll (longer than 12.5cm long) leaf-sized species in this forest type. Its altitudinal range is 650 - 1000 m.

The species appears to be absent from the drier Mabi Forests (Type 5b, Complex Notophyll Vine Forest). Being a fig there is a large array of fauna that utilise the tree. Several possums plus probably the Tree Kangaroo feed on its foliage. Flying foxes, fruit pigeons, possums, Musky Rat Kangaroo, rodents, cassowaries, ants as well as man feed on the fruit. Probably the Red-legged Pademelon, Brush Turkey and Orange-footed Scrub Fowl do likewise. It is an excellent species to use for revegetation in former Hypsi forest areas that are now cleared but may be affected by frost in the open situation.

Distinctive Features: The most prominent feature distinguishing the species from all our other fig species is the large orbicular (roundish) shaped leaves. Another feature is the basally five-veined pattern on the underside of the leaf. The markedly elongated shape of the fruit distinguishes it from fruits of other species except for *F. pleurocarpa* (Gabi Fig) but the distinct nipple at the end of the fruit separates it as *F. pleurocarpa* fruit has a warty end and elongated ribs on immature fruit stages which are less noticeable when ripe.

After consuming some 4-5 fruit each, Danny, Sam and Betty all felt they had recovered sufficient energy to complete their walk after an interesting day.

Some notes about Mabi Forest

By Tony Irvine

A one line description of Mabi Forest is a tall vine forest with a dense shrub zone below. Mabi Forest is a structural classification of a type of vine forest (= rain forest in the tropics) and the key thing about Mabi Forest structure, even in its most pristine state, is that it has mostly tall canopy trees, many vines and a dense shrub layer. This forest structure is similar to the forest structure that develops after a cyclone has hit a rain forest or when a rain forest has been heavily selectively logged.

Why is the structure of pristine Mabi Forest equivalent to a disturbed rain forest? It is because Mabi Forest occurs in the driest region (1,300-1,600 mm per annum, on porous volcanic soils) where rain forest canopy trees can still obtain 45m in height. To survive in such conditions, many of the canopy trees are semi-deciduous or deciduous. Consequently there is seasonally a high amount of light that reaches the forest floor and this enables a dense shrub zone to be formed. This is exactly what happens when an evergreen canopy is opened up by a cyclone or heavy selective logging. The understorey species, shrubs, tree seedlings, and vines, particularly layerer vines respond to the increased light and temporarily form a dense understorey layer which is equivalent to a dense shrub zone.

The description of the forest structure at Shiptons Flat near Rossville that occurs on volcanic soil, does not conform to a Mabi Forest structure as Geoff Tracey (1982) states the forest is tall but is quite open below. Hence this forest structurally lacks the essential ingredient of a dense shrub zone below and cannot be equated with Mabi Forest structure. Pristine Mabi Forest will have mosaics of evergreen and deciduous trees in the canopy. Where there is a high cluster of evergreen trees, correspondingly the shrub zone will be less dense below but overall in Mabi Forest the lower vegetation will be dominated by mid dense to dense shrub zones.

Other features also come into play in the description of Mabi Forest structure. The fact that it occurs on deep, nutrient rich volcanic soils enables the trees to grow tall but in some areas, the canopy can be as low as 14 m high as in areas at Thomas Rd and parts of Halloran's Hill where the depth of the volcanic soil has shallowed. The influence of these nutrient rich soils results in a complex type of rain forest, technically described by Tracey and Webb as Complex Notophyll Vine Forest and designated the number Type 5b to distinguish it.

Complex rain forests are associated with nutrient-rich sites. An immediate conspicuous feature of a complex forest is the high presence of trees with plank buttresses which are triangular sharply keeled buttresses as against the more rounded spur buttresses that may be present in some species. Another feature is that large woody lianes (vines) are readily noticeable. Fern epiphytes and flowering plant epiphytes as well as fleshy herbs are also very common.

Notophyll refers to the leaf size and a normal general leaf shape which is between 7.5 cm and 12.5 cm long is classed as a notophyll-sized leaf. To classify a forest as a notophyll forest means that overwhelmingly, the main leaf size of the canopy trees is notophyll. Factors such as precipitation, soil-moisture retention, fertility, wind exposure and Mabi Forest temperature can all influence canopy leaf-size. The wetter, warmer, more humid, nutrient-rich sites will tend to have the greatest development of large-leaf species (i.e. mesophylls and macrophylls).

Back to Mabi Forest. Its development is strongly influenced by the severe seasonal dry that is experienced on the Tablelands which usually becomes most severe in October. This is accentuated by the very porous, well-aerated nature of the volcanic soils, resulting in a high amount of dry air, circulating around the root zones of plants. The likelihood of significant rainfall occurring in October decreases rapidly on a SE-NW gradient on the Tablelands and an October rainfall event of 25 mm at Topaz usually decreases to 10-12 mm at Malanda and 2-4 mm at Atherton. The species that dominate the forest are those that can survive the dry conditions but there are some species that exist in the Mabi forest canopy and subcanopy today which must have established in much wetter times when dry seasons were less severe.

Key diagnostic features of Mabi forest are:

- Many trees with plank buttresses up to 45m tall
- A well developed layer of specific shrub species and scrambling layerer vines.
- A high presence of deciduous and semi-deciduous trees
- Scattered large lianes and many slender vines
- Large-sized individual epiphytic ferns
- High presence of stinging bushes along edges and in large canopy gaps
- Usually has seasonal wilting of the understorey and seasonal heavy leaf fall
- Occurs on a seasonally-dry upland (700-850m altitude) on rich, volcanic soil, with mean annual rainfall 1200-1600mm.

The forest may have up to six layers of vegetation. The canopy is uneven and consists of:

1. Scattered emergent trees, 40-45m tall
2. A main canopy, 25-40m tall but occasionally as low as 14-20m (At Thomas Road and parts of Halloran's Hill).
3. A subcanopy, 12-20m tall which will be lower at Thomas Rd and parts of Halloran's Hill.
4. A lower layer, 6-8m tall. This layer tends to be absent in areas with lower upper canopies.
5. A predominantly dense shrub and scrambling layerer vine zone 1-5m tall.
6. A zone of seedling trees, shrubs, vines and herbs 0-1m tall.

In the next newsletter I will discuss the distribution of Mabi Forest, the origin of the name and if room permits some of the characteristic species of Mabi Forest.

Nursery News

By Peter Dellow

The new building housing the CTR office and TREAT restoration display was officially opened by Regional Service Director Clive Cook on 22nd August. More than 120 people attended the ceremony that included a welcome to country by traditional owners the Ngadjonji, a symbolic ribbon cutting and commemorative tree planting. The opening also provided an opportunity to reflect on the achievements of the QPWS/ TREAT partnership over the past 21 years with many old faces sharing yarns of the early days and the TREAT display showcasing some of the more recent exploits. All staff would like to thank the QPWS, TREAT and the Ngadjonji people for their continued support and offer congratulations to the TREAT display committee and Stan, Kaisa, Tara and Maya Breedon for their tireless efforts in creating a wonderful interpretive and educational resource that will certainly function as a valuable community asset.

Stocktake Figures

Spring provides an ideal opportunity to assess stock levels in the nursery and determine what potting priorities are in the lead up to the planting season. Nick Stevens completed the stock take in September and after some serious number crunching generated a figure of almost 60 000 trees. This figure will continue to increase somewhat over coming months however the warm weather has encouraged members to drop in to the nursery for their annual allocation of trees which helps alleviate the production bottleneck typical at this time of the year. All in all, production systems are coping well with plant health and general nursery condition in good shape. A BIG thankyou to members who regularly contribute on Friday mornings ensuring this standard is maintained.

Staff News

The nursery is pleased to announce our indigenous ranger Syb Bresolin commenced her new role as project officer for the Indigenous Engagement Unit (IEU) on the 1st October and is likely to remain based at Lake Eacham. This is an exciting development for the nursery and TREAT as Syb will now be employed full time allowing increased interaction with members and greater exposure of programs within the IEU.

As the planting season quickly approaches staff have been taking leave to ensure the full complement is well on deck and ready for action. Peter Dellow has now returned from leave and Nick Stevens will be on leave during October for work overseas R & R.

Workshops - 22nd and 29th November

In November, TREAT and CTR will again be holding 2 workshops on "Tree Identification and Seed Propagation." This year they will be held on Sat. 22nd November and Sat. 29th November, starting at 1.30pm and finishing about 5pm.

Afternoon tea is provided by TREAT to help refresh the mind and body during the information- packed sessions.

Tony Irvine brings in the tree leaf samples from his own property and launches into how various trees can be identified by leaf pattern, their smell, oil dots, etc.

CTR staff arrange a variety of seeds into groups and demonstrate cleaning and sewing techniques for propagation.

The "TREAT Yourself" video is also shown during afternoon tea, giving practical information on tree planting.

If you wish to attend a workshop, please phone CTR (Ph. 4095 3406) to put your name down. Numbers have to be limited, so book a place early.

Report on AGM

By Barb Lanskey

About 30 people or more turned up to the AGM at the Yungaburra Community Hall on the 22nd August. After TREAT reports from the Treasurer and President, and a nursery report from Peter Dellow, election of the TREAT committee for the next year was held.

TREAT welcomes Colin Hunt, Yungaburra to the committee. He replaces Fiona Landers who now has other commitments. Tony Irvine agreed to be Vice-President, allowing Joan Wright a little less responsibility. Otherwise the committee remains the same.

Supper was followed by very interesting talks by Dr Gay Crowley and Dr Stephen Garnett about Cockatoo Grass and the Golden-shouldered Parrot.

Their presentations were much appreciated, generating many questions.

Seed Collections

Winter is a notoriously quiet time in relation to the collection of rainforest seeds and seeds however with Spring comes a burst of flower in response to increased temperatures and day length. As well as collecting seeds, nursery staff are busy maintaining the phytology database of what is flowering and where. These records are vital to ensure collections from framework species are not missed. The following table outlines the species from which fruits have been collected between August and October.

Species	Common Name
<i>Alloxylon flammeum</i>	Pink Silky Oak
<i>Alphitonia excelsa</i>	Sarsaparilla
<i>Arytera divaricata</i>	Pink Tamarind
<i>Buckinghamia submissa</i>	Ivory Curti
<i>Cardwellia sublimis</i>	Northern Silky Oak
<i>Corymbia citriodora</i>	Lemon Scented Gum
<i>Corymbia intermedia</i>	Pink Bloodwood
<i>Decaspermum humile</i>	Bassafalls
<i>Dactyloctenium aegyptium</i>	Bracken
<i>Diploglottis diphylostegia</i>	Northern Tamarind
<i>Dysoxylum rufum</i>	Rusty Mahogany
<i>Elaeagnus triflora</i>	Millaia Millaia Vine
<i>Elaeocarpus angustifolius</i>	Blue Quandong
<i>Endiandra hypotephra</i>	Rose Walnut
<i>Endiandra sankeyana</i>	Sankey's Walnut
<i>Euodia xanthoxyloides</i>	Yellow Evodia
<i>Flindersia acuminata</i>	Sliver Silkwood
<i>Flindersia pimenteliana</i>	Mapple Silkwood
<i>Hicksbeesia pilosa</i>	Red Bauple Nut
<i>Hodgkinsonia frutescens</i>	Turkey Bush
<i>Macaranga tanarius</i>	Macaranga
<i>Omalanthus novo-guineensis</i>	Bleeding Heart
<i>Sarcocelocope simplicifolia</i>	Yellow Aspen
<i>Syzygium erythrocalyx</i>	Johnstone River Satinash
<i>Syzygium gustavioides</i>	Water Gum
<i>Syzygium wilsonii subsp. cryptophlebium</i>	Plum Satinash

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Not A Japanese Invasion!

By Joan Wright

Eight young Japanese students, with their hostess and interpreter joined with TREAT volunteers at the CTR nursery on a sunny winter's morning in August 2003. What did they make of it all?

That they enjoyed our people's welcome and the beautiful surroundings is sure. They toured the nursery, so joined us for morning tea, and had a mini-botany course on fruits and seeds. Later, they startled some trees on a students' property, so that they could feel that they had contributed to the Tableland's rainforest.

The four girls kept themselves very much to themselves, and the boys did the same, and all were very polite. If they had much English, they did not practice it!

Being photographed for the local newspaper amused them very much. Their hostess, Judy Kling, from Malanda was interested in all she saw at the nursery.

A few years ago a commercial Japanese T.V. production team visited the Tableland and produced an excellent video. It shows that the rainforest was largely felled in the early days of farming, and the efforts of the CTR and TREAT to restore some of it. Of course the voice over and sub-titles are in Japanese as it was made for TV in Japan.

Our copy of the video was put to very good use for the students visit. Now the TREAT display will help visitors like these students to appreciate our activities.

WORLD WIDE FUND FOR NATURE

Tolga Bat Rescue and Research Inc together with partners TREAT, Wet Tropics Tree Planting Scheme, Mareeba Environment College, BRICMA and Atherton Shire Council have received a grant from the World Wide Fund for Nature. The project is "Abating Threats to Spectacled flying foxes and Mabi Habitat", 41 grants around Australia were announced on Threatened Species Day on 7 October. An exemplary project was named for each state, and our project was it for Queensland!

The grant will pay for restoration work at the Tolga Scrub as well as work with the Spectacled flying foxes.

First year students from the Mareeba Environment College have already cleared weeds from mainly the northeast (a lot of Madeira vine - *Anredera cordifolia*) and south-east corners (some Captain Cook Bush), but also Anzac Bush on the southwest corner and Solanum vine along the track. Dave Kilpatrick has led this great team of students and they've done a great job. A huge amount of rubbish was also pulled out of the Scrub along the southeast side. We now await rain before planting. Trees from TREAT and WTTPS will be used in the plantings.

Tick paralysis season for the flying foxes got off to an auspicious start, as we couldn't find any Tableland colonies. Wild bats were visiting the bat hospital at night by about 7.15pm so we knew they had to be camped within a half hour flight away. We decided to issue a media release, which led to many phone calls - not all about our missing bats mind you. The day before the story came out, Andrew Dennis had brunch with Bill Cooper, and Bill knew about a large camp at Kingcombe Rd in Butchers Creek. Since then a colony has also arrived back at Whiting Road.

We would really appreciate phone calls about the arrival or departure of camps throughout the year but especially at this time.

Tolga Bat Hospital

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