TREAT Newsletter Dry Season July - September 2011

Coming Events

Date	Time	Event	Owners/ Location
Sunday 14th August	2 pm	Field Day	Larry Crook & Kylie Freebody RN 1691 Topaz Road
Friday 2nd September	7:30pm	TREAT AGM	Yungaburra Community Hall
Saturday 1st October	2pm	Field Day	Peter & Karen Stanton RN 228 Ault Road off Old Boonjie Road, off Topaz Road.

- The field days consist of a guided walk followed by a TREAT afternoon tea. Follow the signs on Topaz Road.
- See the articles below for information about the field day properties.

Annual General Meeting

The **29th AGM** will be held on **Friday 2nd September** at the Yungaburra Community Hall commencing at **7.30pm.**

Our **guest speaker** will be **Alan Gillanders** who will tell us about **'The Wildlife of a Nature Guide'**. A former teacher, Alan now conducts natural history tours specialising in birds and nocturnal mammals.

Annual reports by the President, Treasurer and Nursery Manager will be followed by the election of TREAT office bearers and committee members for the next year. Members are reminded that they must be financial when voting for the new committee. Subscriptions will be accepted at the AGM. A General Meeting follows the AGM. The evening concludes with a supper and plate contributions are appreciated. Everyone is welcome to attend.

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Freebrook Property

Larry Crook and Kylie Freebody

There will be a field day at Larry Crook and Kylie Freebody's property on Sunday 14th August. Kylie and Larry have co-managed the Tablelands Regional Council's Community Revegetation Unit since 2005.

Most people would not even contemplate living at Topaz because of the very high annual rainfall (> 4m per year on average), however it is a perfect place for growing rainforest trees. Kylie had her eyes on land at Topaz since about 1992 when she would collect seeds in the area and be mesmerised by the fabulous Mt Bartle Frere views on sunny days. Kylie met Larry and they bought a 5-acre block in 1995. It was a reasonably flat block of land (for Topaz) and was previously the sports field for the Topaz State School next door, which in its hey day had an ant-bed base tennis court in the south-east corner and a cricket pitch towards the front middle of the block where it is flattest. Former fence post cutter Bluey Taylor from Kairi played there. He told Larry that the Topaz Cricket Club was very strict with dress rules and if you turned up sloppily dresed for the Saturday game, you had to shape up before walking onto the turf. Roy Burton, Topaz, said the best hit was in a northerly direction because the ball would then roll down towards the creek. The sports field was also used for community picnic days where there were games such as tug-of-war and wheelbarrow races. Often the participants would cross dress for these days.

The block was pretty bare of trees in 1995 with the exception of three very small patches of regrowth trees that were severely impacted by years of cattle agistment. It was Larry and Kylie's intention to revegetate a large portion of the block with local rainforest trees and build some sort of dwelling. Fortunately there was a large 20m x 18m shed on the block that had been built by a co-operative of 3 local farmers, over the top of the cricket pitch. Their plans fell through and the shed was then bought by a member of the Tulloch wine family who had visions of turning the property into a holiday resort. Plans were drawn up to convert the shed into a hotel restaurant, to build chalets, a swimming pool and a tennis court; a veritable Club Topaz! Luckily these plans fell through too and Larry and Kylie purchased the block and started planting their first 4000 trees between 1995 and 2002. The existing shed was converted into their house.

In 2002 Larry and Kylie also purchased the adjoining 11 acre block which shares two property boundaries with the 5 acre block. This property had some existing and regrowth vegetation along the creek and gullies. An Envirofund grant in 2004 provided for 6000 trees to be planted on this property in March 2005 with the assistance of the Eacham Community Revegetation Unit, Green Corps and Cairns TAFE students. The planting increased the width of the existing vegetation along the creek. Unfortunately, this planting was hit by Cyclone Larry 12 months later and then heavily frosted at 2 years of age, resulting in 10% of the area being replanted. Larry noted in his diary at the time of the cyclone: **Extensive damage to plantings and old growth creek trees**. In 2007 Larry successfully applied for a Landcare for Larry (the cyclone) grant to plant up a further 1ha on the northern side of the creek. This planting was also hammered by the 2007 frosts and 20% of this required replanting.

Kylie and Larry, with some help, have planted 13,000 trees over four hectares. The initial plantings are quite successful, however it will be very interesting to have a look at the six-year-old plantings that haven't developed so well and discuss reasons for this.

Stanton Property

Peter Stanton

My wife, Karen, and I purchased a 54.2ha property on Ault Road in the Boonjie area in September 1993. The area is 'super wet' with rainfall in the last 16 years averaging 4421mm p.a. Winters are frost free. In February 1994, when Geoff Tracey arrived with over 100 trees, we began a tree planting program which was to continue for 14 years. The forest that has developed from that initial planting is regarded by us as our memorial to Geoff, and our long term friendship with him.

The property consists of three basalt plateaux separated by two large creeks, headwaters of the Russell River, and adjoins the Wooroonooran National Park on part of the eastern boundary. Knowing the son of the first settler, we have been able to determine that the original forest was cleared between 1927 and 1936; the 1943 aerial photos show it as treeless apart from some very small patches of regrowth. It was abandoned as a dairy farm in 1958 and has not been stocked since. Six months prior to our purchasing it, more than half of it was pushed clean with a bulldozer and sown to grass to remove dense infestations of lantana and other weeds. These, however, quickly returned.

About 20ha of the property, mostly adjacent to the National Park, but also along the creeks and scattered in small patches across it, is well developed, relatively species rich, rainforest regrowth. The promotion of the further development of this was the highest priority in our plans to rehabilitate the property. Our plans were also guided by a belief that timber was an increasingly scarce resource, and that timber plantation establishment with local species could be an important part of any land rehabilitation program.

We began planting with a rough plan which was continually adapted as we progressed in the light of what we learnt about appropriate species and techniques. Our direction was also continually shaped by the nature of the landscape and the regrowth vegetation on it. Our operations have been complex in the landscape patterns that they have created, and labour intensive, and what we have learnt is far too great to encapsulate here. All that can be offered is a brief and somewhat inadequate overview of our approach.

Our resources have been the labour of Karen and myself on the planned basis of 4 days per fortnight, but there have been long periods when, because of the weather and the pressure of work, we didn't achieve that. Preparation for planting has involved spraying grass and the elimination of dense stands of lantana (*Lantana camara*), Asian bramble (*Rubus species*), and tobacco (*Solanum mauritianum*). In some areas lantana formed a dense understory to regrowth of *Alphitonia* and *Polyscias*. Good results were achieved by overspraying the lantana (using roundup in a 6 litre pressure sprayer) and planting under the regrowth canopy. Except for about 4000 trees obtained free, we have raised all our 20,000 trees from seed and in small tubes filled with soil derived from the property. Except for a small chainsaw we have no machinery.

Trees were planted at a small size using a crowbar, followed by intensive maintenance by Karen (with her 6 litre sprayer) who allowed no tolerance of the aforementioned weeds. Being a frost-free area, tobacco serves no purpose in sheltering the trees, and indeed considerably inhibits their growth.

While many of the plantings were of species with the best potential for timber production, a number of plantings were specifically designed to expand the habitat of regrowth patches and to join them to the large areas of regrowth. Where the landscape is now an intimate mix of our earlier rainforest timber plantings mixed with volunteer species, and regrowth patches, it is difficult to separate them visually. In the more exposed areas hoop pine (*Araucaria cunninghamii*) (which was once naturally widespread on the Tablelands and adjacent areas, but is now confined to small patches) has proved by far to be the most useful species. It is wind resistant, fast growing, quickly captures the site, suppresses weed growth and provides a benign shelter for the development of a rainforest understory (our ultimate goal).

Our plantings were completed three years ago, with a total of 23ha planted. In the process we have eliminated 30ha of lantana (some within the regrowth areas), and that, along with the nasties mentioned earlier are now difficult to find on the place.

In 2003 the whole property was declared a Nature Refuge with a Conservation Agreement that specifies in some detail how each part of the property (including the harvesting of timber) should be managed.

Thiaki Reforestation Experiment

Noel Preece

Demand for restoration of landscapes to sequester carbon and improve biodiversity outcomes has recently taken on a new urgency with the growing awareness that reducing emissions alone will not slow down the rate of CO2 entering the atmosphere and changing the world's climate. While forestry practices using monoculture tree species (often exotic species) have been well developed for most of a century in the Wet Tropics, reforestation practices using mixed native species for carbon sequestration and biodiversity benefits are relatively poorly developed and understood. Very little replicated experimental research into revegetation from grassed land to forest has been undertaken anywhere in the tropical regions of the world. Together with the reported high establishment and maintenance costs, the results of mixed plantings over the past two decades for ecosystem services have been variable, often with unsatisfactory outcomes.

On our Thiaki property south of Malanda, Penny van Oosterzee and I have established a revegetation research project in conjunction with the University of Queensland, University of Adelaide, Charles Darwin University, Cambridge University and Lancaster University, and partners Terrain NRM, Greening Australia, Stanwell Corp and Biome5. We reported the objectives of the research two years ago in TREAT's newsletter July-September 2009 - essentially to identify the most cost effective strategy for rainforest restoration with optimum carbon and biodiversity payoff. This is an update.

In January this year, 26,232 seedlings were planted in 48 quarter hectare plots in just one week, by a team of 20 enthusiastic people, which included 8 planters, 2 runners and 2 managers from Outland Resources. The planters used planting spades to plant the seedlings in sprayed rows. No preparation other than spraying was done. A remarkable effort - the planters worked fast, making us run the plants up and down the hills so that they could keep going. Some of the planters achieved 1200 trees per day on better ground, and on average they planted 750 trees per day. This was quite an achievement, considering the steepness of the site. We finished 3 days before Cyclone Yasi!

The preparation for the planting involved planning with four nurseries, with Tablelands Community Revegetation Unit (TCRU) and Timberglades finally taking on the lion's share of the job, to find and grow a specific set of species for the research project. Helen McConnell and Susanne Reynolds in particular deserve special mention for their efforts above and beyond the call of duty.

Collections of the seeds were made from 2009 to 2010, and the seedlings propagated from late 2009 to early 2010. All were grown in forestry tubes, because they were cheaper, and because they were lighter to carry around the goat country where the planting was to be done.

The final species propagated and planted are shown in the table below. Numbers were not exactly equal, depending on the numbers allocated to each plot.

Species list and numbers

Family	Species	Total no. of trees required
Lauraceae	*Cryptocarya oblata*	380
Lauraceae	*Endiandra sankeyana*	380
Lauraceae	*Litsea leefeana*	372
Lauraceae	*Neolitsea dealbata*	1820
Moraceae	*Ficus congesta*	380
Moraceae	*Ficus destruens*	380
Moraceae	*Ficus obliqua*	380
Moraceae	*Ficus septica*	1812
Myrtaceae	*Acmena resa*	380
Myrtaceae	*Rhodamnia sessiliflora*	380
Myrtaceae	*Syzygium cormiflorum/ S. kuranda*	1812
Myrtaceae	*Syzygium luehmannii*	372
Proteaceae	*Cardwellia sublimis*	1804
Proteaceae	*Darlingia ferruginea*	380
Proteaceae	*Lomatia fraxinifolia*	372
Proteaceae	*Stenocarpus sinuatus*	380
Rutaceae	*Acronychia acidula*	380
Rutaceae	*Melicope jonesii*	380
Rutaceae	*Flindersia brayleyana*	10,380
Rutaceae	*Melicope elleryana*	372
Sapindaceae	*Castanospora alphandii*	1804
Sapindaceae	*Guioa lasioneura*	380
Sapindaceae	*Guioa acutifolia*	380
Sapindaceae	*Mischocarpus lachnocarpus*	372
	Total	26,232

The experimental design is illustrated below. Essentially we are testing plots with one, six and 24 species, and 1.75 and 3.0 metre spacings. There are also two types of controls; one with weed control (but no plantings) and one without weed control (just grass). It all makes sense if you drive by on Upper Barron Road to see the giant checker-board pattern that looks more like an art installation.

Thiaki experimental design

Thiaki experimental design, plots are 50m x 50m with a 10m buffer between plots and 5m buffer around the edges.

- D1 = 1 species
- D2 = 6 species
- D3 = 24 species
- S1 = 1.75 m
- S2 = 3.0 m
- C1 = Weed control
- C2 = No weed control

Planter and runner

Planter and runner

The plots were surveyed and laid out in October and November by Andy Lilley so that they were all the same size and square. They are square on plan view, although on the ground they don't appear to be square because of the roughness and steepness of the ground. The plots have to be square on plan view so that the tree stems and crowns grow evenly at either 1.75 metres or 3 metres apart, as we are experimenting with spacings. These resulted in 289 trees per ¼ ha plot for 3 m spacings, and 784 trees per ¼ ha plot for 1.75 m spacings. This gives either 1089 or 3249 trees per hectare.

We had to spray between rainstorms from mid-November to mid-January, which was quite an effort by Andy and his team and ourselves. We used a Quikspray unit with self-winding hoses which helped us back up the hills, and glyphosate (Roundup PowerMax) for the first spray. We sprayed in strips across the contour, laying out the lines with a cord strung between marker flags. Flags were placed using a plumb bob because of the slopes. We strip sprayed so that the ground was not laid bare as were concerned about erosion and exposure and consequent drying of the ground, which would be detrimental to the sensitive seedlings. This was a wise move, because Yasi hit just 3 days after the plants went in, and the plants suffered no visible damage from cyclonic winds of over 200 km per hour. The week we planted turned out to be the only dry week in about 6 months, which was good for the planting team but not so good for the seedlings. Although we had lots of lead-up rain, the dry week stressed many of the plants and may have contributed to some losses.

Planters planting in the sprayed rows

Planters planting in the sprayed rows

Sorting the plants so that they were planted in the right plots was a rubics-cube task of a team from the University of Queensland and Charles Darwin University, and others, led by Dr Margie Mayfield. Pre-sorting was done at TCRU and Timberglades, and the plants were transported in shifts to our laydown area on Thiaki.

Early results from a 25% sample are showing that the success rate is around 80% survival. Overall, we are pleased with the work done, and look forward to some excellent research outcomes - and to a forest of square plots on our place!

So the trees are in and looking good, as we had good follow-up rain for several months after planting, which was the intention, and advised by the many foresters who spoke with us about the planting. We had the usual difficulty of follow-up spraying - grass is easier and quicker to grow than trees. We had to resort to Fusilade, which is 5 times more expensive than glyphosate, but it doesn't kill the trees, just the grass, so the expense is more than made up by the time saving.

Yet More on Yasi - Observations on Damage to Plantings

Angela McCaffrey

Whilst it is several months since the big cyclone, and damage was limited on the tablelands, there were still issues concerning revegetation sites which needed attention. At Ringtail Crossing Nature Refuge, our property on Kenny Road, many trees in plots three years old and younger were damaged in various ways and we took this as an opportunity to look at the types of damage and the suggested methods to save trees. We used a few different approaches and hoped to make records of how to get the best results.

Types of damage

Trees on north facing slopes took the biggest hit. All plantings which had not yet reached canopy closure (i.e. 2009 and 2010) suffered with trees being blown over either completely with roots coming out of the ground or partially over, left on a 45° angle. Some trees, mainly pioneers and figs, had their crowns smashed, others were snapped below the crown leaving just the trunk upright in the ground. Some trees were whipped around so initially they looked OK but you could see a funnel shaped hole around the base. Most of these ones died soon after.

Some patterns emerged. Most trees left on a lean were from the *Rutaceae* family i.e. maples, aspens and melicopes. Others, including quandongs, bleeding hearts, mallotus and wattles, i.e. most of our pioneers, were the ones with the smashed crowns. Guioas were the main victims of being whipped around. Several figs were smashed or tilted over. Soil type also played a part with trees in basalt red soil faring better than those in clay. Presumably the roots had more give in looser soil.

Methods of repair:

1. Smashed trees could really only be tidied up - pruned to remove any hanging branches to prevent further damage.
2. Nothing could be done for snapped trunks except wait and see.
3. Those that had been laid down flat with roots exposed were also mainly left where they fell as too many other trees needed attention and saving them seemed unlikely.
4. Fig trees soon showed signs that they were quite happy being smashed up and simply grew new roots from any branch touching the soil, providing several trunks for the price of one!
5. Most effort was put into trees on a 45° lean. Some were just pruned to take the weight off the top to assist them to right themselves. Some were staked using hessian webbing and a staple gun securing them to hardwood stakes. Some were left as they were, to see if they recovered without assistance. Those that were staked were only pulled up to a point where roots were not being broken. Inevitably some roots did snap as we tried to lift the trunks.

Results so far

The good news. Apart from the alphitonias, most of the pioneers survived and have grown new crowns so you would hardly know what had happened. Most of the quandongs are growing again regardless of their angle or broken trunks. As said before, the figs are growing as strong as ever with extra trunks developing, particularly the septic and red leaf figs used on edges and creek sides. Some trees which were snapped off completely are regrowing. Strong growth has been encouraged by periods of sunshine and rain, unlike after Cyclone Larry when it rained endlessly for six months.

The bad news. Less than 50% of staked trees are recovering so there must have been more root damage than we first thought. Many pruned trees and unassisted trees also gave up. Most *Alphitonia petrei* died regardless of treatment and most guioas died. Luckily both these species are some of the first to self seed into the planted areas. Maples were very hit and miss with many losses, a few recoveries and some still standing strong. Many of the casualties, especially the *Rutaceae* family, showed very poor root systems when we removed the dead ones. Some trees died later even though there were no initial signs of damage.

Conclusions.

These conclusions are drawn from only one site after one particular cyclone so other observations need to be taken into account. We would say staking fallen trees is probably more effort and cost than it's worth. Soft soils due to continued rain after the cyclone and strong gusts of wind meant some fell down a second time taking the stakes with them. However it definitely saved some and it definitely made one feel better. Pruning back was more beneficial involving no cost other than time but it's hard to know how much to take off as the trees don't always lift up. Figs can be left alone even if they look a mess and pioneers will mostly recover quickly after removing hanging branches.

Our main concern is to try to find a way to get better root systems developing early, especially on the maples and aspens. We have always used a high percentage from this family because of quick growth and large leaves providing both canopy and leaf litter. Maybe putting fertiliser in the holes at planting time is stopping the roots stretching out. Your thoughts on this and any other observations would be gratefully received.

Some lessons I have learnt from this exercise:

1. To try to remain more emotionally detached. Smashed up plantings are a depressing sight but this can lead to an over-reaction. Over-pruning is as bad as not doing any.
2. I love figs!

Yasi damage *Ficus crassipes*; Yasi damage staked trees

Yasi damage Ficus crassipes

Yasi damage staked trees

Exotic Gingers Now Declared Weeds

Simon Burchill

The Department of Employment, Economic Development and Innovation (DEEDI) formerly the Department of Primary Industries and Fisheries, has added three Hedychium species to the declared plant species lists. This change is particularly relevant to the Atherton Tablelands as the three ornamental gingers (*Hedychium species*) are well adapted to grow in this area. All three species are well adapted to grow wild in the local rainforest, and can form large dense stands that would displace native plants and prevent recruitment.

Yellow Ginger (*Hedychium flavescens*) has been declared a Class 1 pest as it is not known to be naturalised and could cause adverse environmental effects if established. This ginger is subject to eradication from the state, and landowners must take reasonable steps to keep their land free of yellow ginger. This species has been planted in a number of areas across the Tablelands.

Hedychium flavescens

Hedychium flavescens - Lake Eacham (Photo by R. Albress)

Two other gingers which have already naturalised in this region are Kahili Ginger (*Hedychium gardnerianum*) and White Ginger (*Hedychium coronarium*). These have been declared Class 3 pests as they are established in Queensland and have, or could have, an adverse economic, environmental or social impact. The primary objective of their Class 3 listing is to prevent sale, therefore reducing the risk of the spread of these pests into new areas. Under the legislation the definition of sale includes giving the plants away for free. While these gingers have not often been available for sale in nurseries, they are sometimes swapped between friends and have sometimes been sold at local markets. There are scattered infestations of these species on the wetter parts of the Tablelands, for example, I have seen some close to the Beatrice River near Millaa Millaa.

Hedychium gardnerianum

Hedychium gardnerianum - Peeramon (Photo by S. Burchill)

Landholders are not required to control Kahili Ginger and White Ginger unless their land is adjacent to an environmentally significant area. However the declaration of these species recognises that they have the potential to be significant environmental weeds, and responsible landholders, if they don't wish to eradicate these species, should ensure that they are prevented from spreading by removing flowers before they set seeds.

For more information on the declaration of these species visit the DEEDI website at www.dpi.qld.gov.au/4790_19013.htm.

All three of the declared *Hedychium* species are gingers growing 1 to 2 meters tall, and tend to develop into dense stands with generally attractive large flower spikes. They are native to the southern Asian region including China, India and Nepal and some have become major weeds in other countries including New Zealand and Hawaii.

If no flowers or fruit are present, all of the declared *Hedychium* species could be confused with various native gingers in this region, however the flowers and fruit are quite distinctive to allow identification.

Yellow Ginger has flowers that are yellow or yellow white, fragrant and carried on oblong spikes 15-20 cm long. The fruit are unknown. This species spreads from rhizomes slowly, dumped fragments and movement of soil, fill, flooding and contaminated machinery contribute to its spread.

White Ginger has attractive fragrant white flowers on spikes 10-20 cm long. The fruit are an oblong many seeded capsule, which is infrequently formed in cultivation. White Ginger is similar to Yellow Ginger in spreading from rhizomes and garden waste.

Kahili Ginger has an inflorescence 15-45 cm long, the flowers are pale yellow with red stamen filaments extending a long way past the petals. Fruit capsules are 1.5 to 1.8 cm long, 3 valved, orange inside and contain many bright red seeds, which are 5-6 mm long, and about 4 mm wide. Kahili Ginger spreads from rhizomes where already established. Conspicuous, fleshy, red seeds are dispersed by frugivorous birds as well as people. Kahili Ginger will also spread from garden waste.

All the gingers can be physically removed or a permit (No. PER12436) has been issued to allow the chemical control of the gingers. Visit the Australian Pesticides and Veterinary Medicines Authority website for more information: www.apvma.gov.au/permits/search.php.

Using a cut stump method is likely to be the most practical chemical control method, to avoid off target damage.

While the Hedychium species might seem attractive, they can displace native species and cause a loss of biodiversity, so it is worthwhile finding a suitable native alternative, for example Dianella species.

Trees We Love to Plant

Angela McCaffrey

Following on from my article last newsletter where I wrote about how participants of revegetation chose which species to grow, I now look at six families of trees in more detail over the next few editions. These six families make up the bulk of rainforest revegetation and are:

- Sapindaceae - Tamarinds and Tuckeroos
- Proteaceae - Silky Oaks
- Myrtaceae - Satinashes and Lilly Pilly
- Rutaceae - Aspens, Maples and Melicopes
- Lauraceae - Laurels
- Moraceae - Figs

I will concentrate only on local species in these articles but note that there are several thousands of species within these pantropical and temperate families.

Sapindaceae

With a few exceptions, most local species from this family are small to medium trees falling in the 10m-20m bracket. They generally have dense crowns of delicate looking compound leaves giving them a feathery or ferny look with flushes of brightly coloured new growth throughout the year and highly visible colourful fruit. Most of these trees will make you stop and go "wow!" at some time during the year, making them good for garden cultivation as well as revegetation. They have the added bonus of being bird attractants, helping to bring extra seed and additional species into revegetation sites. The seeds are large enough to handle easily, germinate quickly and evenly with a high percentage of success. They are usually enclosed in a bright, sweet smelling aril, some of which are edible to humans and used to make pleasant jams and sauces. Fruit is often produced in large quantities but with a short viability period, making it useful for direct seeding into patches of lantana, rainforest edges, scrubby regrowth or anywhere where grass is controlled by weed killer or shade, to accelerate natural regeneration of rainforest.

Commonly grown examples are:

Guioa lasioneura - Silky Tamarind

Although it is not classified as a pioneer because of its slower rate of growth it is still one of the first trees to naturally colonise abandoned pastures. Heaps of these little seedlings find their way by bird, bat or human intervention into the basalt soils. New growth is spectacular with red flushes paling to lime green before darkening. The fruit is three-lobed, red/pink with an orange aril and shiny brown seeds produced in bunches covering the tree.

Diploglottis bracteata - Boonjee Tamarind

A slow growing tree with stiffly upright pale green leaves clothed in silvery hairs. The fruit are large, three-lobed, velvety greenish yellow, splitting to reveal bright red arils containing large brown seeds. The arils are strongly aromatic and the seed germinates easily and quickly. It can be less hardy than most trees in revegetation.

Castanospora alphandii - Brown Tamarind

One of the larger members of the family, it can grow to 45m. Again fairly slow growing with the very distinctive new growth being lime green and hanging downward creating a large round crown. The great thing about this tree is once again the prolific fruit which look like small furry peaches and contain two highly viable shiny brown seeds. The seeds are very similar looking to chestnuts which is where the genus name comes from, part Latin, and part Greek, meaning chestnut-like seed. As well as germinating easily in a seed tray for tube stock, seed can sometimes be collected by the bucket full and scattered about non-grassy areas for abundant seedlings - remove the flesh and grubs first though.

Brown Tamarinds direct seeded

Brown Tamarinds direct seeded.

Mischocarpus lachnocarpus - Woolly Pear-fruit

A small shrubby tree with pink to apricot new leaves hanging down covered in rusty silky hairs contrasting against dark green older leaves making this conspicuous on forest edges. The fruit is small but orange to red-brown, velvety and splitting to reveal a bright purple aril with a blackish seed in it, so very visible. The amount of fruit is variable but germinates quickly if processed fresh. Grows well in wet years.

Toechima erythrocarpum - Pink Tamarind

Another beautiful small tree with glossy green compound leaves. The bright pink to orange grape-sized fruit split along three lines in the thick flesh to reveal three shiny black seeds partially covered with acid yellow arils attracting many birds to come and eat them. They are reliable germinaters and tough once sun-hardened so they perform well in revegetation plantings and grow fairly quickly.

Sarcotoechia serrata - Fern-leaved Tamarind

This one is not used much in revegetation as its natural distribution is very limited but I had to include it because it is so incredibly beautiful. Both its scientific name and common name refer to the highly serrated leaflets which look very delicate and fern like. New growth is pale pink and silky changing to a bright green. The fruit is oval and yellow with two orange-brown seeds inside. Many seedlings germinate around the base of the tree suggesting that much of the seed strikes where it falls and is not taken by birds. Grow this small tree in your garden if you get plenty of rain and you won't be disappointed.

There are many other beautiful examples of local trees from this family so look out for them. Information for this article was sourced from Fruits of the Australian Tropical Rainforest by Wendy and William Cooper and Australian Rainforest Plants vols I-VI by Nan and Hugh Nicholson.

Fruit Collection Diary April - June 2011

Species	Common Name	Collection Location/ Regional Ecosystem
Acronychia acidula	Lemon Aspen	7.8.2, 7.8.3, 7.8.4
Beilschmedia obtusifolia	Blush Walnut	7.3.10
Caldcluvia australiensis	Rose Alder	7.8.2, 7.8.4
Ficus leptoclada	Atherton Fig	7.8.4
Melicope jonesii	Evodia	7.8.4
Pittosporum venulosum	Rusty Pittosporum	7.8.3, 7.8.4
Pullea stutzeri	Hard Alder	7.8.2, 7.8.4
Rhus taitensis	Sumac	7.3.10
Syzygium australe	Creek Cherry	7.8.3
Syzygium canicortex	Yellow Satinash	7.8.4

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Field Day at Sunset Ridge

Dale Rogers

About 40 members and friends of TREAT met at Sunset Ridge, home of Sue and Ken Pyke, on Eastern Connection Road, at 2pm on 21st May.

A friendly welcome from Sue and Ken, and their six rollicking dogs, on a perfect day, and views for miles, set the scene for our visit to their property.

The tour began in the extensive gardens, with trees and lawn surrounding their home, and then moved down to the slopes on the northern side. There we started to realise the scope of the work they had undertaken, where the ground had been well anchored with appropriate planting, yet still maintaining the views across the Tableland from the house.

Their commercial orchard contained several varieties of Davidson Plum, ably described by Ken. The Finger Lime orchard was also interesting and the use of these two natives in an orchard was recognised as a rarity that we were fortunate to visit.

Revegetation following Cyclones Larry and Yasi was admired and recognised as another Herculean task. The dam area, with its water conservation plan, and surrounding planting, was a star! The fat cattle and clean, green pasture added another dimension to this attractive property.

The day ended with afternoon tea in the gazebo on the highest point of the house hill, where we enjoyed home-made fruit cake and Sue's special cheesecake topped with Davidson Plum jelly.

Nursery News

Nick Stevens

The wet start to the year gave us a few issues ranging from cancelled plantings to trees drowning in poorly drained soils. Followed up by a fairly sudden end to the rain, an extended dry period, and a bit of a cold snap in the early stages of the dry season, saw some further minor losses in our plantings due mostly to rapid drying out and light frost in some areas, in particular the planting on Williams' property at Peterson Creek. Infill planting has been undertaken at this site and the trees appear to be establishing.

No further planting was undertaken at Massey Creek as with the dry, cold weather we decided not to risk planting so late in the season. All going well we hope to establish around one hectare next planting season. Issues with straying cattle from neighbouring properties have resulted in some minor losses in both this year's planting and the older more established plantings. Although we had some light frost areas on the site, no losses have been attributed to frost so far this year.

In May we were joined by Brad Snow from TAFE along with six Conservation and Land Management students from Normanton who spent a Friday morning with us getting a taste of some of the tasks we perform in our restoration work.

Also in May we were joined by Andy, who is with us under a work placement provided by VPG (Vocational Partnerships Group Inc.) and it has been great to have an extra pair of hands around. Andy will be with us until late August.

The nursery hosted Malanda high school student, Thomas, for work experience for one week in June. Students from the School for Field Studies also visited the nursery over two Fridays in June.

Volunteer registrations are now due for all TREAT volunteers at the nursery. Previously this has been an annual event, but under the new DERM volunteer policy, once volunteers have provided their details on the new forms they will no longer be required to do so annually. Regular volunteers can collect a form from nursery staff next time they are in. New volunteers will also need to complete the DERM induction process, and all volunteers are required to sign the volunteer hours register on each working visit to the nursery.

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