TREAT Newsletter Dry Season July - September 2013

TREAT Annual General Meeting

The **31st AGM** will be held on **Friday 13th September** in the Yungaburra Community Hall commencing at **7.30pm**.

Our **guest speaker** will be **Campbell Clarke** from the Wet Tropics Management Authority, and he will be giving a presentation on the **'Making Connections'** project.

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 and the evening concludes with a supper. Plate contributions for supper are appreciated. Everyone is welcome to attend.

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Signing of a New MOU

Angela McCaffrey

On Friday 17th May TREAT celebrated the signing of the third Memorandum of Understanding (MOU) between QPWS and TREAT, extending the formal agreement for a further 5 years.

James Newman and Angela McCaffrey with the new MOU; The Celebratory Cake

The MOU sets out the commitments from each side and secures the future of the nursery until 2018. James Newman, QPWS Northern Regional Manager, and Angela McCaffrey for TREAT signed the document whilst a good number of volunteers and TREAT members watched on. Andrew Millerd from Atherton QPWS did the introductions after which James Newman and Angela McCaffrey each spoke of the value of the strong relationship between the two organisations. Everyone then enjoyed an extended morning tea with a special cake beautifully decorated with TREAT's logo and supplied by QPWS. The large number attending created a warm atmosphere as conversations flowed, instead of the usual call to "get back to work".

Phytophthora cinnamomi and TREAT plantings

Frans Arentz

Phytophthora cinnamomi belongs to a genus of plant-destroying water moulds that are capable of causing enormous economic losses on crops worldwide, as well as environmental damage in natural ecosystems.

Clive Brasier (*pers. comm.* 2013) suggested that *P. cinnamomi* is one of the world's most destructive plant pathogens, currently causing serious damage to forests and natural ecosystems in Western Australia, southern Europe and Central America, and to commercial horticulture worldwide.

World-wide, over 3000 species of vascular plants have been shown to be susceptible to *P. cinnamomi*. In Australia, *P. cinnamomi* has had a devastating effect on the Jarrah forests of Western Australia where it has been associated with the death of mature Eucalyptus marginata as well as causing mortality in the understorey, particularly among species of Proteaceae and Epacridaceae.

Phytophthora cinnamomi is widely distributed on the Atherton and Evelyn Tablelands, possibly as the result of historical movement of contaminated soil associated with forestry, agricultural and road-building activities. Feral pigs are also thought to play a significant role in the spread of the pathogen. It is possible to determine whether *P. cinnamomi* is present in a specific locality by testing the soil, either by direct plating on agar containing antibiotics or by baiting with plants such as blue lupins which are known to be susceptible to infection by the pathogen.

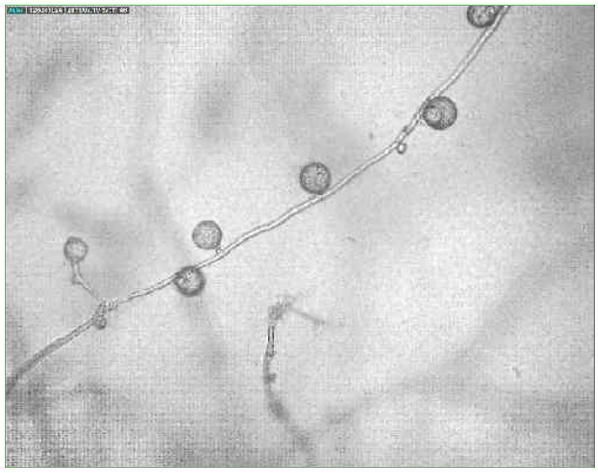
Baiting of soil for *P. cinnamomi* using blue lupins

Each year TREAT members and volunteers plant over 15,000 trees in community plantings and on their own properties. Provided that there is good follow-up weed control and watering, seedling losses in the first three months will be small and can generally be attributed to a number of causes - adverse weather conditions at the time of planting, poor planting technique, damage to seedlings during planting, uprooting of newly planted seedlings by bandicoots and grazing by wallabies. After the first three months, seedlings are generally safe unless hit by frost. However, a number of TREAT members have observed that during the first few years some young trees may suddenly wilt and die, particularly towards the end of the wet season. One of the contributing factors is infection by *P. cinnamomi*.

Phytophthora is morphologically very similar to true fungi but is more closely related to plants (particularly brown algae), as its cell walls are constructed mostly of cellulose. Over 100 species have been named and described and at least another 100 (possibly up to 500) species have yet to be discovered and/or described.

P. cinnamomi has a vegetative phase, which is responsible for the damage in plants, and a reproductive phase, which enables the pathogen to spread to new hosts. During the vegetative stage microscopically fine filaments, known as hyphae, grow within the plant root, breaking down pectin found within the cell walls of the roots. This will kill those root cells, destroying their ability to take up moisture and nutrients from the soil, resulting in symptoms of leaf loss, nutrient deficiency, or sudden wilting of leaves suggesting that the tree is suffering from drought stress.

When there is sufficient free water in the soil, such as during periods of high rainfall or excessive irrigation, the pathogen will produce sporangia, each containing up to 50 zoospores. These spores, which are able to propel themselves through water by means of flagellae, are chemically attracted to the roots of new hosts where they will initiate new infections. *P. cinnamomi* is able to survive for long periods in roots and in soil as thick-walled resting spores called chlamydospores.



Chlamydospores of *P. cinnamomi*, growing on agar

In the 1970s the pathogen was the focus of major research efforts in Victoria, New South Wales and Queensland following reports of major disease outbreaks in forests in those states. A review of the potential impact of *P. cinnamomi* and related Phytophthora species on tropical Queensland rainforests was carried out in 1998. This followed reports of significant patch dieback and the recovery of *P. cinnamomi* in rainforests at Dalrymple Heights on the Eungella Tableland west of Mackay and in rainforests north of Ingham in the 1970s and 1980s (Brown 1998). In the rainforests of Far North Queensland *P. cinnamomi* was recovered from under healthy trees as well as from under patches of dead trees.

There are essentially two major 'strains' of *P. cinnamomi*, called A1 and A2. There has been considerable debate among plant pathologists on the origin of these two 'strains'. The A2 can be found in forest and agricultural soil throughout Australia whereas the A1 appears to have a more limited distribution restricted to only a few localities. In Far North Queensland the A1 has only been recovered from rainforest soil on Mt Bartle Frere and Mt Windsor (Brown, 1998). Based on the historical impact of *P. cinnamomi* on the native vegetation, it is generally accepted that the A2 'strain' has been introduced to Australia since European colonisation, possibly from somewhere in SE Asia. Based on my own recent research, the A1 'strain' however, appears to be native to New Guinea, and I am currently carrying out further research to test the hypothesis that it has been in Australia for at least 11,000 years, having arrived from New Guinea when it formed one land mass with Australia during the last ice age.

Dead sapling, Beth's property

In the tropics the biggest economic impact of *P. cinnamomi* and related species is on horticultural crops, particularly avocados, papaws, macadamias, citrus and pineapples. Because these crops have a high potential cash value, control measures using chemicals can be undertaken. Such measures are not economically viable for rainforest tree plantings, particularly as the pathogen is widely distributed in the landscape. Disease management regimes that have been trialled include increasing soil calcium levels, which may result in increasing resistance of root cells to infection by *P. cinnamomi*, and soil composting in order to build up the microbial population that may inhibit spread of the pathogen between plants. A third management technique has been to plant tree species or cultivars shown to be resistant to *P. cinnamomi*.

Brown (1998) identified 22 rainforest plant species as hosts for *P. cinnamomi* (Table 1), but it is likely that there are many tropical rainforest hosts which have yet to be identified. It would be interesting to investigate which tree species grown by TREAT and QPWS at the Lake Eacham nursery are susceptible to *P. cinnamomi*.

It is important to ensure that seedlings coming out of the nursery are free of the pathogen. Hygiene protocols in use at the Lake Eacham nursery have been developed with this in mind. The biggest danger of introducing *P. cinnamomi* into the nursery comes from dirty tubes returned from plantings in the field. It is therefore important that these tubes are washed and steam sterilised prior to reuse. The soil mixture used for the tubing of seedlings is known to be pathogen free and volunteers are encouraged to clean their footwear on designated brushes before entering the nursery. In addition, seedlings are monitored regularly to check for any disease problems.

In the field, site conditions such as soils subject to water-logging or poor drainage may play an important role in expression of disease symptoms and can be used to predict the probability of problems occurring.

The level of losses in TREAT's mixed-species field plantings is generally small and, apart from not planting susceptible tree species in high-risk sites, nothing can realistically be done to prevent those losses. However, I would like to hear from TREAT members who have suffered tree losses with the symptoms described in this article. Testing of such trees will help determine which tree species are likely to be susceptible to *P. cinnamomi* and help to reduce planting losses in high-risk sites. **Email: arentz@activ8.net.au**

Reference

Brown, B. (1998). Occurrence and impact of *Phytophthora cinnamomi* and other *Phytophthora* species in rainforests of the Wet Tropics World Heritage Area, and of the Mackay region, Qld. Pp 41-76 *In* Gadek, P.A. (1998) (Ed). Patch deaths in tropical Queensland rainforests: association and impact of *Phytophthora cinnamomi* and other soil borne pathogens. Cooperative Research Centre for Tropical Rainforests, Ecology and Management. Technical Report, Cairns (98pp).

Table 1: Queensland rainforest host species for *Phytophthora cinnamomi* (Brown 1998).

- *Prumnopitys amara*
- *Cordyline murchisoniae*
- *Archontophoenix cunninghamiana*
- *Beilschmiedia sp. aff. B. obtusifolia*
- *Cinnamomum oliveri*
- *Cryptocarya corrugate*
- *Cryptocarya glaucescens*
- *Castanospermum australe*
- *Synoum glandulosum*
- *Myristica insipida*
- *Acmena resa*
- *Syzygium erythrodoxa*
- *Syzygium wesa*
- *Brackenridgea nitida ssp. australiana*
- *Buckinghamia celsissima*
- *Carnarvonia sp.*
- *Darlingia darlingiana*
- *Acronychia oblongifolia*
- *Flindersia brayleyana*
- *Argyrodendron actinophyllum*
- *Jagera pseudorhus*
- *Symplocos stawellii*

A Visitor from Kenya

Miki Bradley/ Barb Lanskey

Recently, TREAT members were surprised and delighted on a Friday morning to see Michael Lenaimado, from Kenya in his traditional Maasai clothing, sharing morning tea with us. He came to tell us about his work with scout Rangers in the southern Rift valley of Kenya, covering an area of approximately 850,000 ha.

Michael was visiting Australia, sponsored by the Commonwealth Government, to give a presentation about his work to the World Indigeneous Network Conference in Darwin. In November 2012, the Queensland Ranger Association (QRA) had sponsored Michael to attend the International Ranger Federation Congress in Tanzania, where he met Rangers Jolene McLellan and Miki Bradley.

The QRA then sponsored Michael's flights so he could meet some Rangers in Queensland, including the Rangers at Lake Eacham Nursery. He spent four days travelling Cairns and the Atherton Tablelands and gave presentations to Rangers in Cairns and Tinaroo. A proud man with strong culture, Michael wore his traditional Maasai clothing for the duration of his stay.

Michael is a Chief Ranger and works for SORALO, South Rift Association of Land Owners, which is a community conservation trust made up of 15 group ranches spanning the southern Rift valley of Kenya. The area is rich in culture, wildlife, ecology and landscapes which provide an opportunity for diversification of land use and livelihood generation.

Only 25% of Kenya's wildlife live within protected areas and the government's conservation arms are overstretched in these areas. SORALO's objectives are to enhance biodiversity conservation and wildlife management in the other dispersed areas, while at the same time improving the social and economic standards of the host community. It has established community conservation areas and promoted the creation of a main conservation area in the region.

SORALO has started a community scout program and now has a force of 40 personnel. The scouts are involved in day to day management of wildlife in the dispersed areas. Their specific role is mainly to carry out: anti-poaching patrols, environmental education, monitoring and surveillance of endangered wildlife, and mitigation of human/wildlife conflicts. SORALO has now established 5 conservancies and the scouts Force work in collaboration with the government and other conservation agencies.

Michael (far left) with the SORALO Community Scouts Force

They have achieved a change of attitude in the communities towards wildlife and there has been mitigation of human/wildlife conflicts and a corresponding increase of 34% in wildlife numbers. Communities have developed skills, knowledge and use of locally available materials.

SORALO is also spearheading the opening up of a Southern Tourism circuit linking Amboseli-Magadi and Maasai Mara Ecosystems. Tourists are visiting and using tourist facilities, creating more job opportunities. Various infrastructure has been obtained, including offices, gates and radio communication. Funding is needed for more field equipment such as vehicles for patrol and rapid response to human/wildlife mitigation action, and VHF radio communication systems.

Michael talked about the challenges of the communities with subsistence living, drought/famine and loss of livestock, and always the interaction with wildlife: human/ wildlife conflict and poaching for commercial gain or for bushmeat. Having a Scouts Operation Base in the Vulnerable poaching areas and training new rangers are part of the challenges.

Michael Lenaimado, Angela McCaffrey and Miki Bradley

TREAT volunteers listened with genuine interest and a great appreciation for the work Michael and his Rangers are undertaking. A few had travelled to Kenya and shared some of their stories with Michael afterwards. When Michael was saying his final goodbyes on the Monday evening he asked Miki to pass on his sincere thank you to all Rangers and the TREAT nursery volunteers for taking time out to listen to him about his country and the challenges his fellow Rangers face.

Miki is the secretary of the QRA which is an affiliated partner of the Thin Green Line Foundation, which raises money for the families of Rangers who have been killed in the line of duty, and prevents further Ranger deaths, on the frontline of conservation around the world. Miki is hosting a fund raising dinner at Yungaburra on 3rd August for the Foundation to mark World Ranger Day, on 31st July. Ranger Day is promoted by the 54 member associations of the International Ranger Federation (IRF), the Thin Green Line Foundation, and by individuals who support the work of Rangers and the IRF.

For more information: Miki - (mb) 0411 858 432

South Rift Association of Land Owners: **www.soralo.org**

Thin Green Line Foundation: **www.thingreenline.org.au**

Tablelands Wildlife Rescue

Bronwyn Robertson

A brand new group has started on the Tablelands dedicated to the rescue, rehabilitation and release of sick, injured or orphaned native wildlife. The unique wildlife found on the Tablelands and the specific problems faced by the area's native animals prompted a group of committed wildlife carers to establish the new group.

Habitat fragmentation and impacts from residential development have a big effect on native wildlife. The work of many local groups, including TREAT, to restore connectivity between vegetated areas significantly improves the safe movement of wildlife between remnants. Unfortunately however, carers still receive calls for many hundreds of animals requiring rescue each year, with some of the most frequent problems being animals hit by cars, attacks from dogs and cats and poisoning.

The new wildlife rescue group covers the Tablelands, including Atherton, Ravenshoe, Mareeba, Mt Molloy and Dimbulah. A 24 hour hotline has been established, which is manned by volunteers. Anyone finding sick or injured wildlife can call the hotline on **4091 7767**.

It's an exciting and busy time for members of the new group, and also an ideal time for anyone interested in wildlife rescue to join up. New members and carers are very welcome and full training is provided for all volunteers. Members are also covered by **Tablelands Wildlife Rescue's** permit to care for native wildlife. A workshop for beginner bird carers will be run shortly and interested people can call the hotline to register their interest.

Mount Quincan Habitat Protected

Barb Lanskey

There are now two Nature Refuges on Mt Quincan, protecting the volcanic crater wetland and its surrounding Mabi Forest under the *Queensland Nature Conservation Act.*

For some years, Kerry and Barb Kehoe have protected 8ha of their property with 'Mount Quincan Crater Nature Refuge' and in May this year, Richard Holme protected 43ha of his property with 'Mount Quincan Nature Refuge'. Together, these Nature Refuges cover the 5ha of crater wetland (divided between the properties) and 46ha of surrounding remnant and regrowth Mabi Forest. The volcanic crater wetland is listed as 'endangered' and Mabi Forest is listed as 'critically endangered', so this is a great outcome for this prominant feature located 3km south of Yungaburra.

Kerry and Barb Kehoe operate a tourist resort 'Mt Quincan Crater Retreat' on their property and have planted trees to improve habitat for tree-kangaroos and create a corridor for them down to Leslie Creek. Tree-kangaroos are regularly seen by visitors and TREAT helped plant some of the trees in previous years.

Richard Holme operates 'Quincan Quarries' on the southern side of the mountain, and has been able to re-align the quarry boundary so that it no longer impacts on the protected areas. Mt Quincan is a relatively intact example of a large volcanic scoria cone, active about 7,300 years ago, that is representative of the more recent volcanic activities that shaped the geology of the Atherton Tablelands.

The crater wetland is of international significance as an outstanding repository of fossil pollen. Richard said it was the fossil pollen which was used to age the volcano. The peat deposits within the crater have been the subject of several scientific studies, particularly as a record of climate change and associated plant and insect patterns over the last 10,000 years. With growing international focus on climate change, it is likely that this deposit will become even more important for global climate change studies.

Looking for Turbina

Evizel Seymour

Turbina, an introduced vine from North America, is taking over Mabi Forest and the Barron River but where is its source? This insidious weed is slowly strangling Mabi forests and if left unattended, remnant Mabi forests on private land will become pustules of weeds and disappear in the near future.

Turbina vine is thought to have been introduced into the region in the 1970s, and has made its way from the Curtain Fig National Park region, downstream to Tinaroo Dam, following the Barron River to the coast at Cairns.

Turbina is a scrambling vine that grows over 20 m high, developing thick rope-like stems as it ages. Sprays of fragrant white bell-shaped flowers open in the morning and close in the evening. The fruit is a papery beaked capsule 8-10 mm long, full of brown hairy seeds. The fruits and seeds float on water and can remain dormant while they wash downstream, spreading to other sites.

It has invaded rainforest margins and riverbanks and been quick to establish after two severe cyclones (Larry in 2006 and Yasi in 2011) battered the area. Where trees were blown down causing forest gaps, Turbina vine quickly climbed the remaining standing trees and established.

Particularly vulnerable are the precious remnants of critically endangered Mabi rainforest on private land near the Curtain Fig National Park.

Barron Catchment Care was successful in obtaining funding through a CFOC (2011) grant for a Mabi Remnant Project with an aim to restore and protect 105 ha of Mabi remnants on private land.

This project enabled the Mabi Forest recovery group to reconvene and gather information regarding the health of the remaining Mabi remnants on private land. The results very quickly determined that the Mabi remnants on private land are being strangled by Turbina vine.

Due to the significance of the Turbina infestation, Barron Catchment Care applied for and was successful in obtaining an Everyone's Environment grant with an aim to survey the area to determine the extent of Turbina on the Atherton Tablelands and along the Barron River.

Turbina stem, from an old established vine

A component of the Everyone's Environment grant was to do an aerial survey of Mabi Forest to record the infestations from the air, and determine where Turbina has established and if it coincides with assumptions from previous known records.

Aerial surveys were to be carried out when the vine was in flower, making it more obvious to see from the air. As learnt from organising aerial surveys, it was very difficult and tricky to plan ahead, due to working with nature: predicting the exact time of flowering, and weather conditions.

As Murphy's Law goes, the initial survey was postponed due to bad weather conditions and re-scheduled for 3 weeks later. The day before the survey, the vine was spotted in full flower, making it very easy to identify. On the day of the survey there was not a flower in sight. After much deliberation, it was decided to continue with the survey - in late June.

A strategic approach was developed to determine where the vine was established, with the outlying areas to be surveyed first. Then, if time permitted, the plan was to survey the areas where Turbina was known to exist, filling in the gaps. When the survey went ahead, areas were covered much more quickly than anticipated, with all sites surveyed.

The area surveyed was Curtain Fig NP, and Barron River and Mazlin Creek to determine where Turbina was established along the waterways. The outlying areas, e.g. Wongabel State Forest that has no previous records of Turbina, were also surveyed. There were no incursions of Turbina found in these areas.

Turbina vine, strangling Mabi forest

The aerial survey results showed that Turbina occurs in the areas initially known, with no outlying incursions. It has given us a more accurate account of where Turbina has established, but all GPS points need to be ground truthed, and as the vine was not in flower, there is a high possibility that some vines have not been detected.

The management team, made up of partners CSIRO, QPWS, WTMA and TRC (Wet Tropics Management Authority and Tablelands Regional Council), now have a more accurate map of where each infestation is, and can now develop an effective eradication and management plan. They are also aware that there could be large areas where the plant is established, but which didn't show on the survey. For this reason, the outlying areas will have to be surveyed at the next flowering season.

Recent Field Days

Barb Lanskey

May 25th - Tolga

It was a pity only 20 people turned up for this field day but farmers were very busy with their crops. It was a sunny afternoon with a great view of the Tablelands from the top of Bones Knob, where we went to look at the detention ponds above the butchery. They are at the top of the Spring Creek catchment and 2 ponds have been built across a gully, one small pond leading to another larger one. These were installed only at the end of last year, but with the combination of rain and sunshine, grass had completely covered the dirt areas. The trees planted on the banks had also established well. Water flows from here down the gully and across Tate Road, joining up with the K1 conservation drain on the other side of the Kennedy Highway and into Spring Creek.

The bus then took us to the bottom of Griffin Road where 3 detention ponds, from small to larger and larger still, were built in 2008 to catch the storm water run-off down Griffin Road. We could easily see, on the way down, how the water velocity creates havoc when it travels in a straight line. At the ponds, drop basins channel the water into the ponds, and thereby slow the flow. We walked through the 3 ponds and it was amazing to see how the trees that were planted on the pond banks had achieved canopy closure, and how the trees planted in the base of the third pond were marking the sections for sediment removal. There are access roads for trucks and machinery to recover the sediment trapped. The project has been very successful and in the first year, many tonnes of sediment were removed from the ponds and put back on paddocks.

At the third detention pond, Griffin Road

Our last stop was at Raso's property at the end of Willows Road, where TREAT has been helping Barron Catchment Care (BCC) with tree plantings over the last 3 years. This is in an erosion area caused by the volume of water coming from the K2 conservation drain, starting near Beantree Road. After Raso's property it ends up flowing into the Barron River, below Tinaroo Dam. At this site, extensive gabions were installed and bank battering works done. BCC has stabilised the bank soils with jute matting and planted trees. Again, the trees have established well and in some places, achieved canopy closure.

Afternoon tea was held under cover at the Tolga State School. TREAT would like to thank BCC for hiring the bus, and Evizel Seymour and Geoff Onus for leading the field day.

June 22nd - Ian Freeman's

Mark and Angela McCaffrey led this field day, but Ian was still present, despite recovering from an operation, and he talked to the group about various aspects of his plantings. For this day, we had a good turnout of 35 people, even though the field day coincided with the official opening of the 'Avenue of Honour' in Yungaburra. (We saw the helicopters fly over at the end.)

Ian's plantings show the positive results of good maintenance - keeping the weeds (especially grass) away from the trees and being vigilant with newly planted trees regarding their water needs, being mindful that they suffer when their root ball dries out on hot days. Unfortunately, we can't control the weather, and many of Ian's trees nearer the creek were killed by frost last year. Some infill planting had been done to replace losses, and we walked down to one of these areas first, where TREAT volunteers and students from the School for Field Studies (SFS) had recently put about 300 frost guards around the more vulnerable species. They are the pink covers which can be seen from the road. They are designed to retain some heat from the day and can be re-used. TREAT acquired 1000 of these guards and they have now all been put out - the volunteers worked on Friday mornings and got quicker at the job with practice.

Inspecting the frost guards

From here we walked around the first plantings, in a gully coming down from the national park. There was canopy closure in a lot of places. Ian had done a few side plantings, but these had suffered with the frost last year as well. He'd put in bird perches which we noticed, and they are well used.

The track then led us to the plantings done this year and here we were able to see the weed matting put around the trees to assist with keeping the weeds away from the trees during the 'Wet'. The mats are 700 mm square and are biodegradable. This was another first for TREAT, along with the frost guards. The job of spreading the mats around the trees (using 5 pegs for each mat) was done after the plantings, again with much assistance from the SFS students. Because of the poor 'Wet' this year, Ian has found that the weed mats have not shown a really positive effect, and in fact some of the lighter rain has seemed to run off the mats. To counter this, we made a point of putting some mulch in the middle of the mats which were put down later, to direct moisture to the root ball and help conserve it as well.

We didn't go across the creek, but wound our way up the 'Link' planting to the national park. From here we could look back on the plantings and muse on the view. Some of us clambered through a bit of undergrowth onto Cutler Road and walked along it back to Ian's shed for the afternoon tea.

Later this year, TREAT intends to hold a workshop at Ian's place about site preparation and maintenance, to help people manage their own planting projects.

Nursery News

Nick Stevens

QPWS and TREAT have renewed their partnership for a further five years with the signing of the 3rd Memorandum of Understanding at the nursery on Friday 17th May, with a good turnout of volunteers from TREAT and QPWS staff. QPWS management were represented by Northern Regional Manager James Newman and Area Manager for Wet Tropics Highlands, Andrew Millerd.

Trees were supplied to Ranger in Charge Les Jackson for infill planting at Eubenangee Swamp National Park to replace tree losses from the hot and prolonged dry weather in January and February this year. While planting, Les and his team just managed to get their vehicles out of the park, but had to leave trailers and planting equipment behind when a sudden persistent and heavier than expected downpour caught them by surprise.

Display trees from the nursery were supplied to QPWS Cairns to enhance their parks display at the Cairns Home Show and Caravan, Camping and Boating Expo held at the Cairns Showgrounds from 31st May to 2nd June.

In June the nursery had its 6 monthly NIASA (Nursery Industry Accreditation Scheme, Australia) accreditation and EcoHort inspection, conducted by Thea Pobjoy, Nursery Production/Farm Management Systems Officer for NGIQ (Nursery and Garden Industry Queensland). The nursery accreditation scheme promotes continuous improvement through industry Best Management Practice for crop hygiene, crop management, water management and general site management. EcoHort is the national environmental management system for production nurseries and growing media manufacturers. The nursery has been formally accredited since 1995. Once again, Thea was absolutely impressed with the presentation of the nursery and praised the efforts of TREAT's volunteers in keeping the number of weeds to a minimum and maintaining high quality nursery stock.

Fruit Collection Diary April - June 2013

Species	Common Name	Collection Location/ Regional Ecosystem
Acronychia acidula	Lemon Aspen	7.8.2, 7.8.4
Alchornea rugosa	Alchorn Tree	7.8.3
Alphitonia petriei	Pink Ash, Red Ash	7.8.2
Alphitonia whitei	Red Ash	7.8.4
Alstonia scholaris	Milky Pine	7.8.2
Archidendron lucyi	Scarlet Bean	7.8.1
Atractocarpus fitzalanii	Brown Gardenia	7.3.10
Castanospermum australe	Black Bean	7.8.3
Davidsonia pruriens	Davidson's Plum	7.8.2
Emmanosperma alphitonioides	Bonewood	7.8.2
Ficus congesta	Red Leaf Fig	7.8.2
Ficus fraseri	Fraser's Fig	7.8.3
Ficus septica	Septic Fig	7.8.4
Helicia nortoniana	Norton's Silky Oak	7.8.2
Lindera queenslandica	Bolly Beech	7.8.2
Melicope elleryana	Pink Evodia	7.3.10, 7.8.2
Melicope jonesii	Evodia	7.8.4
Melicope rubra	Little Evodia	7.8.3
Mischocarpus lachnocarpus	Woolly Pear Fruit	7.8.2, 7.8.4
Neolitsea daelbata	White Bollywood	7.8.2, 7.8.4
Pittosporum revolutum	Hairy Pittosporum	7.8.3
Pittosporum venulosum	Rusty Pittosporum	7.8.3
Placospermum coriaceum	Rose Silky Oak	7.8.2
Polyalthia michaelii	Canary Beech	7.8.1
Pullea stutzeri	Hard Alder	7.8.4
Vitex queenslandica	Vitex	7.8.2, 7.8.3
Zanthoxylum ovalifolium	Thorny Yellow Wood	7.8.2, 7.8.3

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