



UnderStories

Summer 2010 No. 48

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Acting Coordinator's Report

Hi Understorey Network members. Before Ruth left, I had started helping out in the office again, working on the Linking Biodiversity on Farms project. When Ruth moved on to her new position at the museum, I was able to take on an extra day acting as the coordinator to keep things ticking over until the position is refilled.

Although it has been a fairly quiet time, with a lot of people taking a break over the Christmas period, there has been plenty going on to keep me busy for two days per week. Since taking over from Ruth, I have been working on general administration, progressing the Caring for our Country projects, plus organising and delivering a busy summer workshops program. These include plant identification, seed collecting and propagation.

The Understorey Network was successful in receiving a grant from Clarence City Council to deliver a summer training program, and we are continuing to provide workshops for the Cradle Coast Authority and local groups such as Kettering Coastcare, Wildcare Deslacs, Hobart Bushcare and others. Another exciting new program will grow from a partnership agreement with NRM South to deliver a series of workshops covering topics from threatened invertebrates to plant propagation.

It will be a busy and exciting year, with a new coordinator managing the Caring for our Country Projects, delivering workshops, seeking new opportunities to further the organisation, and continuing to play an important role in Tasmania, promoting, protecting and restoring our biodiversity.

Remember when you are out and about this summer please do some seed collecting. We would be most grateful to receive seeds from all over the state to add to our seed bank. Remember to record the species name, date and location it was collected from. If you need any advice or information on seed collecting, don't hesitate to call the office or send an email. Thank you and a Happy New Year!

Oliver Strutt

NEW METHODS FOR PLANTING TREES IN TREE DECLINE AREAS

by Anna Povey

Part Two.

Last issue we looked at how Rowella Landcare Group used burning and logs to greatly improve their planting success. This followed research by Tanya Bailey of the University of Tasmania, found that most eucalypt seedlings in natural dry forest could be found near logs, stumps or fallen branches, mainly in ashbeds.

This time we describe the work done by Launceston City Council (with leadership from arborist Gordon Paul) to improve mature tree health and planting success in urban bushland reserves.

Trees need fungi and mulch – Launceston City Council

Many reserves around Launceston are suffering from eucalypt dieback. Arborist Gordon Paul realised that fungi, and the fallen branches and logs which support it, could be part of the solution.

There are many, many species of fungi in natural forests, even though they may not always be visible. Some are saprophytic (eat dead wood etc), some are parasites (feed on living plants etc and damage them) and some are mutualistic (are fed by living plants, but benefit them).

Typical mutualistic fungi are the mycorrhizal fungi which are very important for plant health, especially in Australia's nutrient-poor soils, where these partnerships are often essential to a plant's survival. About 90% of plant species form mycorrhizae and in many of these associations between 15% and 30% of the food produced by the plant moves through to the fungi. The associated fungal mycelia are adept at extracting minerals from the soil and these pass through to the plants. Mycorrhizal fungi can also protect plants against pathogenic fungi and micro-organisms.

Gordon suspected that management of bushland which includes removal of fallen branches and leaf litter (for fire hazard control, and also by informal woodhooking) may be changing the balance of fungi in our local reserves. By mak-

ing it difficult for some fungi (those that live in dead wood etc) to survive in our remnants, we may be removing competition for "bad" fungi like *Armillaria luteobubalina*, the Australian Honey Fungus.

This native fungus is an aggressive pathogen that is capable of attacking and killing woody plants from many genera. The fungus becomes a serious killer in disturbed habitats, destroying the food and water transport systems of its host, and then living on the dead plant's tissue for many years.

With this in mind, Launceston City Council has embarked on a trial to re-establish a variety of fungi in reserves. Under Gordon's supervision, habitat for fungi has been provided – by constructing mounds of mulch and branches. (N.B. The mounds are integrated into the council fire management strategy for safety.) The material for these has come from the reserves themselves, as a result of normal maintenance. The removal of branches has been done by "shatter pruning", which results in a messy branch stump that will provide habitat for more fungi (and perhaps in time, some hollows for fauna).

This shatter pruning went against the grain for many of the arborists employed on the task, for whom neat, fungus-discouraging cuts are normally "best practice" in parks and gardens!

Seedlings of several local species of trees and shrubs were planted into the mounds in the spring of 2008 (before the dry summer that year). No plant guards were provided – the seedlings are at the mercy of the vast numbers of local wallabies and possums. At that stage no fungi were added – fungi have been added later to some mounds.

Even without fungi, the seedlings which were planted last year into mulch mounds are doing extremely well. Fantastic growth was apparent even after our hot summer and before the recent wet winter. Now, after the wet winter, the plants are up to 2 metres tall (see picture), only one year after planting. The mulch seems to have greatly helped the water balance of these seedlings. It may also be that natural fungi have taken up residence in the mulch. It is also possible that the carbon in the mulch helps to reduce the excess nitrogen that can occur in sites with weedy annual grasses. Incredibly, there was almost no sign of browsing on the plants I saw, though why a bit of mulch and branches should dissuade the wallabies I have no idea. Perhaps they mask the scent of newly dug earth and newly planted seedlings.

Some of the mulch mounds have recently been sprayed with a solution of various fungal spores (appropriate species), and monitoring of fungal populations and the health of surrounding mature eucalypts is underway.

The fungi-ed mounds have only recently been planted (winter 2009), so no results yet on whether the fungus helps in addition to the mulch.

There is a lot to this project, with invertebrates also intended to be monitored. No matter how the fungi, invertebrates and eucalypt decline goes, the benefits of the mulch/branch mounds to seedlings seems obvious. We will see if the fungi also make a difference to these new plants and to the mature trees around them.

For more information on this project, contact Gordon Paul
(Gordon.paul@launceston.tas.gov.au).

References:

Fungi and the Environment -<http://www.environment.gov.au/biodiversity/abrs/publications/fungi/environment.html>



Picture shows Bronte Whish-Wilson with large seedlings (planted 1 year ago) in mulch (with no fungi)

Tasmanian Seed Conservation Centre

Online Germination Database

100's of years.

To realise their full potential seeds need to be germinable. In the TSCC laboratory germination trials are being run continuously to find the best ways to get high germination from each collection. All the data from these trials is recorded onto the seed bank database system.

Background

Behind the scenes at the Royal Tasmanian Botanical Gardens lies the Tasmanian Seed Conservation Centre (TSCC). This facility plays a key role in the conservation of Tasmania's flora by storing seed for

Who is it for?

From scientists to gardeners, many people are frustrated at the difficulty of growing Australian native plants from seed.

The Royal Tasmanian Botanical Gardens (RTBG) online germination database will provide information to help resolve some of these difficulties.

James Wood

Accessing the data

Driven by the principle of 'open disclosure' set out in the RTBG's Plant Conservation Policy, the germination database is available to the general public via the RTBG website at

www.rtbg.tas.gov.au/tasgerm.html

In January 2009 the database held over 2100 completed germination tests conducted on over 400 different species. Although currently modest, species coverage this will increase with time. Long term, the seed bank aims to hold data for the entire Tasmanian flora (~3,600 taxa) including various provenances.

You can search for germination data either by plant family or genus. Simply select a family or genus from the menu on the database web page and press the report button next to it. This will generate a PDF file for you to download onto your computer.

James Wood

With this resource we hope to help:

- scientists investigating wild plant germination behaviour;
- people working in plant conservation;
- amateur growers, and
- native plant nursery owners.

In doing so we hope to facilitate the:

- management, reintroduction or re-establishment of native plant communities;
- expand our knowledge of seed germination behaviour, and
- promote the planting of water efficient and wildlife friendly gardens.

www.rtbg.tas.gov.au/tasgerm.html

The TSCC is a member of the international Millennium Seed Bank Project.

Explore the possibilities

THREATENED PLANTS IN THE UNDERSTOREY

by **Phil Collier**: President of Threatened Plants Tasmania

Email: phil@rubicon.org.au

Not all understorey (and over-storey) plants in Tasmania are equal, according to the Tasmanian *Threatened Species Protection Act 1995* (TSPC Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), plus associated schedules and regulations. Both of these Acts enable members of the public to nominate species of flora and fauna as threatened in one of several categories. Nominations are assessed by expert committees, resulting in a possible recommendation to list the species under the respective Act. Typically, endemic species that are listed as endangered or vulnerable under the TSPC Act can be successfully nominated under the EPBC Act for additional protection and possible access to Commonwealth resources to assist with species "recovery".

Focusing on the TSPC Act, the categories used for threatened species are:

- **Endangered**: Species that are either *in danger of extinction* because long term survival is unlikely while the factors causing the species to be endangered continue operating, or *presumed extinct* on the grounds that no occurrence of the species in the wild can be confirmed during the past 50 years;
- **Vulnerable**: a species which is likely to become endangered while the factors causing it to be *Vulnerable* continue operating;
- **Rare**: a species which has a small population in Tasmania that is not endangered or vulnerable but is at risk.

The number of Tasmanian vascular flora species in each category is shown (as at August 2009)

TSPCA Category	Number of species
Endangered – presumed extinct	21
Endangered – in danger of extinction	122
Vulnerable	61
Rare	256

With 460 species of native vascular plant plus 30 non-vascular flora species in Tasmania listed as threatened, what does this mean for The Understorey Network and other interested organisations and people? In short the TSPC Act provides some protection for listed species and a process for recovery of priority species. Protection is provided in part through a permit system for anyone who needs to collect or interfere with a plant or population of a listed species. Recovery is based upon the identification of one or more "threatening processes", with recovery plans being prepared for priority individual or groups of species.

One of the objectives of the TSPC Act is "to educate the community in the conservation of native flora and fauna". To this effect, there is a great deal of useful information about Tasmania's threatened species on the web at <http://www.dpipwe.tas.gov.au/threatenedspecieslists>. Here you may find interim note sheets, listing statements, and/or recovery plans that provide information about the species, their distribution, threatening processes etc. These documents are based upon a comprehensive information system for threatened species called the *Natural Values Atlas*, which is integrated with the *LIST*, (Land Information System of Tasmania.) The public may see maps of the distributions of threatened species using the *LIST*, and interested people may register as users of the *Natural Values Atlas* to see further details about individual observations of the species. For more information see www.naturalvaluesatlas.dpiw.tas.gov.au and www.thelist.tas.gov.au.

The framework described above is very welcome, so what's the catch? With 460 species of vascular flora listed, there is a huge challenge to manage all of these species effectively. Botanists at the Threatened Species Section, Department of Primary Industries, Parks, Water and Environment are responsible for administering the TSPC Act, effectively managing the regulations and providing up-to-date information to enable good decisions to be made. They have very limited time for on-ground implementation of recovery plans. This is where the newly constituted Wildcare group, Threatened Plants Tasmania (TPT), aims to assist.

TPT recognises that local Landcare and Coastcare groups often have the knowledge and wherewithal to be effective managers of threatened species in their own locality. Local knowledge and action is likely to be the most effective long-term insurance for threatened species. There are also other organisations, including the Understorey Network, with invaluable knowledge of threatened and non-threatened flora. TPT's activities have sometimes been "gap filling" in

locations with no local groups of interested people, for example:

- weeding the priority grasslands at Salt Lagoon Nature Reserve, Tunbridge, and
- planting the Miena Cider Gum (*Eucalyptus gunnii* subsp. *divaricata*), a tree of the Tasmanian central highlands that has experienced serious dieback.

TPT also fills a distinctive niche in monitoring the needs of various threatened species. In conjunction with the *Flora Recovery Plan: Tasmanian Threatened Orchids 2006-2010*, TPT is mid-way through a Threatened Species Network Community Grant focusing on orchid conservation. The grant enables TPT members to:

- search for new populations of threatened orchids;
- effectively monitor priority orchid populations over several seasons. Dr Fiona Coates led workshops for members in November 2008 to introduce the techniques that she has applied successfully for 20 years in Victoria;
- mentor other members and community groups to monitor additional threatened orchid populations; and
- organise controlled burns by professionals to enhance priority threatened orchid populations.

While orchids tend to capture the imagination of TPT members, it is the grasslands of the Tasmanian midlands that support the highest density of threatened species. These grasslands have mostly been grazed over the years, with some of the best remnants being in cemeteries, golf courses and other reserves. A small property at Pontville is the focus of a monitoring project looking at two vascular plants and two lichens. The response of the species to an ecological burn in autumn 2010 will be tracked to provide input to the management plan for this site, given that fire response of these species is not known.

With assistance from the Threatened Species Section, TPT has also submitted a proposal to Cradle Coast NRM to conduct further monitoring of species at The Nut and the Vale of Belvoir amongst other activities. There is much that we need to do if we are to be effective managers of our threatened species. Please consider joining TPT if you would like to help by emailing threatenedplantstas@gmail.com.



Caladenia caudata a Tasmanian endemic orchid that TPT is monitoring at Henry Somerset Orchid Reserve, Latrobe (photo: Phil Collier)



Members of TPT measuring x and y coordinates for a specimen of Caladenia tonellii for the purpose of monitoring (photo: Peter Tonelli)

WHAT'S ON

- | | |
|--------------------|---|
| Seed Collecting: | Wed. 20 Jan. 10am
Kettering |
| Seed Collecting: | Sun. 24 Jan. 10am
Mortimer Bay, Sandford |
| Plant Propagation: | Wed. 10 March
Clarence (TBC) |
| Plant Propagation: | Sun. 14 March
Clarence (TBC) |

There will also be additional dates for seed collecting and propagation around the state, check you emails or visit the website to find out more.

COMMUNITY ACHIEVEMENT AWARDS

Stand Up and Be Counted

On Saturday 14 November the Community Achievement Awards were presented at a Gala Dinner held in the Ballroom of the Grand Chancellor Hotel. Awards were made in nine different categories and Ruth was one of three finalists in the Environment and Sustainability Award sponsored by Nyrstar. The other two finalists in this category were Southern Coastcare Association and Tasmanian Land Conservancy.

Annie and Brian Griffiths, Rupert and Wyn Manners and I donned our party wear and made up a table to support Ruth at this prestigious event. The Master of Ceremonies was Peter Murphy of Southern Cross T.V. and during the evening we enjoyed fine food and wine, good company, with live music in the background. We were also treated to some very inspiring stories as the finalists in each category took to the stage.

There was a buzz of excitement in the air and anticipation grew as Ruth's turn approached. Three of us accompanied Ruth into the limelight as she accepted her Certificate as a finalist and as she summarised the importance of the Network in the limited time allotted to her. Looking out from the stage at the hundreds of community representatives present was mildly intimidating but also enlightening. It was uplifting to realize the level of commitment shown by community volunteers in so many different areas.

Congratulations to Southern Coastcare who were the eventual winners in the Environment Category and congratulations to Ruth for making it into the Finals and promoting the Network at such a prestigious event. It was, for all of us who attended, a special evening.

by Mary Jolley

COMMITTEE MEMBERS

*Rupert Manners
Mary Jolly
Anne Griffiths with
ex-coordinator
Ruth Mollison
being presented with
the award by
Steve James*



FROM THE PRESIDENT

I hope you all had a happy Christmas, with enough cheer but not too much! We look forward to another year of success for the USN, though by necessity now with a major change. Unfortunately our wonderful coordinator, Ruth Mollison, has left us and we are in the process of replacing her. Our advertisements brought an amazing number of expressions of interest, and we have some excellent applications to consider before interviewing and appointing a new co-ordinator. It's not going to be easy as there is a wealth of talent out there. Meanwhile Oliver Strutt has agreed to keep the USN ticking over. He's doing a great job and we are exceedingly grateful to him for stepping in to help. Bless you Ollie!

We are also working hard with the relevant powers-that-be to try to get core funding for salaries and office costs, which are not funded by grants for specific projects. We are asking for funding for three year blocks of time so that we have some security and an adequate time-frame for the provision of local provenance indigenous plants. We can only hope...

Meanwhile keep the water up to those little plants, whether in tubes or the ground, as these hot days with wind dry out the soil very quickly. Hard to imagine that only 2 months ago we were complaining about too much rain!

Anne Griffiths

NATIVE GARDENS ON THE NORTH WEST COAST

by Ruth Mollison

The Cradle Coast Natural Resource Management Group recently promoted the use of native plants in coastal gardens through a Coastal Native Garden competition. The aim of holding the competition was to encourage gardeners to plant natives to provide habitat for local fauna and to decrease the risk of garden plants escaping over the back fence and becoming a weed along foreshore areas.

The Understorey Network was contracted to draw up the competition guidelines and organise the judging of the gardens.

Over a dozen garden entries were received, located along the north west coast from Sisters Creek to Port Sorell. The three judges, Iona Mitchell from 'Gardens for Wildlife', Dick Burns from the Australian Plant Society and myself then had the enjoyable job of visiting each of the properties and chatting to the gardeners, before making the very difficult decision of the winning garden. It was a very inspiring couple of days, to see the beautiful landscapes created out of using native plants .

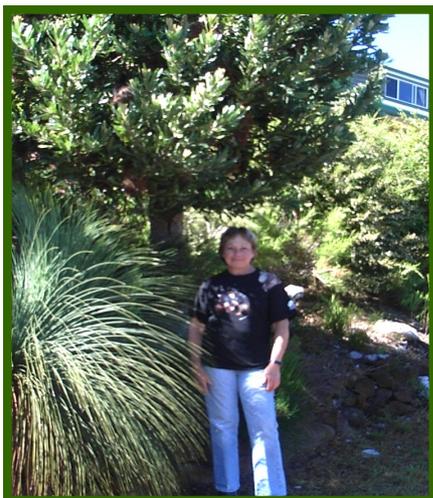


Robert Oakley

project to extend an already extensive cottage garden, into the adjacent paddock. This project is a great example of how revegetation on an intensive scale can work, with native grasses and daisies, plus a mix of understorey shrubs and trees recreating a native grassland habitat on degraded pasture.

Toni Gurren at Devonport has transformed the small cottage garden of her heritage cottage into a miniature bush landscape, complete with frog pond and wet sclerophyll forest in pots down the shady side of the house.

The overall effect is of a peaceful retreat, with the soft textures and muted colours of the native plants.



Carol Baker



Toni Gurren's Cottage Garden

Carol Baker at Sisters Beach uses natives to solve the problem of gardening on a very difficult rocky steep terrain. The site has natural stone terraces which are complemented by the soft colours and textures of Australian and Tasmanian native plants.

Further along the coast at the Don River, Robert Oakley has taken on an ambitious landscaping

The winner of the competition, Jill Roberts at Ulverstone, has had a passion for native plants all her life, and has transformed an exposed suburban corner block into a private oasis, for people and the local wildlife. The garden is very functional, with a mix of groundcover and native grasses reducing mowing to a minimum. Shade is provided over the driveway with several creepers plus a native shrub screen along the footpath

providing privacy. Jill has thought about clustering, creating an overstorey with several mallee-type gum trees, with layers of shrubs and ground covers under these. The garden is easily accessed with wide sawdust paths which lead though several garden rooms to give that element of surprise to the garden.

These are just samples of the wonderful gardens we visited. All the gardeners were winners really, with the beautiful landscapes they had created to enjoy at leisure, providing habitats for local birds, insects, lizards and frogs.



Jill Roberts



The three judges: Ruth Mollison, Dick Burns and Iona Mitchell.

APOLOGIES

Apologies to Val Brown who was inadvertently called Christine Bateman in the Spring edition. Val assisted Susan, Mary and Anne prior to depot day in loading over 17,000 tubes into a container for sterilizing.

Apologies also for the black and white Spring edition of the Newsletter. There was some misunderstanding with the printers!

FAREWELL FROM RUTH

The New Year has heralded new changes for myself and the Understorey Network. I have decided the time has come to try something new. I have just started a position at the museum in the invertebrate section. This is an opportunity to indulge in my fascination with small spineless beasts, and perhaps learn more about the amazing close relationships between plants and butterflies, snails and bugs.

I will continue to be involved in the Understorey Network as a grower, and as a volunteer coordinator for the Victorian Bushfire project. I have thoroughly enjoyed my five years with the network—the best part of the job is working with so many passionate people. I have made many good friends around the state, for which I am grateful.

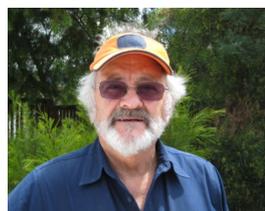
The Understorey Network is now an established part of Tasmania's non-government organisations and occupies a unique niche in natural resource management. I believe this special organisation will continue to flourish and grow with a change in its coordination bringing new ideas and fresh energy.

So farewell and best wishes for the New Year,

Ruth

NEW MEMBERS

The USN would like to welcome William Hurst and Gillian Shannon to our list of volunteers.



William (Bill) and his chainsaw, brushcutter and expertise is proving a great asset to the community garden and the results are already evident at the Tolosa Street site. Gillian has edited the Summer edition of 'Understories' and we welcome her skills in this area. We hope our new volunteers are enjoying what they are doing as much as the committee enjoys having them on board.

Amanda