



UnderStories

Autumn 2008
No. 41

Contact Details

Enquiries, newsletter articles and memberships to:

Ruth Mollison

Understorey Network Coordinator

Ph: 6234 4286 Fax: 6234 4286

Mobile: 0407 352 479

PO Box 4535 Bathurst Street Hobart 7000

Office: 148B Elizabeth Street Hobart

ruth.mollison@understorey-network.org.au

Steering Committee Members

President: Anne Griffiths

Vice-President: Joan Rodrigues

Secretary: Mary Jolly

Treasurer: Rupert Manners

Committee members: Brian Griffiths

Warner Wait

Amanda Cole

Visit our website and Plant Propagation Database at:

www.understorey-network.org.au

The Understorey Network would like to acknowledge the support of NRM South, the Tasmanian Government and the Australian Government.



Australian Government

In this issue

- Waverley Flora Park Seed Collecting
- Stimulating Brews from the Hop Bushes Part 2
- A Closer Look at Tasmania's Native Grasslands
- Propagation Boxes for Cuttings
- Seed Collectors of Kettering
- A Closer Look at Tasmania's Threatened Flora

Coordinators News

The weather has been very fickle lately, from snow on Mt Wellington in February, to the hottest March day for 40 years! It's particularly difficult at the end of summer to keep the watering regime going with tube stock, but it's not long before the cooler months and hopefully some rain, so plants can go in the ground. I hope everyone has had a successful growing season – I have had good reports from some new growers, who have had very good success rates with germination, and have been pleasantly surprised with how easy it is to grow native plants from seed.

If you did have some failures and need to make up an order, please let me know so I can either put a request out to other growers for donations, or fill the gap with plants from the Tolosa Community Nursery. It's good to hear about the failures as well as success stories, as it may mean checking our seed stock for viability.

We now have oodles of seed in paper bags waiting to be cleaned and packed away into the seed bank – thanks to everyone who sent seed in. Seed donations combined with a couple of very successful seed collecting field days run by Oliver have ensured enough seed is in stock for the Spring Growers' Season.

Oliver is also putting together five seed cleaning kits, consisting of a tub with stacking sieves, seed cards, zip bags, guidelines etc, that will be available for loan by community groups, for seed cleaning and collecting.

The materials for these have been generously funded by a grant from the Australian Plant Society. Please contact me if you would like to borrow a kit, they can be transported around the state via Redline bus – payment for the loan is some cleaned seed returned with the kit!

Ruth Mollison

Message from the President

The wonderful rain we have had in February has hopefully put some of the sub-soil moisture back so that we can start planting soon, especially if we can get some follow up rain. This means that very soon the "Growers" can hand over the seedlings to their "Receivers", so I hope those of you who asked for plants to be grown for you are preparing your ground now, getting ready to get the plants into the soil.

Just a few things to bear in mind.....

Receivers

- Please treasure your plants!

A lot of time, water and emotional energy go into providing these plants for you, apart from the cost to the USN itself. Our growers have to be pretty dedicated and the effort they put in should not be underestimated or taken for granted.

- Follow up watering is a **must!**

Gone are the days when we could depend on reliable winter and spring rains. Watering into the second and even the third summers will probably be a feature of the future.

Planting with saturated water saving granules e.g Yates water wise water storage crystals, has been suggested as a possible labour saving exercise and I think well worth a try.

- PLEASE return your empty pots, or at least arrange for them to be picked up from a central location. The pots are very expensive - re-using them saves money and of course the environment.

Have fun planting, and enjoy watching and helping your plants to grow!

Anne Griffiths
President



Volunteers Wanted for 'tube drop depots'



To assist growers and receivers to return their empty tubes and save us money, the USN is looking for volunteers who would like to nominate their residence/work place as a place where other members can drop off their empty tubes.

If you would like to offer your place as a drop off centre please Phone: 6234 4286 Mobile: 0407 352 479 Fax: 6234 4286 or email ruth.mollison@understorey-network.org.au

Waverley Flora Park Seed Collecting

The Waverley Flora Park Landcare group may lay claim to being the oldest Landcare group in Tasmania, as it has been in existence since 1990.

However like all Landcare groups it waxes and wanes in

membership and at present needs some new members.

The Understorey Network, in partnership with Greening

Australia Tasmania, held a seed collecting field day on Sunday 3rd of February to raise interest in the park, amongst local residents, as well as learning new skills in native seed collection.



The park is the 'jewel in the crown' of Hobart's hilltop reserves, forming a backdrop on the eastern shore to Mornington, Bellerive and Howrah. It has high conservation values as woodland native grassland and has exceptionally high biodiversity due in part to the varied geology and aspect of the area. Winifred Curtis, the botanist who wrote the Students' Flora of Tasmania chose the park as a teaching site for her botany students, because of the wide range of plants found there.

The park also has an interesting history as the site of a sandstone quarry used in the 1800's to source high quality sandstone to construct some of Hobart's historical public buildings. Sandstone blocks from Waverley were sent as far afield as Auckland in New Zealand, to build the city's post office.

Those attending the field day collected seed from the copperwire daisy (*Podolepis jacenoides*), the back sheoak and drooping sheoak (*Allocasuarina littoralis* and *A.verticillata*), the everlasting daisybush (*Ozothamnus obcordata*) and the tufted poa (*Poa siebieriana*).

The park has fantastic views of Hobart, Mount Wellington and the Derwent River plus a myriad of butterflies out at present, so is well worth a visit. There are several entry points - from Mornington, Bellerive and Howrah Check the street atlas for directions.

Any assistance for the Waverley Park Landcare group would be much appreciated. Please contact Phil Watson at Clarence Council Ph (03)6245 8619 Ruth Mollison Understorey Network Coordinator

Stimulating Brews from the Hop Bushes

Part 2 Phil Watson

Seeds are protected by Ants

Once the Hop Bushes release their seeds onto the ground, ants have co-evolved a mutually beneficial process to assist their survival from both fire and seed predation. This symbiotic relationship relies on the attraction to the ant of the nutritious fleshy attachments (elaiosomes), which they busily collect and subsequently secrete a couple of centimetres below the woodland's floor. Here protected from the surface environmental vagaries they serve as an underground larder. This process of dispersing seeds by ants has the descriptive name of *myrmecophory* (*myrmex* Latin for ant). Interestingly the notorious Bull Ant and Jack Jumper (*Myrmex sp.*) as well as the rare diurnal termite ant-feeding Banded Ant Eater (*Myrmecobius fasciata* - Numbat) have this prefix represented in their name. Once abandoned these piles are poised to respond to moisture and heat from surface bush fires which crack their hard coats, enabling a germination flush. Critical to the survival of the seedlings is the requirement that their roots establish a symbiotic relationship with mycorrhizal fungi. These fungi act as 'soil postmen' supplying (posting) water and nutrients to the plant's roots which in turn provide, via their ability to photosynthesis, a supply of carbohydrates to the fungi.

Hop bushes are culturally significant

Both aborigines and colonists valued Hop bushes for their cultural and medicinal properties.

So impressed were the early colonists with the similarity in looks and taste, which its winged seed capsules had to hops, they were inspired to successfully brew a tangy, bitter but drinkable beer. The name 'Hop bush' still remains its popular common name.

From cultural perspective aboriginal tribes knew the plant as the 'Oyster Bush' since once the winged seed capsules had deepened in colour to reddish-orange, they knew the bounty of succulent oysters from the nearby rocky estuarine foreshores were in peak condition ready for harvesting.

Hop bushes are medicinally important in all the widely separated countries where it grows. This is revealed by findings from recent pharmacological analyses of hop bushes which reveal a common set of active ingredients represented by alkaloids, tannins, flavonoids, organic acids and 1-8 cineole rich oils. The variations in its medicinal usage relates to changes in relative concentrations of these ingredients, which is determined by soil types and environmental conditions typical of the countries and habitats in which they occur. Within each country another variation in relative potency of active ingredients is also related to seasonal differences at the time of harvest. Although the Hop Bushes are found in many distant countries, it is uncanny how unrelated local indigenous populations had attributed similar cultural and medicinal uses to this ubiquitous species.

Hop Bushes are valued for medicinal applications

Common amongst the older aborigines were the persistent problem of toothache derived from decades of grinding highly fibrous diets. By chewing the leaves of the 'Oyster Bush', mild analgesic and

euphoric effects provided much sort after relief from nagging toothache. Aborigines used the term 'Pitori' for plants such as Hop Bushes that acted as painkillers.

Inflammations from rashes and bruises as well as jelly fish and stonefish stings were eased by binding wads of chewed leaf pulp for a few days on the affected areas. The bitter juice exuded from the leaves during the preparation of these wads was not swallowed but collected as an antiseptic. In general the leaves were known to reduce inflammation and swelling as well as impart an antimicrobial protection to open wounds and infected sites.

The Central Australian Aborigines (like indigenous Indian tribes) were reported to rely on the leafy branches as a customary means for relief of flu like fever and body aches. The leafy branches were smoked on warm ash beds releasing 1-8 cineole rich oils (well known active ingredient in the essential oils extracted from Gum, *Eucalyptus sp.*, Tea Tree *Leptospermum sp.*, Paperbarks *Melaleuca sp.* and native mint bush *Prostantera sp.*). The smoke would act as a febrifuge (fever reducing agent) by reducing the swelling of mucous membranes and loosening phlegm thus freeing the airways.

Also common amongst colonists and aborigines were digestion and elimination problems. This was a result of hot weather, poor food hygiene and sub standard nutrition. Australian aborigines, in parallel with indigenous cousins from North America, Mexico and South Africa used the tannin and flavonoid properties of the Hop Bush by applying poultices of fresh leaves, to relieve diarrhoea, stomach and uterine cramps. The typical mode of action has been reported in pharmacological studies to act by sedating smooth muscle contractions.

Interestingly, across the south east, Australian Aborigines preferred to construct their temporary shelters from *D. viscosa var. angustissima* simply because the outer side of the dead branches retained their leaves.

Cultural uses in other countries

It has been recorded that Pacific and South America Peruvian Indians developed a culturally accepted practise of chewing the Hop Bush leaves in the knowledge that it acted as a valued substitute for Coca (*Erythroxylum coca*). Like betel nut, the younger viscous (sticky appearing) leaves were often chewed with ash, lime or magnesia to neutralise the organic acids binding the active ingredients, thus enhancing its stimulant and euphoric effects. Of course, akin to betel nut chewers, the lime would have caused rapid tooth decay.

Conclusion

Like its companion woodland plants, She-oak, *Allocasuarina sp.*, Native Box *Bursaria spinosa*, and Black Wattle, Hop Bushes are often disregarded as common uninteresting mid-storey species. However this new brew of information in relation to its rich tapestry of cultural use and interrelationship, hopefully will entice a more in depth appreciation and further use as a valued revegetation or landscape framework species.

Recommended Readings

Whiting, J., et al., 2004. *Tasmania's Natural Flora*. Tasmania's Natural Flora Committee;

Van Wyk, Ben-Erik, 2003. Gericke, N., *People's Plants; A Guide to Useful Plants of Southern Africa*. Briza Publications.

The Collection Newsletter Volume 6, Issue 1, 2004. *Dodonea viscosa Hop Bush* www.tcbmed.com/newsletters/volume6-Issue1

Closs, J *Dodonea Study Group 1993 Dodonea Australian Plants Journal 17/137*

Propagation Box for Cuttings

Ruth Mollison and Kris Schaffer have run a series of native gardening workshops over the last year in the coastal settlements of northern Tasmania. One of the ways they have supported more isolated communities, has been to develop propagation boxes for workshop participants to take home, enabling them to start propagating plants from cuttings immediately. Kris came up with the idea, after many years of using polyboxes in which she stores potting mix and grows plants.

To make a propagation box you will need
1 polystyrene box

Growing material – composted pine bark, sand and perlite in a ratio 3:1:0.8 (no fertiliser needed)

Seedling punnets

Plastic plant guard

Cuttings of native plants



Filled propagation box with a variety of cuttings in individual seedling punnets

How to take cuttings

- Using sharp, clean secateurs, take short cuttings from the semi-hardwood or the bendy tips of plants.
- Trim excess foliage from the cutting stem and trim lengthy leaves
- Dip the cut end into a rooting compound such as Clonex (purple) and insert the cutting into the growing medium in a seedling punnet. Cuttings placed closer together appear to grow roots better than cuttings placed sparsely in the punnet.

- Fill the bottom of the polybox with some of the growing medium and place the seed trays on top. The growing medium under the punnets helps to provide insurance against drying out and encourages better root growth.
- There should be room for 10 or so punnets filled with cuttings in the polystyrene box.
- Water well and slide the box into the plastic tree guard. On hot days, slide the plastic guard back to allow more air flow.
- Keep moist.
- When roots are established, transplant single cuttings into tubes filled with potting mix. (include fertiliser with the potting mix for the transplanted seedlings)
- Try some of the easier plants to start with, such as correas and saltbush, then you will be ready to tackle other species that are difficult to grow from seed, such as the epacrids (heath family).

(see 'What's Happening' on pg 7 for dates and times of upcoming Propagation Workshops in your area)

★Catie Porteous★

is the winner of the two nights accommodation for two people at Huon Bush Retreats. Catie has been an USN member for 2 years and is currently growing plants for her own property.

Congratulations Catie

Ollie Strutt, (field day coordinator) with some of the 25 USN members who came to collect seed at Chauncy Vale Wildlife Sanctuary.



Are you able to assist in the USN Office?



A variety of tasks need some attention in our office. If you are able to offer some of your time please contact Ruth, our coordinator, on 6234 4286 or email us.

A Closer Look at Tasmania's Native Grasslands

By Threatened Plant Action Group Coordinator,
Catriona Scott

Native grasslands are often hotspots for threatened species. The Midlands of Tasmania have been recognised as one of Australia's fifteen Biodiversity Hotspots, due to the high number of threatened and endemic species found there. The Midlands region is home to 10 endemic species (species not found anywhere else) as well as 180 state listed threatened plants and animals, 32 of which are also listed nationally. Despite the incredible conservation values of the region, less than 2% is reserved, with over 95% of the area being private freehold land.

The Midlands was one of the first areas in Australia to be cleared for agriculture and today still supports extensive agriculture, as well as plantation forestry. The widespread land clearing of the past 200 years has resulted in habitat fragmentation, with only small and scattered remnants of intact native grasslands left today. One of the most important of these remnants can be found at the Township Lagoon Nature Reserve, at Tunbridge. This 16-hectare remnant is home to sixteen threatened flora species and is also an important refuge for rare invertebrates.

Woody weed invasion is a significant threat within the reserve, with gorse, boxthorn, briar rose, cotton thistle, and radiata pines all present. The Wildcare Threatened Plant Action Group (TPAG) hosted two working bees on site at the Reserve in late 2007, cutting and painting woody weeds and digging up cotton thistles. While they worked, volunteers had the pleasure of viewing many of the threatened species in full flower. Out of flowering season the grassland does not look like much, but in spring it comes to life in an explosion of colour as native wildflowers and shrubs come into flower, revealing the incredible diversity of this seemingly uniform vegetation type. One of the more spectacular plants seen was the vulnerable *Pultenaea prostrata* (silky bushpea), with its dense spreading mass of almost fluorescent orange-red flowers. Volunteers also spotted the Endangered Tunbridge leek orchid, *Prasophyllum tunbridgense*, known from only five sites, in full flower.

Further south, TPAG volunteers worked to eradicate woody weeds from a *Themeda*

Grassland site at Brighton. Home to thirteen listed species, including three lichens, this small block of Crown Land alongside the Jordan River is earmarked to become a Nature Reserve. Surrounded as it is by subdivisions and agricultural land, the site is an invaluable refuge for threatened flora and invertebrates.



Site before clearing and removal of weeds

Volunteers worked to great effect, clearing the top of the site of gorse, briar rose and boxthorn.



Site after clearing and removal of weeds
Photos courtesy Richard Schahinger

Removal of the weeds will hopefully give threatened species such as *Cryptandra amara* (pretty pearlflower), *Hibbertia basaltica* (basalt guinea flower) and *Vittadinia muelleri* (narrowleaf new holland daisy) a chance to prosper. Since recent management changes on site, many species are looking to be in much better health, and are present in greater numbers this year than in previous years.

If you would like to be involved in the recovery and conservation of Tasmania's precious and unique threatened flora please contact Threatened Plant Action Group Coordinator, Catriona Scott. 6233 6692 threatenedplantactiongroup@gmail.com

You can join the Threatened Plant Action Group, by visiting www.wildcaretas.org.au and join WILDCARE Inc online, selecting TPAG as your preferred group, or by joining WILDCARE at any Service Tasmania outlet. Membership is free with the purchase of an Annual Parks Pass.

The Seed Collectors of Kettering

Jean Taylor

So what makes a typical seed collector? Well, if we consider the group of Kettering people who collect seed for the Understorey, at first glance it's difficult to find a common trait. Men and women, from mid 30's to early 70's, retired, working, students, grade 12 to PhDs, vets, teachers, nurses, researchers, technicians, sailors and bushwalkers. The only commonality seems to be that we all live on largish blocks of at least 2 hectares with regrowth bush in varying degrees of regeneration.

However, dig a little deeper and we find a group of people united by their passion for the Australian bush. We all appreciate the peace and serenity of living surrounded by native vegetation with its constantly changing shapes and tones. We also appreciate the suite of native animals – mammals, birds, reptiles, amphibians and insects – that share our land. We are all aware how quickly the area is changing and we want to ensure the survival of the bush surrounding us.

As more land is subdivided for more houses, more bush is being removed to make way for humans and to protect property from the threat of bushfire. We appreciate that people are drawn to our beautiful area; after all, we too are 'blow ins', none having lived here for more than 20 years. So, what to do?

We were all attracted to the Understorey Network by various routes and at different times. Some of us joined to receive plants for our own properties, some to grow for others, some because they thought the idea of highlighting the benefits of saving and planting understorey plants and not just trees was such a good idea. However, we have all stayed members, and we have all continued to collect seeds.

We are very fortunate that we still have quite large areas of relatively intact bushland from which to collect. We collect carefully, following the principles of not collecting more than 10% of a plant's seed, collecting from at least six parent plants, selecting plants that do not appear stressed. We often collect in a group, and if we collect individually, we make sure the others know where we have collected so one area is not unfairly targeted.

The benefits of shared seed collecting and being out in the bush with people you like are many - companionship, learning, good health and just

good fun. There is at least one downside, however. It is very addictive.

Oh, I forgot. The other thing we Kettering seed collectors have in common? We all hate having our photos taken. Check out the photos.



D and Des



Kerry and Sue



John



Check this photo out though! Jean snapped at Chauncy Vale collecting seed. I only just managed to get her to look up. (Editor)

A Closer Look at Tasmania's Threatened Flora

The Royal Tasmanian Botanic Gardens was the site for a recent gathering of flora enthusiasts, hosted by the Wildcare Threatened Plant Action Group. Over 70 people braved a brisk autumn morning for a tour of the RTBG's ex situ threatened flora nursery and seed bank. Michelle Lang, RTBG's nursery supervisor, introduced us to a number of Tasmania's threatened species, including the living relic, *Lomatia tasmanica*, a species known from only one population in South West Tasmania. *Lomatia tasmanica* has never been observed to bear seed or fruit, and appears to reproduce clonally by suckering and coppice. Genetic studies indicate that the only known 'population' of *Lomatia tasmanica* is a clone and is possibly the oldest known living plant individual at approximately 43 600 years old!

James Wood, the Seed Bank Coordinator at RTBG gave a tour of the seed bank and a fascinating talk on seed collection and storage methods and the germination requirements of native species. The RTBG's seed banking efforts are part of the Millennium Seed Bank, a world wide program which aims to conserve 10% of the world's flora in *ex situ* seed banks. The program prioritises the collection of threatened and endemic species. So far 100 of Tasmania's 500 threatened species have been collected and seed banked, including 21 endangered and 20 vulnerable species.

The nursery and seed bank tours were followed by morning tea and a presentation about the recently established Threatened Plant Action Group, a group which aims to involve volunteers in threatened flora recovery efforts. The talk outlined TPAG's recent efforts in native grassland habitat restoration, threatened orchid field surveying, and the conservation of the endangered Miena cider gum (*Eucalyptus gunnii* ssp. *divaricata*). This led to an open discussion about community involvement in conserving Tasmania's threatened flora, with many valuable suggestions offered and excellent questions asked. It was inspiring to see people from many different groups and backgrounds in attendance, showing an interest in, and concern for the fate of Tasmania's threatened flora.

If you would like to know more about the Threatened Plant Action Group please contact TPAG coordinator on 62336692 or call Catriona.Scott@dpiw.tas.gov.au



What's Happening

Threatened Plant Action Group Mtg

For all interested persons

Date: Saturday March 29th 11.00

At Sustainable Living Tasmania (first floor, 102 Bathurst St). Contact Catriona, 6233 6692

Catriona.Scott@dpiw.tas.gov.au

Native Plant Propagation

Workshops

Come and learn plant propagation techniques growing from seeds, cuttings and division.

★ **North - Liffey**

'Growing Native Plants for Gardens'

Date: Saturday April 5th 11.00 to 3.00

Habitat Plants Nursery at Liffey (sign posted at Jones Road Liffey)

\$10.00 per person paid on the day

★ **Northwest - Leith**

'Growing Native Plants for Coastal Gardens'

Date: Saturday April 12th 9.30 to 12.30

At 10 Allport Street Leith

\$10.00 per person paid on the day

★ **Hobart – two dates**

'Growing Native Plants from Cuttings'

Date: Thursday April 17th 10.30 to 12.30

Royal Tasmanian Botanical Gardens - Community Education Glasshouse (near Subantarctic House)
Bring notebook and pen

Date: Sunday April 20th 10.30 to 12.30

Royal Tasmanian Botanical Gardens - Community Education Glasshouse (near Subantarctic House)
Bring notebook and pen.

(You **must register** by phone or mail to attend the workshops, as numbers are limited.)

Newtown Rivulet Planting Day

Come and help revegetate important riparian vegetation in this urban area.

Date: Saturday May 3rd 10.00am

Lenah Valley, below John Turnbull Park. RSVP for more information and directions. Bring sturdy footwear, sunscreen, lunch and drinks.

Snug River Planting Day

Come and help restore native habitat at Snug River, as part of the Huon/Kingborough Biolinks (biodiversity linkages) project

Date: Saturday May 17th 10.00 to 2.00

Meet near the Snug River Bridge, Channel Highway. Bring sturdy footwear, sunscreen, lunch and drinks.

Email: secretary@understorey-network.org.au
Phone: (03) 6234 4286

If undeliverable return to

Understorey Network
PO Box 4535
Bathurst Street
HOBART TAS 7000



UnderStories