UnderStories

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www.understorey-network.org.au

Coordinators News

It's seed collecting time in the bush!

So pack a picnic and some paper bags and have a go. It is a very satisfying, addictive pastime. Our seed bank has been depleted by a record number of growers (87!) in the 2007 growing season, and we are relying on the support from members to replenish seed stocks for the 2008 spring growing season.

The most effective way to collect seed is to have a local bush patch that you can check, in readiness to harvest the seed before it disperses. Many of the daisies (everlasting daisy, dusty daisy bush etc) are fluffing up now, ready to be wind dispersed. The native peas (parrot pea, bush peas, running postman etc) may be ready in your area – some of these have already ripened. Peas are tricky to catch as the pods tend to explode on a hot day, so watch them closely for ripeness- if the seed is ripe it's hard to crack with a fingernail. The native grasses (silver tussock, spear grass etc) are setting seed now also – run your hand along the seed head and if they are ready the seed will come away from the stalk easily.
Other seeds that are needed are wattles, flag iris, native hopbush, prickly box and banksia, sedges and lilies.

Remember to collect into paper bags with three basic pieces of information written on the bag – the DATE, the LOCATION and the PLANT NAME common or scientific. If you are unsure of the plant name, put a seed pod in the bag and tape some leaves on the outside plus a description.

I may be able to pick up your seeds depending on the location, or you can mail them *to PO BOX 4535 Bathurst Street Hobart 7000*

In this issue

President's Report

By the time you read this Christmas will be over and we will be well into the New Year

wondering how the time can go so quickly from one year to the next. So I hope Christmas was good and that 2008 is a happy year for you all.

We are starting the year with two more members on our staff than we had this time last year. First is Steve Shaw, who has been doing a marvelous job at our nursery at Tolosa Park for the last 12 months but only in the last month or so has been officially on our books. We are very pleased that we can keep Steve as he is a man of many talents. Our other brand new employee is Oliver Strutt, who will be helping Ruth with the field days and workshops. Oliver has been a member of the USN for some years and has recently been compiling plant lists for the various regions of the state which will soon be on our website. He is a very accomplished botanist and we are fortunate to have him and Steve with us, albeit on a very part-time basis.

You may have noticed that recently we have been having problems with our web-site. At one time it simply was not there! However we hope to have overcome the problems which were associated with upgrading the site and while it is far from perfect at the moment it soon should be even better than it was before.

Your little plants should be steaming ahead by now but don't despair if some haven't germinated yet…ultimately most will and if you are really worried contact Ruth who can probably send you more seed.

All the very best to you all for 2008 and thank you all for your support through the year.

Oliver Strutt

You will be seeing a new face around at seed collecting and planting days as Oliver Strutt has become a Project Officer with the Understorey Network, working one day per week. Apart from field days Oliver will also be working on the Saltbush on Farms trial. Oliver has recently completed a Bachelor of Natural Environment and Wilderness Studies at UTAS and previously worked with the state government's Private Land Conservation Program. He looks forward to meeting more Understorey Network members.

Tolosa Community Garden and Native Plant Nursery

The biggest projects at the nursery over the last few months have been to propagate 3000 salt bush cuttings as well as setting up an electronic watering system. *Atriplex cinerea*, grey saltbush and *Rhogadia candolleana*, coastal saltbush or seaberry saltbush have been propagated over a number of weeks in November and December with the help of Green Corps volunteers, a group of year 9 girls from St Michael's Collegiate school and volunteer help from some Understorey members.

Green Corps members, Manuela James and Alicia Gait, in the shade house preparing saltbush cuttings

Volunteers Needed Please

Now that the cuttings have taken root, we will need many willing hands to complete the task of potting up. **If you would like to volunteer some of your time in January / February** please contact Ruth, who will be able to coordinate times and give you directions to the nursery if you haven't yet paid us a visit. Steve works at the nursery on Mondays and Tuesdays, but with a large project like this, other days are possible.

Steve Shaw

Stimulating Brews from the Hop Bushes Part 1

Phil Watson

Hop Bushes or more endearingly called 'Dods' (*Dodonaea viscosa* spp.), provide an interesting brew of enthralling plant characteristics, uses and interrelationships. Their robustness enables them to flourish across a diverse range of open vegetation communities spanning areas of continental Africa, America, Australia and India. With its natural habitat spreading from exposed coastal fore dunes and cliffs, to barren rocky ridges and grassy woodlands communities, it has earned a reputation as a hardy, water miser. Combined with its plant uses and attractive, vividly coloured 3 to 4 winged fruits, glossy leaves and natural hedging ability, it deserves a recent increase in popularity as a desirable landscape and revegetation plant.

Subspecies of *Dodonaea viscosa* have distinctive characteristics

Dodonaea viscosa spp. has a series of subspecies occurring in open woodlands in SE Australia. Their plant size, distinctive leaf shape and habitat range helps to distinguish between them. Key examples include *Dodonaea viscosa* ssp *viscosa* (large, nearly stalkless, elliptical leaf), robust *Dodonaea viscosa* ssp *spathulata*, (spoon shaped leaf), the attractive *Dodonaea viscosa* ssp *angustissima,* (delicate linear leaves), the arid area *Dodonaea viscosa* ssp *mucronata* (pointy tipped spoon-shape leaves) and the appealing purple leafed screening or accent favourite from New Zealand *Dodonaea viscosa* ssp *purpurea.*

Recently variegated and a prostrate forms of *Dodonaea viscosa* ssp *spathulata* have proved very popular as landscape features and accent plants. All the above species form excellent water wise informal screens or formal hedges (biennial pruning necessary). Some of the most classic forms of these plants can be enjoyed in very exposed sites such as sea cliffs or frontal dunes where the wind shearing effect has resulted in unique and photogenic botanical marvels.

Hop Bushes are unusual members of the Soapberry family

There are 66 *Dodonaea* species, elevating it to being the largest genus of the 150 genera Soapberry family *Sapindaceae,* ("*Sapo*" Latin for soap). Many family members contain a *saponin* glycoside, which provides plants with a useful detergent-like foaming attribute acting to reduce the water tension when shaken under water. In contrast to open dry woodlands where Hop Bushes flourish, most of the family members are found in closed, tropical forests, being prized for their well known fruits. These include the luscious Lychee *Litchi chinensis* and Rambutan *Nephaleum lappaceum* along with the sticky sweet Asian delights from the Tamarind seed pods *Tamarinus indica*. All these tropical members attract the pollination services of a variety of insects and birds by boldly marketing their flowers with alluring nectaries, scents and colours. Their irresistible fruits ensure the forest fruit eaters disperse their seeds far and wide.

Dry, exposed woodland communities enhances their long term survival

In contrast to the families' main pollination process, the Hop Bush is surprisingly a wind pollinated plant. The *Dodonaea* floral structure, colour and lack of scent provide cryptic clues in this regard and help in understanding why it flourishes in dry, exposed vegetation communities. Missing from the flowers are the obvious bold coloured petals, sweet chalices of nectar or alluring scent essential for the tropical family members to advertise their rewards in exchange for insect or bird pollination services. Closer observation reveals that the flowers are at the ends of branches with their stigmas having a broad sticky collecting surface ideal for catching airborne pollen. With disproportionate numbers of anthers (relative to stigmas) they are capable of wafting clouds of fine yellow pollen into the breeze where they can travel some two kilometres during their pollination season. As obvious wind pollinated flowers they thrive in exposed, dry landscapes allowing the wind to do its job.

By establishing itself in prominent single species groves within low diversity, open plant assemblages, Hop Bushes, like other wind pollinated native trees and shrubs, such as She-oak (*Allocasuarina verticillata*) and North-Esk Pine (*Callitris oblonga*) improve their chances that the pollen will reach its target. Like Hop Bushes, these species are dioecious having male and female flowers on separate plants. It is also interesting to note their pollen transfer occurs when the warm dry breezy conditions of late spring to early summer arrive after the rainy, humid conditions have waned.

Hop Bushes enhance bird and insect diversity

Hop Bushes' three dimensional twiggy and leafy frameworks are an open invitation for the wheel webbing spiders to weave their intricate webs to capture unsuspecting passing insect prey. These webs are diligently collected for binding the fibrous grass strands during nest building by insect and seed feeding birds such as Brown Thornbills, Flame, Scarlet and Dusky Robins, Welcome Swallows, Strong-Billed and Black Headed Honey Eaters, Grey Fantails, Eastern Spine Bills and Dusky Wood Swallow. Other large seed eaters such as Bronze winged

Pigeon, Beautiful Firetail (Tasmania's only native Finch), Musk Lorikeet and Green and Eastern Rosella devour the nutritious winged seed clusters before they are either feasted on by seed weevils or glide to ground. Mid-storey bushes like Hop Bush and Native Box (*Bursaria spinosa*) planted into the park style urban landscapes and gardens provide an important role in helping to attract these seed and insect eating birds at the expense of the aggressive domineering nectar feeders such as New Holland Honey Eaters, Noisy Minas and Wattle Birds.

Recommended Readings

Whiting, J., etal., 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/volume*6-*Issue1*

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

Latz Peter, *Bushfire and Bush Tucker, Aboriginal Plant use in Central Australia*

Butterflies in the Grass

By Anna Povey

Have you noticed all the brown butterflies, looking chaotically happy as they flit about in the grass? As far as I can work out, the ones around Launceston are mostly Klug's Xenica and Common Browns (I think the photo here is a male).

Others I have found include the Australian Admiral, Meadow Argus and Australian Painted Lady (and of course the European Cabbage White), but I have only begun to identify butterflies, mostly when I find dead ones!

Tasmania has about 35 - 40 species, including the odd introduced species and mainland blow-ins. Of course there are also moths in the same family (Lepidoptera); many more species (about 2000!) and often quite beautiful too. But I know of no books to easily identify moths, so they will have to wait.

Beautiful moths demand a book for identification, please!

Moth or Butterfly?

Basically butterflies are moths which:

- have clubbed antennae
- are day-flyers
- usually sit with wings upright
- lack a wing-coupling spine (frenulum) on their hindwing.

(Grant, 2003)

We have a vision of butterflies feeding on the nectar of flowers with their special long tongues, but of at least equal importance is the food plant of the caterpillars – especially native grasses and sedges. Each species has preferred food plants, usually native species, for adults and larvae, which need to be provided for the butterfly to complete its lifecycle. Perusing the Butterflies of Tasmania book, I find the following favourite food plants:

- Native grasses (various)

caterpillars of Dominula Skipper, Tasmanica Skipper, White Grassdart, Yellow-banded Dart, Hobart Brown, Klug's Xenica, Common Brown, Shouldered Brown, Common Silver Xenica, Orichora Brown, threatened Ptunarra Brown

- Sawsedge/cutting grass, *Gahnia spp (*various*)*

caterpillars of Chrysotricha Skipper, Donnysa Skipper, Flame Skipper, Masters' Skipper, threatened Chaostola Skipper

- Sedges, *Carex spp.*

caterpillars of Bright-eyed Brown, threatened Marrawah Skipper

- Sagg, *Lomandra longifolia*

caterpillar of White Spot Skipper

- Herbaceous and everlasting daisies

adult Dominula Skipper and Mountain Blue, caterpillar Australian Painted Lady (also likes capeweed!)

- Sassafras, *Atherosperma moschatum*

caterpillar of Macleay's Swallowtail

- Riceflower, *Pimelea* spp.

adult Macleay's Swallowtail and Hobart Brown

- Caperbush (not native in Tasmania)

butterflies from the mainland sometimes appear here.

- Broccoli and other *Brassica*

introduced Cabbage White caterpillars

- Milkweed, *Asclepias* (a weedy shrub not found in Tasmania)

adult Wanderers and Lesser Wanderers sometimes blow over from the mainland.

- Prickly Box, *Bursaria spinosa*

adults of Common Brown, Shouldered Brown, and Bright Copper, and caterpillar Bright Copper

- Dandelions

adults of Shouldered Brown, Common Grass-blue, threatened Ptunarra Brown

- Hook sedge, *Uncinia tenella*

caterpillar of Leprea Brown

- Carpet frilly heath, *Pentachondra pumila*

adult Leprea Brown

- Heaths, *Epacris spp.*

caterpillar Mountain Blue

- Broomheath, *Monotoca elliptica*

Mathew's Blue

- Saltbush, *Rhagodia candolleana*

caterpillar of Chequered Blue

- Plantains, *Plantago spp.*

caterpillar of Meadow Argus

- Stinging nettle, *Urtica urens*

caterpillar Australian Admiral

- Buddleia (introduced shrub)

adult Australian Admiral (presumably likes some native shrubs too)

- Various introduced pea plants, e.g. broom, clover, lucerne

caterpillar Pea Blue and Common Grass-blue

- Wattles, *Acacia dealbata, A.mearnsii, A.melanoxylon*

Tasmanian Hairstreak (see below for complex story)

- Dodder-laurel, *Cassytha spp.*

caterpillar of Blotched Blue

- Native peas, inc. *Aotus ericoides*,

caterpillar Fringed Blue.

Another factor in butterfly survival is complex interactions with ants and other species. An example is the Tasmanian Hairstreak. Its caterpillars feed on leaves of silver wattle (and some other wattles) and usually pupate under the bark of nearby mature white gums. It relies on protection by a certain small black ant species, which also has ecological needs – all of these aspects are required for the Hairstreak to survive.

To preserve our butterflies we need to protect our whole native understorey, including our less colourful sedges and grasses, as our Understorey Networkers well know.

I have long believed in planting local native plants, to provide habitat for local native animals, so I was delighted to be shown the Painted Lady caterpillars on my Clustered Everlastings, *Chrysocephalum semipapposum*, one of their favourite food plants.

Caterpillar and chrysalis of Painted Lady, on one of their favourite foodplants, *Chrysocephalum semipapposum*, in my garden.

Butterflies have recently been found to be useful indicators of the success of revegetation programs. Hopefully they will show the success of yours! A copy of the Butterflies of Tasmania book can help you to start identifying them.

So, enjoy the butterflies this summer!

References:

Bell, P. (2005). Threatened Butterflies of Tasmania – presentation. Threatened Species Section, Department of Primary Industries and Water.

Grant, P. (2003). Habitat Garden – attracting wildlife to your garden. ABC Books, Sydney.

Lomov, B., Keith, D.A., Britton, D.R. and Hochuli, D.F. (2006). Are butterflies and moths useful indicators for restoration monitoring? A pilot study in Sydney's Cumberland Plain Woodland. Ecological Management and Restoration, vol.7, no.3, pp.204 – 210.

McQuillan, P. (1994). Butterflies of Tasmania. Tasmanian Field Naturalists Club Inc., Hobart.

A Species on the Brink
Saving the Miena Cider Gum

Eucalyptus gunnii ssp. *divaricata* (the Miena Cider Gum) is endemic to Tasmania, with its distribution restricted to the edge of frost hollows in open woodland in the Great Lakes region on the Central Plateau. The species, listed as Endangered at both state and national levels, entered into a severe and rapid decline in the late 1990's, resulting in the extinction of at least one of the wild populations, and death of all mature adults in some populations. The dead populations, which can be seen from the Lakes Highway, make a dramatic sight, with the spreading branching pattern typical of the species, completely exposed by a lack of any foliage. Standing beneath the skeletal canopy of these spreading trees is a reminder of just how precarious a species' existence can be. The decline of *Eucalyptus gunnii* ssp. *divaricata* is thought to be a result of changing climatic conditions with the taxon unable to cope with the warmer drier conditions being experienced in the Central Highlands. The decline appears to be most severe in disturbed populations, and in populations showing the most extreme characteristics of the species.

Eucalyptus gunnii ssp. *divaricata,* while one of Tasmania's most frost resistant eucalypts, is very susceptible to drought stress and browsing pressures. The leaves of *Eucalyptus gunnii* ssp. *divaricata* are highly palatable (more so than most other eucalypts) and are favoured by possums, stock, and deer as well as a range of insects. Following recovery from drought stress the regrowth is very nutrient rich, making it even more palatable to browsers and this is exacerbated by pressure from insect populations which have increased due to warmer winters. Stock grazing, increased fire frequency and the application of fertilisers in many populations, have also increased the nutrient content of regrowth, further increasing palatability resulting in spiralling declines from which populations do not appear to be able to recover.

Fortunately, seed was collected from the two populations, representing the most morphologically extreme form of *Eucalyptus gunnii* ssp. *divaricata,* which have suffered the worst decline. This seed,

collected between the late 70's and the early 90's, has now been germinated, and we have 500 seedlings of *Eucalyptus gunnii* ssp. *divaricata* almost ready to plant. Some of these seedlings will be planted into the two wild populations from which the seed was collected. There are presently no mature individuals setting seed in either population and no seed is held in the canopy. The only hope for survival of these populations is to encourage growth of repressed seedlings currently present in the understorey, and to establish new seedlings. Seedlings planted into the wild will be caged to prevent browsing pressure and monitored. Caging seedlings has been shown to be effective in the wild, with caged seedlings showing higher survival and growth rates than uncaged seedlings.

In addition to planting seedlings into the wild populations, *ex situ* conservation plantings will be established on private land at Bothwell, Kellevie and Granton. These plantings will provide insurance against the potential extinction of this species even if decline continues in the wild populations. Once mature, the conservation plantings will provide an invaluable source of seed, so that future attempts can be made to re-establish *Eucalyptus gunnii* ssp. *divaricata* in the wild. Additionally, these trees may aid future research into the species, for example by providing foliage for genetic analysis.

If you would like to be involved in establishing the conservation plantings, or in planting and caging seedlings into the wild populations please contact *Threatened Plant Action Group Coordinator, Catriona Scott on 62336692 or email Catriona.Scott@dpiw.tas.gov.au*

Farmer Rae Young and threatened Species botanist Wendy Potts planting *Eucalyptus gunnii* ssp. *Divaricata* seedlings.

Photo courtesy Simon de Salis

Wellington Park Bushcare Group Builds a Relationship with the Understorey Network

Recently the Wellington Park Bushcare Group formed a relationship with the Understorey Network to grow plants at the Tolosa Community Nursery for rehabilitation of a site nearby in Wellington Park.

This all stemmed from a successful application for an Australian Government Envirofund grant, primarily to protect a population of the rare heath, Epacris virgata under threat from weed invasion. Adjacent to this area are exotic pines that are scheduled to be removed in the autumn of 2008 and then that parcel of land planted out with natives to the area.

By a happy coincidence, Gabrielle Balon, who was commissioned to prepare the group's Envirofund application, was familiar with the work of the Understorey Network and was able to initiate the link between the organisations. In addition one of the Bushcare group sponsors, Luke Chiu from Glenorchy City Council, was keen to encourage the involvement of the Tolosa Community Nursery in the project.

So for the first project report; five boxes of tubes were sown with seeds in late November, and as of mid December a box of Indigofera has sprouted profusely and already had a first thinning whilst the other boxes were just showing the very first signs of life breaking through the soil.

The Wellington Park Bushcare Group started in 2002 with the aim to maintain and enhance the native flora and fauna of the major natural icon, Wellington Park, and to educate Park users of the high biodiversity values and ways to protect them. The major focus is to endeavour to halt spread of weed species and eradicate where possible. Links have been formed with the Hobart and Glenorchy City Councils as well as the Wellington Park Management Trust and Parks and Wildlife Service.

The group provides opportunity for volunteers to repair environmental damage stemming from weeds and gain a sense of achievement and involvement in a project that has long term environmental and community benefit. The group spends a day each month on a working

bee at various locations in the park, mostly getting rid of Erica, Gorse and Broom.

It is always very happy to welcome along new volunteers and can be contacted at wellingtonpark@iprimus.com.au or by ringing Peter Franklin on 6228 4889. Details of working bees can be found on the group's website at http://wellingtonpbg.googlepages.com/home

Mike Bowden and Peter

What's Happening

Chauncy Vale Wildlife Sanctuary Open Day & Seed Collecting (Bagdad)
Come and help collect seeds for our seed bank and explore this reserve.
Date: Sunday 27th January
11.00 to 3.00
Bring your own secateurs, pen, ID books, paper bags, lunch and drinks, sunscreen, hat and protective footwear.

Seed Collecting Workshop at Murrayfields (Bruny Island)
Learn how to collect seed from native Tasmanian plants
Date: Saturday 16th February
10.30am
Bring your own secateurs, pen, ID books, paper bags, lunch and drinks, sunscreen, hat and protective footwear.
Meet at Kettering at 9.00 for car pooling. Ferry departs 9.30 and returns 2.15.
On Bruny travel 8km along road from ferry to main intersection. Turn right towards south Bruny. The Murrayfields entrance is about 1km along on the left hand side. Park at the shearer's quarters.
A great opportunity to visit this spectacular property, have a look at revegetation sites and collect seed.

Plant ID, Bush Walk & Seed Collection at Huon Bush Retreats
Visit Mt Misery Habitat Reserve for a seed collection, walk and plant ID day.
Date: Sunday 2nd March
10.30 to 2.00
Bring your own secateurs, pen, ID books, paper bags, lunch and drinks, sunscreen, hat and protective footwear.
One participant will win two nights accommodation for two people at Huon Bush Retreats (see page 2 for details)

Please RSVP for more information:

PO Box 4535
Bathurst Street
HOBART TAS 7000

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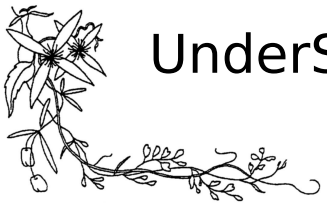

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