



# MOUNT LOFTY RANGES GRASSY WOODLAND NETWORK



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## Editorial

Regrettably my grant application for 2008 to continue with the woodlands work was not successful, so I will be looking for alternate sources of funding while continuing the Network and other work, albeit in a reduced form. So only three newsletters per year (not four) and less workshops. At this stage I am only planning two workshops in winter and/or spring. More about these in the August newsletter.

## Barossa Bushgardens – open day & plant sale

*Why plant local plants?* The current drought emphasizes the value of using local native plants in our gardens. As a rule of thumb, local natives need only be watered through their first summer. After that, monthly watering will keep them happy - this compares very favourably with the more frequent watering required for most exotic plants. Do you want some fresh ideas for your own low water use garden? Then come along to the Barossa Bushgarden featuring six low water-use display gardens and be inspired for your very own water-wise designer garden. Come along on **Sunday 20th April from 10 am – 3 pm** for the plant sale. Thousands of local plants will be on sale from just \$3. **Every customer gets a free plant!** Where? Regional Native Flora Centre, Coulthard Reserve, Penrice Rd, Nuriootpa. Parking available off Research road. Guided tour at 2pm - phone 8562 1732 for bookings. The Barossa Bushgarden is open seven days a week during daylight hours; entry is free, but donations are appreciated.

## Bush For Life Workshops

Each year Bush For Life offers community members and landholders the opportunity to learn about managing bushland for biodiversity. These one day workshops combine classroom and field trip elements from 9am to 4pm and are free for Trees For Life members. Participants learn about the principles of bush management, why it is important and the practical steps that individuals can take.

Wednesday 16th April - Belair  
 Saturday 3rd May - Gawler  
 Thursday 15th May - Clare  
 Saturday 24th May - Mount Barker  
 Tuesday 3rd June - Brooklyn Park  
 Wednesday 18th June - Playford  
 Saturday 21st June - Burnside  
 Thursday 26th June - Murray Bridge  
 Wednesday 2nd July - Aldinga/Seaford  
 Saturday 12th July - Mitcham  
 Thursday 17th July - Strathalbyn  
 Saturday 26th July - Tea Tree Gully  
 Tuesday 5th August - Coromandel Valley  
 Saturday 16th August - Belair  
 Saturday 27th September - Victor Harbor  
 Tuesday 14th October - Mt Barker

Phone 8406 0500 to secure your booking.

There are a series of Advanced Workshops for those people who have completed the introductory workshop and wish to further refine their skills. Check out the TFL website ([www.treesforlife.org.au](http://www.treesforlife.org.au)) and follow prompts: "Learn" and "Programs and Workshops") or phone Penny for details.

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*Austrostipa* sp. Beaumont Common (Photo: Lydia Paton)

### Advanced Grass ID 2008

A repeat of the very successful course on advanced grass identification for *Austrodanthonia* and *Austrostipa* species run by Ellen Bennett will take place in May 2008. A basic knowledge of grass identification will be presumed. Sessions will be 7-9pm on Tuesdays 6<sup>th</sup>, 13<sup>th</sup>, 20<sup>th</sup> and 27<sup>th</sup> May 2008 at the Urrbrae Wetlands Centre. Cost for the whole course, \$88 incl. GST. Enquires to Ellen Bennett [benje@picknowl.com.au](mailto:benje@picknowl.com.au) or 8271 9123

The course is structured to increase observation skills and so that participants learn to use the ID tools/references with more confidence. Week 1 focuses on the detail of *Austrodanthonia* florets and the story according to the picture books. Week 2 looks at the difficult danthonias and the real life story. Week 3 looks at the features used in separating the *Austrostipa* species and includes practice using a key. Week 4 more practice with *Austrostipas* and the *Grasses of SA* key to the genus.

Places are limited to the number of microscopes available (19 at last count). If you have your own microscope and lamp please bring them.

Participants will need tools: a pair of needles or needle-nosed tweezers to manipulate material under the microscope. Needles are easily made by gluing sewing needles into an old pencil or a dowel. Suitable tweezers can be purchased from Australian Jewellers Supplies, 1<sup>st</sup> floor, 38 Gawler Place, from approx \$10 upwards. **NB. Participants must bring their own tools. Tools will not be provided.** A notebook and sticky tape may also be useful.

### Black-chinned Honeyeater 'Chin-wag'

Please send black-chin records to Penny by end of June 2008 for inclusion in Chin-wag 08-09.

### Bushland Condition Monitoring Training

Tim Parkinson is organising training in NCSSA's Bushland Condition Monitoring Manual methodology at Hindmarsh Valley probably at the end of May 2008. The workshop will run for 2 days and is open to landholders, volunteers and professionals interested in or engaged in management of native vegetation or revegetation sites on the Fleurieu Peninsula. Contact Tim, Sustainable Landscapes Program, City of Victor Harbor; Phone (08) 8551 0541 or email [tparkinson@victor.sa.gov.au](mailto:tparkinson@victor.sa.gov.au).

### Gluepot Reserve Courses 2008

Although Gluepot is in the Murray Mallee and cannot by any stretch of the imagination be called woodland, my association with the Reserve leads me to advertise their nature-based courses. Further details are available from the website:

[www.riverland.net.au/gluepot](http://www.riverland.net.au/gluepot) (follow the prompts under "What's New" and "2008 Courses") or by ringing Mrs Anne Morphett on 08 8379 3865.

Art of the Ant	12-13/4, 8-9/11
Intro to Birds & Birdwatching	19-20/4, 20-21/9
Intro to Nature Photography	17-18/5, 6-7/9
Intro to Macro Photography	24-25/5, 13-14/9
GPS and GIS	28-29/6
Intro to Scientific Botanical Illustrating	14-15/6
Intro to Bird Banding	30-31/8, 4-5/10
Painting Nature	18-19/10
Bats of Gluepot Reserve	5-7/12

### Grey Box *Eucalyptus microcarpa* Woodland nominated as a TEC

A few weeks ago I was fortunate to represent Nature Conservation Society SA at a Commonwealth Government Technical Workshop in Wagga NSW along with three other SA representatives and experts from Victoria and NSW. We were gathered to consider a nomination for grey box woodland listing as a Threatened Ecological Community (TEC) under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC). Too many acronyms!! There are 38 TECs in Australia, with three in SA (Fleurieu Peninsula Swamps, Peppermint Box Grassy Woodland and Iron-grass Natural Temperate Grassland – see GWN News 9, Sept 2007 for more details of last two).

The aims of the two days were to:

- Clearly define the ecological community in terms of structure, composition and other key diagnostic features
- Determine the distribution of the ecological community in terms of its national extent
- Develop condition classes for the ecological community that will help distinguish between patches of good and poor quality

Considerable work had been carried out in NSW to define the community in relation to vegetation, landforms, soils, decline in extent, threats and conservation status, but less detail was available for the other three states where grey box occurs – Victoria, SA and Queensland. We spent a delightful afternoon in grey box woodland south of Wagga mainly in Travelling Stock Route Reserves, one of which is illustrated below.



Grey box woodland, The Rock TSR (Photo: Penny Paton)

The workshop came up with some definitions and conditions classes with the next step being to field test these in different parts of the range of grey box. In South Australia grey box occurs in three areas – the southern Flinders Ranges in and around Mt Brown Conservation Park, the foothills of the Mt Lofty Ranges and in the Upper South East near Bordertown. While exact figures are not available, the extent of these areas is much reduced from pre-European times, with up to 180 ha mapped in the Flinders Ranges, less than 500 ha in the South East and less than 1800 ha in the Mt Lofties.

The next steps after field testing are data analysis and mapping (with appropriate input from expert, stakeholder and public comment), the assessment of the nomination against 6 criteria by the Commonwealth Department (Environment, Water, Heritage and the Arts) and then the Threatened Species Scientific Committee provides a recommendation on listing and “conservation advice” to the Minister.

## Fire Risk and Climate Change

In September last year a really interesting and horrifying report on this topic was published to little fanfare considering the contents. The Bushfire CRC, Australian Bureau of Meteorology and CSIRO Atmospheric Research prepared the report for the Climate Institute of Australia.

Here I summarise the contents very briefly and then pull out the relevant predictions for Adelaide, which is a useful surrogate for the Mt Lofty Ranges, given the similarity in climate between the two areas. The report updates the findings of a 2005 study in that:

- A wider range of observations is analysed
- The fire season of 2006-07 is included
- The estimated effects of climate change by 2020 and 2050 are recalculated using updated global warming projections from the IPCC
- Two new fire danger categories are considered, namely ‘very extreme’ and ‘catastrophic’
- Changes to individual seasons and season lengths are examined (as well as annual changes in fire danger)

The usual caveats apply regarding the data sources and the necessity to rely on climate simulations, so the results are to a certain extent open to different interpretations. However with the best science available, **the predictions are grim for the Mt Lofty Ranges and most of southeastern Australia.**

Bushfires are an inevitable occurrence in Australia and much of our flora is adapted to fire. However the majority of the population resides in the southeast of the continent which is susceptible to large wildfires that threaten life and property, not to mention the ecological effects in a



fragmented landscape. A unique factor in these fires in the southeast is the climate of the region, with its hot dry summers and mild, wet winters. The winter and spring rains allow fuel growth, while the dry summers allow fire danger to build. The risk is exacerbated by periodic droughts that occur as part of natural interannual climate variability.

Climate change projections for southeastern Australia were generated from two CSIRO climate simulations named CCAM (Mark 2) and CCAM (Mark 3). Projected changes in daily temperature, humidity, wind and rainfall were generated for the years 2020 and 2050, relative to 1990. Patterns of change per degree of global warming were scaled for the years 2020 and 2050 using IPCC estimates of global warming for those years, i.e. 0.4 – 1.0°C by 2020 and 0.7 – 2.9°C by 2050. This allows for the full range of IPCC scenarios of greenhouse gas and aerosol emissions.

The modelled changes from these scenarios were projected onto the observed daily time series of temperature, humidity, wind and rainfall from 1973 to early 2007. As a general rule, the projected changes in annual cumulative Forest Fire Danger Index (FFDI) were highest for CCAM (Mark) 3 and lowest for CCAM (Mark) 2). The largest changes (increases) were in the interior of NSW and northern Victoria; and coastal areas have smaller changes.



**Result of large fire in Ngarkat CP, 2006 (Photo: Lydia Paton)**

The annual cumulative FFDI values mask much larger changes in the number of days with significant fire risk. Very large fires like the 2006 Ngarkat fire will be more likely.

The daily fire danger rating is 'very high' for FFDI greater than 25 and 'extreme' when FFDI exceeds 50. Two new ratings have been defined here: 'very extreme' (FFDI > 75) and 'catastrophic' (FFDI > 100). For example for Adelaide, the FFDI predictions (numbers of days/yr) are:

Variable*	now	2020		2050	
		Low 2	High 3	Low 2	High 3
VHE	18.3	19.2	22.3	19.9	30.2
% incr.	0.0	5.1	21.9	8.8	64.9
xtrm	1.2	1.4	1.8	1.4	3.8
% incr.	0.0	18.4	55.3	23.7	234.2
vxtrm	0.0	0.0	0.0	0.0	0.4
cata	0.0	0.0	0.0	0.0	0.0
DJF 50	10.1	10.3	10.6	10.4	11.5
MAM 50	5.7	5.8	5.9	5.8	6.2
JJA 50	1.8	1.9	1.9	1.9	2.1
SON 50	4.1	4.3	4.4	4.4	5.1
DJF 90	27.6	28.1	29.3	28.6	32.4
MAM 90	16.9	17.1	17.5	17.3	18.3
JJA 90	5.6	5.7	6.0	5.8	6.6
SON 90	14.8	15.4	15.9	15.8	18.3

- VHE = very high & extreme
- % = % increase in row above, from 'now'
- xtrm = extreme
- vxtrm = very extreme
- cata = catastrophic
- DJF = summer
- MAM = autumn
- JJA = winter
- SON = spring
- 50 = seasonal median FFDI; 90 = 90<sup>th</sup> percentile

As shown in the last eight lines of the table above, the projected changes vary at *different times* of the year, with the largest changes in the seasonal median FFDI in the season of highest fire danger (in Adelaide's case, the summer). A large change is also seen in the season prior to the peak season as well, suggesting that fire seasons will start earlier and end slightly later, while being more intense throughout their length. This effect is more pronounced by 2050 but should be observable by 2020. For the full text of the paper see:

<http://www.bushfirecrc.com/>