

## IMPORTANT NOTE

From **THIS MONTH** the club's **General Meetings** will be held in the **Newborough Uniting Church Hall** which is located at the corner of Old Sale Rd and Chamberlain Rd, entry from Chamberlain Rd.

### DIRECTIONS FOR UNITING CHURCH HALL

After leaving the highway at the Newborough exit drive straight ahead through the traffic lights (John Field Drive) then 1km to the next set of lights where you turn **RIGHT** (Old Sale Rd). At the third crossing of the median strip do a U-turn to get back to Chamberlain Rd. Turn **LEFT**, and the entry to the Church grounds, off-street parking and the hall is the **FIRST** drive on the **LEFT**.

### TOLERABLE FIRE INTERVALS

Tolerable Fire Intervals (TFI) was the topic of the August meeting of LVFNC and one I had been looking forward to. DSE Fire Planner, Jean-Marc Porigneaux spoke of the process of how, when, why and where Planned (or Controlled or Proscribed) Burning should take place in the Southern Fall (i.e. the south slopes of the Great Diving Range in West Gippsland). Asset protection is also part of his jurisdiction. Australia had been a relatively wet country, he said, until 10 million years ago. Then a drier period of about 9 million years followed by the last million years when it became even drier and fire became a prominent factor in vegetation evolution. Charcoal deposits in swamps and lakes are a testament to this.

The area which Jean-Marc has responsibility for, is public land and covers is 5.1 million ha. Ninety five percent of planned burns are less than 5 Ha, 25% of which are naturally occurring fires caused by lightning. He said all forests rely on fires but the type, intensity, the weather during the season, extent of the fire and its severity are all factors. The intensity of the fire depends on solar and other weather conditions and dryness. Intensity affects fauna survival so that decisions need to be made as to the time

of year to start a planned burn. Autumn is favoured mainly as it is out of flowering and breeding season. Other considerations are taken. For example, is a Powerful Owl a breeding resident or visiting the area?

The 2006-7 fire in the Southern Fall which burnt out 1.1million Ha but it was patchy and high intensity. In contrast planned or asset protection burns leave large areas unburnt for re-colonisation by flora and fauna. Ridge lines may be canopy scorched while gullies are left unburnt with no crown scorching. Frequency of firing is important – not too short and not too long. (This varies with Ecological Vegetation Classes (EVCs). Because there are more than 300 EVCs, EVDs - Ecological Vegetation Divisions - have been created, which consist of 1 or more EVCs. There are 32 divisions of EVDs but only 9 are considered for fire management. (1))

In planning ecological burns consideration of how the flora responds is taken in account. For example growth from rootstock, lignotubers or epicormic growth and also the time it takes for a species to reach maturity. It is necessary to look at an EVC as a whole to assess how it responds to frequency intervals. Different codes are given for tolerable intervals to ensure all species are maintained. But not all burns can be achieved at tolerable intervals because they contain different zones, it becomes a trade off. There are different categories for seedlings and maximum tolerable intervals for species. Some species may not germinate unless there is a burn within a certain time.

In 1981 Noble and Slatyer (2) published minimum and maximum intervals taken to reach reproductive maturity for 5000 floral species. A single germination pulse after a fire may produce short lived species. Others, eg Mountain Ash set the maximum for fire intervals. Minimum Tolerable Fire Intervals have been done on benchmark species found in each EVC (see [www.dse.vic.gov.au/fireecology](http://www.dse.vic.gov.au/fireecology)). In determining Lowland Forest TFI, *Leptospermum continentale* (Prickly Teatree) is a benchmark species for minimum TFI – 8 years before another Planned Burn. Maximum time between burns is 60 years or the species will die out

in that area. Plans are done at landscape level and therefore contain many EVCs which need more detailed study. Some pockets will be left to senesce.

For fauna there is a different response. Mainly birds and mammals have been studied and placed into 4 groups for re-population of species. Species A, for example raptors which become abundant rapidly then decline just as quickly. For species B, numbers drop after fire then rebuild. Species C may suffer a long decline then rebuild while species D, hollow dwellers, will not return until hollows appear in new growth. If the fire interval does not allow hollows to form, then Species D may never return. This information is built into ecological fire plans.

DSE maps of Southern Foothills show details of fire and logging history, including analysis. Planned burns are improving outcomes. Gully lines are preserved and more pockets of vegetation are maintained. There is more growth stage analysis. At present in this area there is more early years of vegetation growth because of the 2006-7 fires and little at the post maturity stage. Other factors being looked at are fire sensitive areas, how easy or hard burning is to do, priority burn areas, assessments – those areas to be burnt and those to be maintained, monitoring of selected burns (not all are monitored) and the fact that there may be a shorter burning period due to weather conditions.

In answering questions, Jean-Marc agreed that burning 5% of forested area in any one year was ‘challenging’. He commented that when 3000ha was listed to be burnt, this was done in patches meaning a lesser percentage is actually burned. He hopes there will be changes in current policy. He also confirmed that wildfires do not count towards the 5% of area burnt.

This topic is not only controversial but is clearly one where so many factors need to be taken into account. Jean-Marc did an excellent job in explaining the process.

#### References

(1) Cheal, D. (2010) Growth stages and tolerable fire intervals for Victoria’s native vegetation data sets.

Fire and Adaptive Management Report No. 84. Department of Sustainability and Environment, East Melbourne, Victoria. Australia. (Note: This publication is available in the LVFNC Library, along with other publications on this topic.)

(2) Noble, I.R. and Slatyer, R.O. (1981) Concepts and models of succession in vascular plant communities subject to recurrent fire, in Gill, A.M., Groves, R.H. and Noble, I.R. (eds.) *Fire and the Australian Biota*. (Australian Academy of Science: Canberra)

Jackie Tims

## MYRTLE RUST - A NEW THREAT

The fungus, *Uredo rangellii*, commonly known as Myrtle Rust, was first discovered in NSW in 2010 and soon afterwards in Queensland. It has now been discovered at about 60 sites in Victoria, including Tynong North and east Gippsland. As the name suggests, it is a disease of the *Myrtaceae* family which, in Australia, includes the following genera - *Eucalyptus*, *Callistemon* (Bottle-brushes), *Casuarina*, *Leptospermum* (Tea-trees), *Melaleuca* (Paperbarks), *Acmena* (Lilly-pilly) as well as many others. The Myrtle Rust National Management Group has agreed that it is not technically feasible to eradicate this disease so the focus now is on management to minimise its spread and impact. As well as being found in nurseries it has also been found in private gardens and bushland. The outbreak in east Gippsland was traced back to a commercial nursery. There are now no quarantine restrictions on the movement of plants between eastern states and the industry was supposed to self-regulate.

The yellow spores of myrtle rust can be easily spread by movement of infected plants and contaminated equipment, by wind, water and gravity, by animals and vehicles and on the clothing, jewellery, etc, of humans. If a plant is suspected of being infected, do not touch the suspect plant but either call the Department of Primary Industries on 1800 084 881 or email photos and a contact number to [plant.protection@dpi.vic.gov.au](mailto:plant.protection@dpi.vic.gov.au). For more information and photos of plants infected with myrtle rust, visit [www.dpi.vic.gov.au/myrtlerust](http://www.dpi.vic.gov.au/myrtlerust) or a fact sheet can be obtained from the DPI.

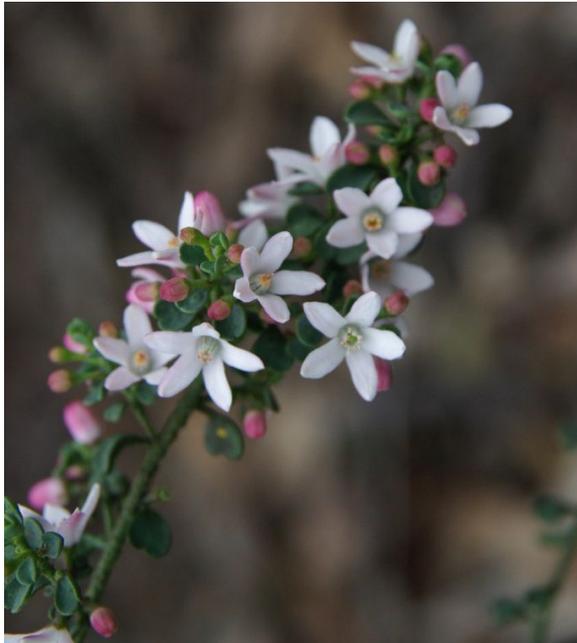
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Estelle Adams

## SEANA SPRING 2012 CAMP AT BENDIGO

The Bendigo Field Naturalists Club hosted the SEANA Spring 2012 Camp over the extended weekend of 17-20 August, the early date having been set to avoid clashing with the October gathering of the Australian Naturalists Network in Canberra. Despite decidedly bracing temperatures (it was just 3 degC in Kyneton at 1.00pm on the Friday as we travelled to Bendigo), the camp was enjoyed by well over 100 participants, including no less than 19 from our own club. Evening meals, talks and meetings were held at the spacious Mandurang Hall, around 12km south of the city centre.



*Bendigo Wax-flower*

The camp marked the 50<sup>th</sup> anniversary of combined camps under the auspices of SEANA and its predecessor associations, WVFNCA and VFNCA. A celebratory cake was cut and shared on Saturday evening, and memorabilia were displayed. It is worth noting that when VFNCA was set up in 1972, LVFNC members Ellen and Don Lyndon were members of the initial steering committee, with Ellen being interim secretary.

### Evening talks

### Friday – Bendigo’s natural and human history.

Following a welcome from Bendigo FNC President Jan Orr, Rob Moors presented an overview of the history – both human and natural – of Bendigo, which is located on Dja Dja Wurrung country. Early white settlement in the 1830s saw the take-up of the Mt Alexander and Ravenswood sheep runs. The discovery of alluvial gold in 1851 ushered in an economic boom. Extensive reef mining followed, as alluvial gold was soon exhausted. The municipality of Sandhurst (to be renamed Bendigo in 1891) was established in 1855 and by the early 1860s the town was serviced by a water reticulation system involving extensive tunnelling and was linked by rail to Melbourne, the line opening in 1862. An architectural boom resulted in Pall Mall becoming one of the finest late 19<sup>th</sup> century streetscapes in Australia.

The Ordovician sediment of the region was the source of its gold – laid down about 500 million years ago. Land movement created heat, which superheated water in which gold and quartz dissolved and were brought to the surface. Around 370 million years ago, hot magma rising through Ordovician material metamorphosed it, producing the granite of the Mt Alexander area to Bendigo’s south.

Rob explained that the main natural vegetation in the district is Box-Ironbark forest, open woodland and, to the north, mallee (as in the Whipstick forest).

### Saturday – Moths of Victoria: talk and workshop

Saturday evening’s presentation by Marilyn Hewish, Steve Williams and Ken Harris introduced the study of moths, seen as at a relatively early stage in Victoria. Leading off, Marilyn introduced the order Lepidoptera, comprising butterflies and moths, with 6 families of the former and 140 families (20,000+ species) of the latter in Australia. In showing some great photos from her moth-hunting travels around Victoria, Marilyn noted that it is not always simple to distinguish moths from butterflies – e.g. some moths are brightly coloured!

Steve followed on by reporting on his

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studies of moth ecology in Bendigo's Box-Ironbark forests. Predators of moths include bats, owls and other insectivorous birds, and other insects including wasps. He has made rearing studies to identify what plant families furnish food for various moth species.

Ken took the activity into workshop mode by demonstrating moth-attracting techniques. The number of species attracted to the vertical sheets was somewhat limited by comparison with some of the demonstrations that Ken has conducted for our own club.

## **Sunday – Irrigation pasture: an unlikely spider habitat**

Dr Jenny Shield reported on research carried out on an irrigated dairy farm near Cohuna in northern Victoria. She presented results of a pitfall trapping survey to compare the assemblages of spider species across four types of habitat on the farm:

- pasture with shelterbelts of native vegetation (Yellow Box, River Red Gum and understorey);
- pasture without shelterbelts;
- shelterbelts;
- remnant vegetation (including Black Box).

Not surprisingly, the spider diversity was much greater in shelterbelts and remnant vegetation than in pasture. But the species found in pasture (typically from the Linyphiidae and Lycosidae families) were rarely encountered in the shelterbelts and remnant vegetation, which supported instead different Lycosidae species and members of the Clubionidae and Zodariidae families. Jenny concluded that shelterbelts did not have much effect on the species composition on irrigated pasture.

## **Excursion program**

A wide range of full- and half-day excursions on Saturday and Sunday focussed on botany, birds, mammals and geology across the diverse landforms and ecosystems radiating out from Bendigo. There were also opportunities to explore Bendigo's significant urban landscape.

Here is a brief overview of just two excursions.

## **Northern Plains wetlands (full day Saturday)**

Ben Goonan, from the Northern Central CMA, led an excellent excursion which explored a diverse range of ephemeral aquatic habitats across the northern plains region of the Victorian Riverina. These wetlands have been transformed by the flooding rains of 2010/11 which followed a decade of drought. The use of a bus meant that all participants benefited from Ben's considerable knowledge of the regional ecology.

Heading north through Huntly on the fringe of the Whipstick Forest took us into the Kamarooka area, observing Golden Wattle and Whirrakee Wattle in flower amidst remnant Box-Ironbark forest, grassy woodland and then mallee woodland (including Blue and Green Mallee, Kamarooka Mallee and the larger-leaved Bull Mallee).

We enjoyed spotting two pairs of Brolgas and a Banded Plover on our way to Tang Tang Swamp, with dominant River Red Gums in Plains Grassy Wetland. Ducks seen at this swamp included Hardhead and Chestnut Teal.



*Tang Tang Swamp*

An interesting sighting at our lunch spot, Leichardt Conservation Reserve (no connection with Ludwig!) was a conical mud Chough's nest high in a eucalypt.

Pollocks Swamp was fringed by River Red Gums, with many young plants emerging on the recently flooded flat areas. These and

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other local swamps support various threatened EVCs including Plains Grassy Wetland, Plains Swampy Woodland and Lignum Swamp.



*Pollocks Swamp*

A final stop on the return to Bendigo introduced us to the tiny winter-flowering Plains Rice-flower, *Pimelia spinescens* subsp. *spinescens*, listed as critically endangered. This plant is a stunted shrub, 5-30cm in height, with small pale yellow flowers and small green elliptical leaves up to 10mm long and 3mm wide; its stems are tipped with spines.



*Bushy Needlewood*

## One Tree Hill and Diamond Hill (half day Sunday)

This excursion, led by Matt Comer with extra input from Jane Cleary, proved to be stunning for its rich diversity of spring wildflowers. Plants seen at One Tree Hill, part of the Greater Bendigo National Park, included:

- The fairly rare Bushy Parrot-pea, *Dillwynia ramosissima*;
- Bendigo Wax-flower, *Philothea*

*verrucosa*;

- The blue-flowered Shrub Violet, *Hybanthus floribundus*;
- Bushy Needlewood, *Hakea sericea*;
- Leopard Orchid;
- Nodding Greenhood (Matt noted that seven greenhood species are found here);
- Golden Wattle, *Acacia pycnantha*.

At Diamond Hill, the major point of interest was a patch of Sticky Boronia, *B. anemonifolia*, growing in profusion in a fenced-off area. Also worth a mention to conclude, the Goldfields Grevillea, *G. dryophylla*.

All in all, the camp provided a great opportunity to learn more about an incredibly diverse part of Victoria – many thanks, Bendigo FNC friends.



*Sticky Boronia*

Philip Rayment

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## REPORT ON BUSINESS MEETING HELD 24.9.2012

### General Meetings & Excursions

**Friday 26 October:** Biodiversity Management at Dutson Downs – Deb Archer

**Saturday 27 October:** Dutson Downs excursion. Meet 10am at Longford Hall or carpool from Mexican Rest. Traralgon 9.15.

**Friday 23 November:** Presentation on Grand Strzelecki Track – Ken Harris introduction followed by a DVD about it.

**Saturday 24 November:** Related excursion, walking part of Macks Creek loop of the GST. Meet 10am at Balook Info Centre.

**Botany Group:** Saturday 3 November - sedges and rushes in the field around Wonthaggi. Meet 10am at Guide Park, Graham Street, (opposite hospital). Contact: Wendy Savage ☎ 5634 2246

**Bird Group:** Tuesday 13 November (6<sup>th</sup> is Cup Day): Heyfield Wetlands. Meet there by 8.30 EDST. Alix Williams ☎ 5127 3393, [alixw@spin.net.au](mailto:alixw@spin.net.au)

**Finance** – Balances: Cash Mgt Trading A/c \$4053.43. Term Deposit \$12,000.00. Term deposit matures 18 October. Will add \$1000 and reinvest for best term available.

### Business Arising, Correspondence & General Business

Meeting room for general meeting – start at Uniting Church Hall Newborough in October. Have inspected premises and got instructions for its use. Alix has a key and Wendy will forward meeting dates to Jeanette Young. Storage of equipment currently held at LCHS: David M will take screen, Phil – slide projector, Wendy – supper box, Jackie – PA system. Wendy will bring extra powerboard. Old PA system to go to second hand shop.

Program Planning Meeting – a good number of choices was available thanks to input from members. There is a charge of \$150 to Bunurong Environment Centre for Mike Cleeland's talk and excursion on megafauna.

Spring Camp to the Gurdies 5-7 October – 20 staying at camp. Catered meal for Saturday night \$15 each, so cost will now be \$85 per person. Excursions in the local area will be run by Jenny Rejske and Terri Allen with notes and lists provided. Mike Cleeland will run a session on geology Saturday morning at a cost of \$50 payable to Bunurong Environment Centre. Will send details to participants this week.

Community Groups Expo 14 October at Old Gipps town – waiting for final details. Will use digital photo frame; David M and Ken H will prepare photos. Sell books, brochures etc. Ken H, David M, Wendy and Jackie available. Phil to bring club banner.

### Conservation Matters

Maryvale mill meeting 18 October – John Poppins will be away and would like someone to go in his place. He has sent minutes and agenda. John has been invited as a rep on a new recycling project group so will represent the club.

## GUEST SPEAKER FOR NOVEMBER

Ken Harris will introduce the topic of the Grand Strzelecki Track to be followed by a DVD about the track. On Saturday we will be walking part of the Macks Creek loop of the track after meeting at the Balook Visitors Information Centre at 10am.

## FOR THE DIARY

### Springsure Hill Landcare Group Walk in the bush Saturday 10 November.

Full details – see September Naturalist.

Rob & Caroline Gully 0413 347 665

### Bird Challenge Saturday 1 December

Contact: Alix Williams 5127 3393, [alixw@spin.net.au](mailto:alixw@spin.net.au)

### Club Christmas Party Saturday 8 Dec

This year at David & Jacqui Mules' property at Narracan, from 12 noon. Full details next month.

### Summer Members' Night Fri 11 Jan 2013

Open theme – your chance to show and tell.

### Wildflower Walk Saturday 12 Jan 2013

Join the Friends of Baw Baw NP on the

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plateau – always wonderful!

### **Club Summer Camp Friday 18 to Monday 21 January 2013 at Dargo**

Dargo River Inn has cabins with kitchen and lounge. Linen and towels supplied. Meals are available at the licensed restaurant (pay individually). More information next month.