



Understanding Our Natural World  
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# Field Nats News No.142

Newsletter of the Field Naturalists Club of Victoria Inc.  
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Office Hours: Monday - Wednesday 9am-5pm.

May 2005

## President's Report

Hi Everyone

### Open Day – What a Great Day !!

My first thought is to let you know about the great success of the open day. For those who couldn't make it, I thought I'd fill you in with some of the activities. We had a great outcome with lots of new faces. The clubroom was transformed into a myriad of displays by each Special Interest Group.

The Juniors' Group had endless fun and interest with their indoor pond and native fishes.

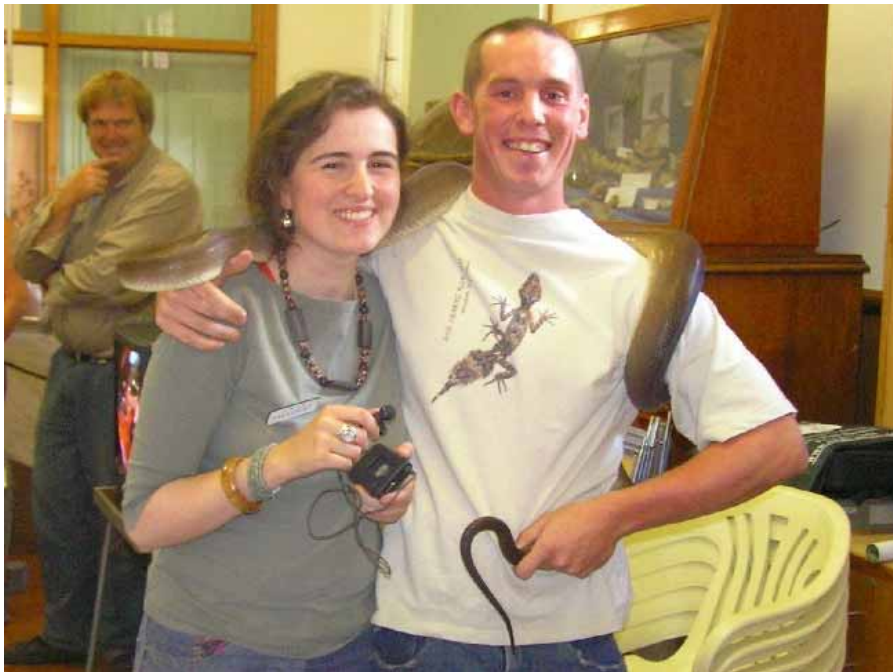
Ray Power's Microscopical display was a drawcard for many new faces.

The Terrestrial Invertebrate Group included a unique collection of stick insects.

The Fungal Foray Group table was alive with a variety of fungal posters and specimens. They also successfully sold half of their first C.D.

The Marine Research and Botany Groups also displayed live specimens and an array of hands on exhibits.

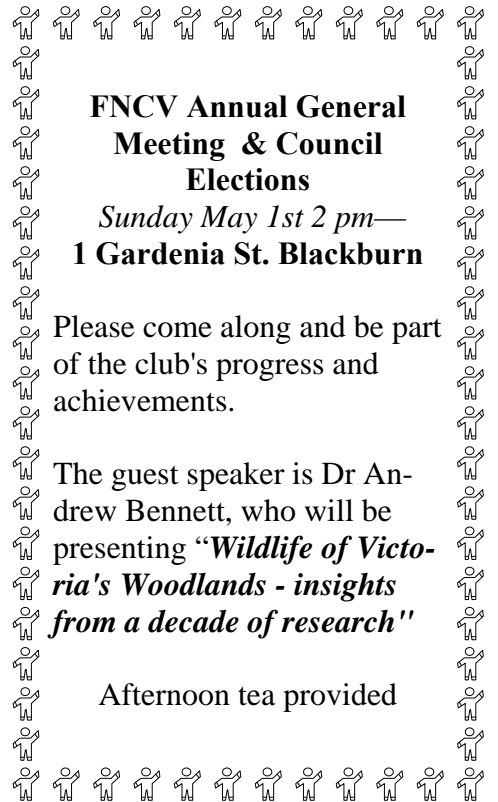
The Geology Group feature, popular



The Fauna Survey Group displayed trapping equipment, live reptiles including snakes, lizards and a juvenile freshwater crocodile. Thanks to Scott Eipper who introduced me to his friends - including his olive python pictured above.

with students was the packeted give-away specimens of Lovenia (sea urchin fossil) and minerals. Juniors had great fun with a prismatic compass locating hidden iron ore under the table.

(Continued on page 3)



**FNCV Annual General Meeting & Council Elections**  
*Sunday May 1st 2 pm—*  
**1 Gardenia St. Blackburn**

Please come along and be part of the club's progress and achievements.

The guest speaker is Dr Andrew Bennett, who will be presenting "*Wildlife of Victoria's Woodlands - insights from a decade of research*"

Afternoon tea provided

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## CALENDAR OF EVENTS

*All meetings are held at FNCV Hall, 1 Gardenia St. Blackburn at 8 pm., unless otherwise indicated. On days of extreme weather conditions excursion may be cancelled. Please check with leader.*

### May

**Sunday 1st FNCV Annual General Meeting and election of Council.**- Speaker: Andrew Bennett, Associate Professor, School of Ecology and Environment, Deakin University.- “Wildlife of Victoria’s Woodlands; Insights from a Decade of Research”. Contact Mimi Pohl FNCV 9877 9860 Mon-Wed. 9 am—5 pm.

**Monday 2<sup>nd</sup> Fungal Group** -No monthly meeting due to the Fungimap Conference in Tasmania.

**Tuesday 3<sup>rd</sup> – Fauna Survey Group** -“Wildlife of Victoria's Box-Ironbark Country.” A talk by Chris Tzaros. Contact Prue Simmons 9801 2882 AH

**Monday 9<sup>th</sup> - Marine Research Group**—“How Corals Form Coral Reefs.” A talk by Dr Alan Marshall. Contact Leon Altoff 9530 4180 AH, 0428 660773

**Saturday 14<sup>th</sup> – Fauna Survey Excursion Christmas Hills** – Checking nest boxes for fauna. Contact Ray Gibson 9874 4408 AH or Bob Taylor 9729 6775 AH

**Sunday 15<sup>th</sup> Fungal Foray.** Meet at 10.30 am Kinglake Meet at Masons Falls picnic area Kinglake National Park, MEL ed 29 610 P11 or earlier editions 510 P11. Turn into National Park Rd near Pheasant Creek, go through the park entrance gate, turn right and it is a short drive to the picnic area. Contact Geoff Lay 9898 4816 AH

**Tuesday 17<sup>th</sup> Collate FNN 143** 1 pm at the FNCV clubrooms, 1 Gardenia Street Blackburn. Contact Noel Schleiger 9435 8408. Many hands make light work.

**Wednesday 18<sup>th</sup> – Microscopy Group**— a practical night for members and visitors on slide making. Contact Ray Power 9717 3511 AH

**Thursday 19<sup>th</sup> – Botany Group**—“An Introduction to the Flora of Victoria and basic plant ID (pt 2).” David Cameron, Arthur Rylah Institute (DSE) will give a talk and slide presentation to illustrate the identification characteristics of Victoria’s major plant families. Contact Jenny Porter 98591274.

**Sunday 22<sup>nd</sup> May – Botany Excursion Kinglake National Park.** A walk with David Cameron to see representatives of Victoria’s plant genera and appreciate their identifying features. Meet in Yarra Glen at 10 am. Park on the west side of the highway, after passing the railway and first intersection (Mel 275 A2). BYO lunch. Contact Jenny Porter 0415 67117.

**Wednesday 25<sup>th</sup> – Geology Group** -“The Pleistocene Megafauna of Victoria” - Danielle Shean of Monash University will talk about her work on extinct marsupials found in Buchan Caves and speculate on the causes of the extinction of these large creatures across Victoria in our recent past. Contact: Rob Hamson 9557 5215 Ah, 9925 4399 BH.

**Friday 27<sup>th</sup> – Juniors’ Meeting**—“Antarctic Journey”. A talk by Rob Hamson. Contact Wendy Clark 9877 9266 Excursion to be advised.

**Saturday May 28<sup>th</sup>—Sunday May 29<sup>th</sup>—Leaves from our History** Celebrate 125 years of the FNCV at the Mueller Hall, Royal Botanic Garden, Birdwood Ave, South Yarra. Booking form in FNN 140, on the FNCV website or contact the Mimi Pohl 9877 9860, FNCV office hours, Mon-Wed 9 am—5 pm. More information FNN p 6 & 7.

**Sunday 29<sup>th</sup> Fungal Foray.** 10.30 am Dom Dom Saddle (MEL ed 29 610 S12, earlier editions map 510 S12, Take the Maroondah highway from Healesville towards Alexandra. The Dom Dom Saddle parking area is at the top of the Black Spur on the right. Contact Geoff Lay 9898 4816 AH

(Continued from page 1)

The clubroom was filled with visitors by 11 am. We had 100 people enter our doors by lunchtime. Visitors continued to arrive throughout the day.

With the sounds of frogs as background music, many families with their children came in and enjoyed the atmosphere, information and activities. Give-aways included a free FNCV "eco bag", and a FNCV bookmark: both of which are currently for sale in the bookshop.

Financially the day was a great success through book sales, new memberships, drinks and the sausage sizzle. FNCV total membership has now reached the holy grail of 1000. Many thanks to the great people who organised these areas.

Planning was made easier due to an initial Grant from the City of Whitehorse which allowed us to produce 3000 flyers, bookmarks and the eco-bags.

We also received excellent publicity through a feature article in the local City of Whitehorse Newspaper. Most importantly a huge thank you to everyone who distributed flyers, and to the dedicated members of all the SIG groups who constructed their wonderful displays.

#### **AGM and Council Elections, Sunday May 1st 2 pm.**

Have you ever thought about taking an active role in the FNCV? The opportunity currently exists for members who would like to become part of our Council. A nomination form was published on p10 of FNN 140, and is available from the Website or from the office. A reminder that nominations must reach the office no later than 48 hours before the AGM.

#### **125<sup>th</sup> Anniversary – Leaves from our History 28– 29th May**

Two amazing days filled with guest speakers outlining FNCV history and future directions. A dinner celebrating the landmark anniversary will be held on the Saturday night. See p 6 and 7.

**Karen Muscat  
President**

### **VALE CHARLES BARNETT**

It is with regret that we announce the death on 11th March, of Charles Barnett.

I can remember Charles at Marine Research meetings with his American accent and hearty laugh. His background included being a Catholic Missionary teacher with experience in Africa. Charles was a keen film goer, buying tickets for the whole Film Festival. He was also a keen birdwatcher and participated in many BOCA excursions and meetings.

Clarrie Handreck informs me that Charles joined the Marine Study Group (now called the Marine Research Group), in May 1971 and remained a member until his death. In those days the MSG met in the Museum Theatre and Charles attended 187 meetings there.

His interests were chiefly as an educator in topics like evolution and natural philosophy. He was the Marine Research Group's representative on the Conservation Council of Victoria from 1976—1979. He often asked questions at the end of talks and provided technical assistance with equipment when needed. Charles' contribution to our Club will be missed. Our sincere condolences to his family.

**Noel Schleiger**

### **Secretarial help needed**

As club secretary Karen George will not be standing for re-election, the FNCV will need someone with secretarial and computer skills to take over her role. In particular this would include preparing the agenda and minutes for FNCV Council meetings each month..

The Environment Fund is also very keen to hear from someone who could provide secretarial help for a few hours per year.

**Contact Mimi in the office to discuss these positions 9877 9860**



## **Library News**

Recent additions:

Grgurinovic, C.A. (2003) *The genus Mycena in south-eastern Australia.*

Lacey, G. (2004) *Still glides the stream: the natural history of the Yarra River from Heidelberg to Yarra Bend.*

Lindenmayer, D.B. (2000) *Life in the tall eucalypt forests.*

Lindenmayer, D.B. et al. (2003) *Wild-life on farms: how to conserve native animals.*

Victorian Environment Assessment Council (2004) *Angahook-Otway investigation final report.*

We have also the draft management plans (2004) for the following marine parks and sanctuaries: Corner Inlet, Point Addis, Point Danger, Eagle Rock, Port Phillip Heads, Rickett's Point and Wilson's Promontory.

Thank you to Brendan Murphy for his donation of *The Geology of Australia*, by David Johnson.

We are about to start a stocktake of the library, and would appreciate it if members would return any books they are not currently using. Please check your bookshelves!

**Sheila Houghton  
Honorary Librarian**

### **FNCV ECO BAGS**

**\$2 ea  
or 2 for \$3**





## Geology Group

### REPORT ON GEOLOGY EXCURSION TO CAPE SCHANCK & FLINDERS Leader: Dr Eric Bird Sunday 6 March

This was the third trip for the FNCV Geology SIG led by Dr Eric Bird, the well-known coastal geomorphologist. His first in 2003 covered the Bayside beaches and the second in 2004 looked at the coastline features developed in dune limestones at Sorrento through to the appearance of basalts near Cape Schanck. This third excursion concentrated on how the coast from Cape Schanck eastwards has formed in an area dominated by the basalts of the Older Volcanics. These consist of the alternating lava flows and less resistant ash beds of the Middle Eocene Flinders Formation (47-42 million years old) which reaches a thickness of 400m.

Our first stop was Cape Schanck. On the west side the basalt lava flows have determined the form of the shore with the lava flows standing out as ledges. On the east side when one looks down there are flat wet areas of shore platform where wetting and drying and salt crystallisation have weathered the basalt to a basal level where the rock is permanently saturated. Also of interest was how to distinguish ash beds from weathered lavas, both reddish-brown in colour, and the fact that an ash bed could be baked by a new lava flowing over it and become just as resistant to weathering as the result of this hardening process.

We next walked through hummocky ground to Bushrangers Bay. The undulating topography is due to Pleistocene sand dunes. This was evident at a point where there had been a blow-out in one of the ridges revealing its dune calcarenite core. The erosion had been triggered by something as prosaic as cattle grazing along a fence

line. Eight thousand years ago sea level was more than a hundred metres lower because of the water locked up in the Northern Hemisphere ice sheets. Bass Strait was dry and the climate was arid. Huge amounts of calcareous sand were blown 'inland' from the exposed sea floor. In the area we were now traversing this blown sand spilled into the valley of Main Creek which discharges into Bushrangers Bay and is a rare example for Australia of a river bringing sand down to the coast.

At Bushrangers Bay, we walked a short distance to the west to the mouth of Burrabong Creek where there is a freshwater limestone. It is crumbly and contains small gastropods indicating its freshwater origin in a lake probably enclosed by sand dunes. The limestone is 23m thick and is of Pleistocene age (600,000 years old).

Our next stop was Hazzards or Cairns Bay which we reached by walking down the valley of Tea Tree Creek. This is actually a hanging valley in relation to the present level of the beach; the creek flows over a waterfall to reach the sea. There has to be a reason for this: perhaps the sea has cut back into the valley faster than the stream has been able to lower its bed or it could be that sea level has fallen leaving the stream at a higher level.

Despite being cut in basalt, Cairns Bay has light-coloured calcareous sand whereas the neighbouring cove which we looked at from the cliff top has none - just basalt pebbles.

Aerial photography shows that this sand will make its way into bays from offshore if there are submarine 'gutters' between the underwater basalt reefs along which it can migrate.

At the Blowhole we examined two lava blisters on the shore platform. They have been eroded so that they are open, their structure revealed by the lava dipping away on all sides. These were probably caused by gas welling up a fissure beneath the liquid lava. Also we

saw a good example of an abrasion ramp at the foot of the cliff. Here basalt gravel was being washed backwards and forwards and is actively abrading the basalt floor.

Dr Bird explained at Flinders that this was the area where Jutson studied the development of shore platforms. He theorised that shore platforms went through three stages. The first is an abrading sloping ramp, then a flat platform formed by sub-aerial weathering and finally, by the progressive erosion of the seaward edge of this platform, a concave profile up to the base of the cliff. This theory assumes there are no other changes in the meantime such as movements in sea level.

Our final stop was Mushroom Reef just west of Flinders. There we examined a Miocene limestone overlying a basalt. This was a marine limestone which was evident in the fossils it contained such as echinoid spines. It is dated at 10 million years and looks very much like the Miocene limestone at Batesford quarry near Geelong.

This report deals with only a selection of the features pointed out and explained by Dr Bird during the day. He has kindly left his notes which will be photocopied and available at the next Geology meeting. We are once again very grateful to Dr Eric Bird for a very informative and enjoyable day out.

**Rob Hamson**


**Leaves from Our History**  
**28th and 29th May at**  
**Royal Botanic Gardens**

Volunteers still needed to help on both days, eg. with morning and afternoon tea, registrations etc.

Please contact Mimi at the Office Mon—Wed 9—5 pm 9877 9860.



## Fauna Survey Group

### FNCV and the Australasian Bat Society Bat Workshop Feb 26<sup>th</sup> and 27<sup>th</sup>

Another interesting and informative bat workshop was held in the Kinglake National Park and the Toorourrong Reservoir with around 20 (?) bat enthusiasts participating over the weekend.

The presentations began with Lindy Lumsden informing the group about the 'Natural history of bats' as well as the transfer of Grey-headed Flying Foxes from the Royal Botanic Gardens to an alternative site in Kew. Although the new site is not the one that was planned and prepared for, it has been a successful re-location.

The next speaker was Chris Grant who described his research into the Southern Bent-wing Bats and the importance of caves to the bats. The following speaker was Susan Campbell who provided details of her research into Australia's only fishing-bat, the Large-footed Myotis. Lindy then ended off the presentations by speaking on the roosting ecology of bats and answered general questions from the audience. She also provided clear information on the Lyssavirus and preventative vaccinations.

Dinner was a hearty delight with a barbeque, salads, couscous, chicken cacciatore and salads. There was more than enough and the cooks should be pleased with the outcome of their labour.

After dinner we went off to Toorourrong Reservoir and set up the harp traps (of which there was a surprisingly large number!). While we were seated in the picnic area for a demonstration and talk by Lindy on the Anabat detector and the accompanying software, the bats were very cooperative and a variety flew overhead to have their calls recorded. Spotlights

were used to highlight some of the bats as their calls were showing up on the laptop screen. Before the night ended the harp traps were checked and the captured bats collected for a demonstration of handling techniques and an explanation on the identification of bats. Some of the bats were released but an individual of each species caught was kept for daytime viewing.

Sunday morning there was the joy of awakening in the Kinglake National Park to the sound of Ian Kitchen singing in the ranger's house at 6.40 am. There was a flurry of activity as the group struggled to meet the 7.00 am planned exodus from the Park to return to Toorourrong Reservoir to collect bats, take down and remove harp traps, have breakfast and then process the captured bats. We were fortunate to collect bats of seven species: the large bentwing bat (*Miniopterus schreibersii*), the Large-footed Myotis (*Myotis macropus*), the chocolate wattled bat (*Chalinolobus morio*), the

Lesser Long Eared bat (*Nyctophilus geoffroyi*), Gould's Wattled Bat (*Chalinolobus gouldii*), the Little Forest Bat (*Vespadelus vulturnus*), and an Eastern Freetail Bat (*Mormopterus*). Three (?) more species of bats had their calls recorded the previous night but were not captured in the harp traps. Susan demonstrated the procedure for taking tissue samples from the wings of the large-footed myotis bats as this was a necessary part of her ongoing research.

Happily we were also able to see extra bats as Trish and Terry, from South-East Queensland's Wildcare Australia (<http://www.wildcare.org.au/>) attended the workshop and brought three bats in need of regular medical care with them. The two Beccari's Freetail Bats (*Mormopterus beccarii*) were housed in their own little transportable tent, and the *Pteropus alecto* (beautiful Benny the Black Flying-Fox) managed to charm the entire group.

It was a wonderfully successful weekend and no doubt inspired participants to continue to take an active interest in bats.

**Silvia Zele**



Lindy Lumsden (right) instructing bat workshop participants on the handling of micro bats.

*Photo: J. Broadberry*



# *Leaves from our History*

## *A Celebration of our Club's History*

### *Saturday 28th May—Sunday 29th May 2005*

*"It was 125 years ago, that a small group of nature enthusiasts had the idea of forming a club. An advertisement was placed in The Argus inviting interested people to attend a meeting at the Athenaeum on 6th May 1880. Thirty people attended. The inaugural meeting was held on the 14th June when 56 people were elected. They became known as the original members. The first excursion, to Brighton, was held on the 19th June, 5 days after the club was formed."*

Excerpt from the booklet *Leaves from our History*, which all attendees will receive at the symposium).

#### **\*\* NOT TO BE MISSED \*\***

To celebrate the 125th Anniversary of The Field Naturalists Club of Victoria, we invite you to join us for a two-day history symposium where members and friends of the FNCV from across the state are presenting talks on aspects of our club's fascinating history.

Each day, lunch is being professionally catered and we are also being treated to a three act playlet by the Friends of Woodlands historic Park. The play will be performed between courses during the Saturday night dinner.

To be running so strong after 125 years is such an outstanding achievement. Join us, help us celebrate this milestone, and learn a little more about Victoria's earliest naturalists.



Pictured above re-enacting the roles of Anna and Alfred Hardy in the 1905 FNCV excursion to Wilson's Promontory, Sue Wright and Michael Howes will be joined by other members of the Friends of Woodlands Historic Park to present a series of chapters from the FNCV history at the May 28th Symposium Dinner. The 1905 excursion re-enactment was part of the World Ranger Conference held at Wilson's Promontory in 2003.

#### **PRICES**

<b>Saturday and Sunday</b>	<b>\$ 130.00</b>
<b>Saturday OR Sunday only</b>	<b>\$ 70.00</b>
<b>(Both days are fully catered)</b>	
<b>Formal Dinner</b>	<b>\$ 75.00</b>
<b>(3 course catered meal with wine included)</b>	

**For registration forms or more information please call Mimi in the FNCV office on 03 9877 9860 or email [fncv@vicnet.net.au](mailto:fncv@vicnet.net.au).**

**Registration Forms are also available on the internet at [www.vicnet.net.au/~fncv.htm](http://www.vicnet.net.au/~fncv.htm)**

#### **" A Signal Service"**

Three act playlet

To be performed during the FNCV 125th Anniversary History Symposium Dinner

By  
**Friends of Woodlands  
Historic Park**



# Leaves from our History

## 125 years of The Field Naturalists Club of Victoria Inc.

### Symposium Agenda

**Location:**
**The Mueller Hall**
**Royal Botanic Garden Melbourne**
**Birdwood Ave, South Yarra 3141**
**Saturday May 28th**

09.30-10.00	Registration and morning tea
10.00-10.30	Opening addresses
	Key note address: <i>The History of the FNCV</i> - Linden Gilbank
11.35-12.05	<i>Conflict between popular and professional communications: Edith Coleman and Norman Wakefield</i> - Danielle Clode
12.05-12.30	<i>Relationship between the FNCV and the RBG</i> - Helen Cohn
12.30-13.30	Lunch
13.30-14.10	<i>"If it is not against the rules": Women in the FNCV</i> - Sheila Houghton
14.10-14.30	<i>The New Century Woman</i> - Valda Dedman
14.30-15.00	<i>Unravelling and enjoying Victorian geology; 125 years of geologizing with the FNCV</i> - Doug McCann
15.00-15.30	<i>Marine Studies and the FNCV</i> - Brian Smith
15.30-16.00	Afternoon tea
16.00-16.20	<i>The Junior Nats</i> - Nick Andrewes/Wendy Clark
16.20-16.50	<i>Fungi and the FNCV: forays to Fungimap</i> - Tom May
18.00	Pre-dinner social
19.00	Formal Dinner (bookings required)

**Sunday May 29th**

09.30-09.50	<i>The Australian Natural History Medallion</i> - Ian Endersby
09.50-10.10	<i>S.G.A.P. and its connection with FNCV</i> - John Walter
10.10-10.30	<i>FNCV and the VNPA</i> - Malcolm Calder
10.30-11.00	Morning tea
11.00-11.30	<i>Changes in the contents of the Victorian Naturalist over time</i> - Melanie Archer
11.30-11.50	<i>The Field Nats News – a tribute to volunteers</i> - Noel Schleiger
11.50-12.20	<i>Art and scientific illustrations in The Victorian Naturalist</i> - John Kean
12.20-13.20	Lunch
13.20-13.50	<i>Landscape with figures: In the field with the Field Nats</i> - Gary Presland
13.50-14.10	<i>Victorians' perception of the landscape as viewed through Victorian Naturalist</i> - Suzanne Shoemaker
14.10-14.40	<i>200 years of Victoria's natural capital: from depletion to replenishment</i> - Ian Mansergh
14.40-15.00	<i>Cabinets of curiosities to black boxes: the future of the FNCV</i> - Alan Yen
15.00-15.15	Closing comments
15.15	Afternoon tea and close of conference

The Field Naturalists Club would like to thank our generous sponsors for the assistance they have given us in this event.



Department of  
Sustainability  
and Environment





## Fungal Group

### Fungi Group Activities Open Day at the FNCV

The Fungi Group CD ROM of the 2004 Forays was launched at the FNCV Open Day. The CD ROM was arranged and put together by Paul George using 385 photos taken by members of the group, and with notes on the 61 species provided by Tom May (Senior Mycologist, Royal Botanic Gardens Melbourne). The species on the CD have specific macro characteristics and can be identified in the field – with a little practice – and exclude all the Fungimap target species. Twenty-three of the 50 CD's were sold on the day. Copies will be available at the forays and meetings, as well as at the club, priced at \$11 incl. GST.

Committee members manned the table and displayed the CD ROM on a lap-top. Fresh fungi were provided by Denise and Arthur Carew and spore prints by Virgil Hubregtse. A steady stream of visitors stopped by to ask numerous questions.

### Fungi Foray, 6 March, Botanic Gardens: leader Tom May

The first Fungi Group excursion of 2005 was to the Royal Botanic Gardens Melbourne led by Tom May. In the newly created Children's garden *Aseroe rubra* (Anemone Stinkhorn) was growing through the mulch. This was the first species of fungi to be collected and described from Australia. It was collected by J. Labillardiere on 1 May 1792 at Recherche Bay, Tasmania and was published in 1800. The species usually grows at higher altitudes including alpine grasslands, but has obviously been brought down with mulch. It is an immigrant to the UK from Australia. It was discovered in Oxshott, Surrey in 1993, the only known site in outdoor natural habitat in the northern hemisphere, although there was a solitary record from a Kew Gardens greenhouse in 1829.

The boot is on the other foot with *Amanita phalloides* (Death Cap) found under the oaks on the Oak Lawn. This species has migrated from Europe and until recently was only found in Melbourne and Can-

berra. The Death Cap only appears to grow when the tree has reached maturity. The specimens we found were growing under an Algerian Oak (*Quercus canariensis*) which had been planted 15 November 1889. At first they were difficult to see in the litter, but once spotted were obvious. Most had very pale whitish caps, but some had the greenish tinge that is

ium was set up by Baron von Mueller in 1853, he recruited a number of interested people around the continent to send him collections of fungi, plants and non-vascular plants.

Fungi collections were often sent to Kew to be identified, or to other mycologists in Europe, usually Germany, but also Italy and Switzerland. According to their bent, mycologists would describe the fungus either as a European species or, because it came from Australia, a completely new species.



Open day: Scott (left) introduces his freshwater crocodile to Paul and Arthur at the Fungal Group table.

Photo: J. Broadberry

usually described in books. The volva at the stem base was very impressive, white and sac-like. Unusually, this year there has been a big flush in summer. Typically they fruit in autumn, and mycologist, Teresa Lebel, is keeping an eye on them in the Gardens. Most of the deaths from fungi around the world are caused by this species.

After looking at the Death caps, the noise of the Grand Prix starting up drove us inside the Herbarium where Tom showed us some of the collections. Fungi collections, despite the impressive efforts of many Fungimap collectors, still lack the numbers and varieties of collections compared with the vascular plants. When the Herbar-

DNA (which can be obtained from old material if it has been preserved correctly) is showing that the answers lie somewhere in the middle. Thus, many of the Australian collections were described from dried specimens and the type collections retained in Kew. Sometimes collections were accompanied by the most delightful water-colours.

One of the water-colourists was always referred to as Miss Wehl, a niece of the Baron. As the family consisted of several Miss Wehl's it was difficult to discover her forename. However, Tom May, putting on his detective shoes and matching up various labels, and notes found an initial and was able to put a

(Continued on page 12)





## Terrestrial Invertebrate Group

### Report on February TIG Meeting

The February meeting of the Terrestrial Invertebrate Group took a different approach to most previous meetings. Three students (or, in one case, a Graduate recruit with the Department of Primary Industries), made presentations on the research associated with their studentships. The three were Kylie MacGregor, Linda Semeraro, and Renee Ayres.

**Kylie MacGregor, Department Primary Industries, Knoxfield, *Assessing the biodiversity values of shelterbelts for invertebrates.***

Widespread clearance and decline of native vegetation is a major issue in Australia today. In the Victorian Riverina, approximately 95% of the land has been cleared for urban and agricultural development, contributing to the loss of biodiversity.

An assessment of the biodiversity values of shelterbelts for invertebrates in intensive agricultural landscapes was conducted at two study locations in Victoria. The terrestrial invertebrate fauna was collected from shelterbelts and adjoining crop fields using pitfall traps and yellow pans. The samples were sorted to the ordinal level and relationships of invertebrate activity with habitat and distance from shelterbelts were examined.

The mean abundance of invertebrates appeared to be significantly greater in shelterbelts than crop fields for most study sites. This suggests that vegetative areas with a diverse floristic structure and composition possess a greater number of available microhabitat niches, in which a greater number of invertebrates can be supported. Additionally, a decreasing trend of invertebrate activity with distance from the edge of shelterbelts was observed for most paddock sites. The placement of shelterbelts within agricultural landscapes could be of significant importance to maintaining invertebrate biodiversity in intensive agricultural systems.

**Linda Semeraro, Department Primary Industries, Knoxfield. *A Systematic Study of the Macropsinae leafhoppers of Australia.***

Leafhoppers, are an abundant and diverse group of insects, some of which are known to be agricultural pests of economic significance. This is one of the many reasons to study the Australian leafhopper fauna. As part of my Master of Science degree project, I aim to study the systematics of the Australian fauna of Macropsinae leafhoppers.

There are currently 46 species recorded in Australia, but the generic placement of some species is uncertain. This project hopes to establish which genera/species are represented in Australia, and to study their relationships. It is of particular interest to determine whether species of the genus *Macropsis* and/or *Oncopsis*, (the largest genera in this sub-family), occur in Australia. At least three species within these two genera are known to vector plant diseases overseas.

The initial step is to conduct a taxonomic investigation involving sorting and identifying of Australian collected specimens (undetermined, identified and type material). The study is based on comparison of external and internal morphological characters. Examination of the male leafhopper genitalia is the most reliable method for confirming genus/species identifications.

At present, 220 male specimens have been dissected/ examined and sorted into 59 species suggesting at least 13 or possibly more new species are to be named and described. Data needs to be further analyzed and many more specimens examined, (including 700 unidentified females), before we can understand the range of Macropsinae genera present in Australia.

**Renee Ayres, Centre for Environmental Stress and Adaptation Research, La Trobe University. *The impact of pesticides on freshwater macroinvertebrates.***

Pesticides are widely applied in urban areas on gardens, sports fields, road-

ways, industrial estates, and in private homes. The presence of highly impervious surfaces and efficient drainage systems in urban areas enables pesticides and other pollutants to contaminate urban waterbodies.

It is difficult to isolate the ecological effect of pesticides on urban freshwater ecosystems as multiple pollutants contaminate waterways. Research on the effect of two pesticides on freshwater macroinvertebrate abundance and diversity is in progress as part of my PhD. In this study a microcosm approach is employed.

Macroinvertebrates are allowed to colonise the microcosms and emerging adult individuals are collected. Analysis of species diversity and abundance in relation to the corresponding pesticide concentration allows species tolerances to be determined. Potential biological indicators of aquatic health may be identified.

### BARMAH-MILLEWA CONFERENCE

*Further to our notice in FNN 141 concerning the conference on the Barmah-Millewa Forest. Details are*

**Organised by the Royal Society of Victoria**

**Saturday 18 and Sunday 19th June**

**Elizabeth Murdoch Theatre,  
Old Pathology Building, Spencer Rd  
University of Melbourne**

Fees including lunches, teas and proceedings are:

Student ( <i>send copy of student card</i> )	\$230
Royal Society Member	\$290
Non RS Member	\$390
Dinner 7 pm on 18.6.05	\$ 65

Payment can be made by credit card.

**ENQUIRIES: Camilla van Megen,  
Executive Officer, Royal Society of Vic.  
Telephone : (03) 9663 5259,  
Fax: (03) 9663 2301**

**Email: [admin@sciencevictoria.org.au](mailto:admin@sciencevictoria.org.au)**



## Marine Research Group News

### Notes on field trip to Point Addis, Victoria Saturday 5 February, 2005

This was a very overcast day and the persistent threat of significant rain was fortunately realised only toward the end of our stay, which meant a good period of rewarding time in the intertidal zone, but a wet ascent up the long staircase leading back to the car parking area. We were extremely happy to welcome back to the field both Clarrie Handreck and Robert Burn, and again benefited from their company and their extensive knowledge and enthusiasm.

Like Point Roadknight, Angelsea, but to a more impressive extent, the sandstone cliffs at Point Addis showed intricately attractive patterns of weathering. High up under upper littoral / supra-littoral sandstone rocks the living purplish-pink shells of the pulmonate *Marinula xanthostoma* were encountered after some patient searching. Many of the more common inhabitants of the mid and lower littoral zone were encountered, including a magnificent adult blue-ringed octopus *Haplochlax maculosa* displaying its brilliantly blue iridescent rings (NOTE: THIS OCTOPUS HAS A LETHAL VENOM AND MUST NEVER BE DISTURBED OR HANDLED).

Some good chiton records included *Ischnochiton lineolatus*, *Ischnochiton cariosus*, *Ischnochiton virgatus* and the beautifully coloured *Rhysoplax diaphora*, amongst the more common *Ischnochiton elongatus* and *Ischnochiton australis*. Some good prosobranch records included the sponge-feeding cerithiopsids *Seila crocea* and *Seila albosutura*, the mitre *Mitra carbonaria*, considerable numbers of *Conus anemone*, as well as the paucity of the muricid *Lepsiella vinosa*. Large pools of the seagrass *Amphibolis antarctica* proved interesting, yielding some numbers of the fragile but beautiful micro-limpet *Asteracmea stowae*, and the active and tenacious microgastropod *Zafra atkinsoni*.

Of all the species recorded, however, the

most visually stunning were the opisthobranchs, which included: *Spurilla macleayi*; the sacoglossans *Ercolania margaritae* (that were greenish rather than black as originally described) and the bivalved gastropod *Midorigai australis*; the striking nudibranch *Flabellina poenicia*, with its purplish-pink body and fusiform cerata flamed respectively from base to tip with orange, red and white; the beautiful *Cuthona catachroma*, with its head suffused in pink, and brown and white cerata all tipped with bright yellow; the rare and as yet undescribed white nudibranch of the genus *Palisa*; *Palliola cooki*, whose egg ribbon has become known only recently (see MRG News, FNN No. 119, April, 2003 for details); and some outstanding examples of the pink nudibranch *Noumea haliclona* depositing egg capsules on its pink sponge food source *Aplysilla rosea* on the undersurfaces of lower littoral rocks; the chromodorid *Rostanga calamus* was also recorded.

*Patiriella calcar* was the commonest asteroid, with some numbers also of *Tosia australis*, and a single, impressive (but dying) example of *Echinaster arcystatus*.

### Notes on field trip to Gibson's Steps, Port Campbell Marine National Park, Victoria, Monday 14 February, 2005

Located just east of the famous Twelve Apostles, this ranked easily among the most visually breathtaking locations visited by the MRG. A narrow stairwell hugging the cliff face led onto the high energy shoreline. There were relatively few loose rocks to turn and so the overall species count for this area was not high (33 on the field record sheet). *Plaxiphora albida* was the only chiton recorded. Of the prosobranchs, not all of the commoner mid and upper littoral species were represented (for example, *Austrocochlea adelaidae* was the only recorded trochid). The micromollusca *Eatoniella melanochroma*, *Pisinna approxima* and *Laevillitorina mariae*

were present on lower littoral and sublittoral algae. The sacoglossan bivalved gastropod *Edenttellina typica* (juveniles) was sieved from amongst the green alga *Caulerpa brownii* and some impressive examples of *Oxynoe viridis*, an elongate slug-like sacoglossan with an external shell about a third of the length of the animal, were present on sublittoral tufts of the green alga *Caulerpa longifolia*. This snail is strikingly coloured, being green and spotted with light blue dots. An unidentified nudibranch with cerata blotched and spotted with red, orange, yellow and purple, length in the order of 5mm, was also encountered on sublittoral algae.

Note: A summary of Mark O'Loughlin's recently delivered talk 'A molecular and morphological review of genera of Asterinidae', will be presented in the next issue.

#### Further reading:

Marine Research Group of Victoria. Coastal Invertebrates of Victoria. An Atlas of Selected Species. Marine Research Group of Victoria in association with the Museum of Victoria, 1984.

Platon Vafiadis

#### Apology from the editors:

Tables in MRG News FNN 141, p9, should have read.

#### Component % of total

Oxygen	20.95
Carbon Dioxide	0.03
Nitrogen	78.09
Argon	0.93
Total	100.00

Temp. (°C)	Fresh water	Sea water
0	10.29	7.97
10	8.02	6.35
15	7.22	5.79
20	6.57	5.31
30	5.57	4.46

