



# FIELD NATTER

## FIELD NATURALISTS ASSOCIATION OF CANBERRA

**OBJECTS:** To foster an interest in, an awareness and an understanding of nature.

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Meetings are held in the Division of Zoology and Botany, Building 44, in the Australian National University, on the first Thursday of each month, except January. Meetings commence at 8:00 pm and are followed by refreshments.

NEWSLETTER — APRIL 2005

### MEETING

Thursday April 7

### THE FALSE PROMISE OF SEX

Dr Rod Peakall

Associate Professor

School of Botany & Zoology

The Australian National University

As we all know, sex is a crucial step in the life cycle of both animals and plants. In plants, pollination brings together the male (pollen) and female (stigma) prior to fertilisation. Typically, pollination is achieved by an outside agent – the pollinator. Pollinators are usually attracted to plants by food rewards that are advertised by chemical, visual and tactile cues.

Orchids are particularly well known for their diversity of floral forms and their many diverse and even bizarre mechanisms of achieving pollination. Sexual deception, the attraction of male pollinators by the false promise of sex, is among the most intriguing of orchid pollination strategies. Odours are well established as the primary cue for sexually attracting the male insect pollinators in these orchids, but we have only begun to discover how many, and which compounds are involved in this chemical communication between orchid and pollinator. In this talk I will briefly describe the multidisciplinary research that is allowing us to uncover the secrets of the biology and chemistry of sex and orchids. This research has already led to the discovery of a new class of natural chemicals and is offering new insights into the evolution of these intriguing pollination systems.

#### About the author

Rod Peakall is an Associate Professor in the School of Botany and Zoology, ANU. His research interests include plant reproduction, molecular ecology, conservation biology and

botanical forensics. He has been involved in research on the pollination, genetics and evolution of Australian orchids since 1984. His research has attracted widespread national and international media coverage, especially with regard to the topic of this lecture.

## Plus

Adrian Whitehead is coming, as a Conservation Council project officer, to talk on the issues of the ACT's water options from a Conservation Council perspective. This'll be a 5-10 minute presentation

## OUTING:

### Shepherd's lookout- Honeyeater migration

<b>TIME</b>	2 pm
<b>DURATION</b>	3 hours
<b>DATE</b>	Sunday April 10th
<b>LOCATION</b>	Accessed about 3km along Stockdill Dr, past Holt and the golf course. The entry is about 800m from the end of the road (there is no sign anymore), where there is an asphalt path, look for my white Barina car.

Shepherd's lookout (near the sewerage works) has many birds and great views of the Murrumbidgee river. The walk will be mainly focused around the honeyeater migration. Shepherd's lookout is a major corridor for birds and hopefully we will see hundreds or thousands of yellow-faced and white-naped and some white-eared honeyeaters with red wattlebirds. Most of the area was burnt in 2003 but the intensity of burning did vary spatially, sometimes over only short distances and it will be interesting to see how it has recovered (or not). The walk is very steep and gravel and we will most likely only reach the meeting of the two rivers (Molonglo and Murrumbidgee) before walking back up.

It is called Shepherd's lookout not after the Good Shepherd but after the Ford dealer, whose family owns property nearby.

### THIS IS WHERE WE WILL PROBABLY END.

Provided the river is low, you can cross the Molonglo on a foot bridge and do the circuit walk. Charles Sturt was granted 5000 acres in 1837 here for his explorations along the rivers of NSW.

If you continue upstream along the Murrumbidgee and cross the Uriarra Road but not the river you will soon reach the Uriarra East picnic ground. The crossing here has a colourful history - before the first bridge was built a punt was used to cross the river. In 1895 the river froze and the punt was jammed in the ice. The first bridge was built in 1901.

**From Benj Whitworth and some extra information from the late Murray Dow**

## NEWS AND EDITORIAL

Canberra is a city full of recreational opportunities. It is a place where you can escape the pressures of everyday life by exploring its natural wonders. Exploring the natural wonders of Canberra has never been so easy. Grab a free copy of **Get out there!** —the new guide to the ACT's parks, forests and bushlands. The new guide provides visitors and Canberrans alike with an engaging and useful reference to the ACT's parks, forests and bushlands that are managed by the ACT Government.

So says the blurb on the internet. Along with the guide you can also obtain a fold out map of Canberra's nature parks. The map contains information prepared by Ian Fraser and, in my opinion, contains more useful information about the nature parks than the guide. However the map is so large that its useful life span if used will be short. Hopefully, I will remember to bring along some guides and maps to the next meeting.

## OUTING REPORT

### Brooks Hill

A beautiful, but very early morning, saw a happy crew meet at Brooks Hill reserve. Alistair introduced us to the reserve while Jenny Bounds helped introduce some birds. Walking up along the old highway were a number of very large appleboxes (*Eucalyptus bridgesiana*) and cherry ballarts (*Exocarpus*), quite a few Lomandras and Egg and bacon plants (*Daviesia mimosoides*), good colonies of *Dianella revoluta*, while further up was a red anthered wallaby grass (*Joycea pallida*) dominated understory. Interesting discussions focused around plant and bird ID (e.g. Pomaderris, Eucalypts) although I was finding it difficult to think, so early in the morning. Birds included some yellow tailed blacks that passed over presumably to feed in the nearby pine plantations. Other good finds included a mistletoe bird and a grey butcherbird and a small flock of birds including fantails, eastern spinebill, white-throated treecreeper, striated, brown and buff rumped thornbills.

Further up the hill we ran into stands of scribbly gums (*E.rossii*) and broad-leaved peppermint (*E.dives*). Not many birds but good views of Bungendore. We examined a six-spined or jewel spider (*Gasteracantha*) and also ran into George. Coming down the hill we saw a tiger snake on the road, which generated much excitement. Some birds were around, including three leaden flycatchers, two rufous whistlers, an adult female which was eating a caterpillar and a juvenile was hanging around, and a cuckoo that was possibly a juvenile Horsfields although it was debatable. Walking further we found a dam and Christian noticed a dragonfly breaking out of its pupa and blowing up its wings, and walkers were fascinated by at least 3 species of frogs and their tadpoles. Dragging people away from the dam was difficult, but eventually we made it back to the car park where members from the two clubs vowed to do further joint walks as I think everybody learnt something and had fun. Some of us couldn't stop talking and made our way to Bungendore for a coffee.

Thanks to Alistair for organising the walk and Jack Holland for helping set up the joint walk.

### Benj Whitworth

P.s – the editor arrived late because of work reasons, and managed, although walking in the direction that should have led to the group missed them entirely.

**Remember next month's talk is about the world of Parasites (i.e. body snatchers) by Dr David Spratt, a recently retired CSIRO parasitologist**

## A dish pig turns to worms - by Philip Bell

Preamble: Philip wrote the following as part of a 2001 stories project for the National Folk Festival, held in Canberra every Easter. With talk of Charles Darwin as well as worms, grasshoppers, echidnas, blowflies, birds, termites and ants, this is a fully rounded piece of field natter.

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At the festival we meet many lovers of music, poetry and dance who also harbour another great passion in their lives. For them the festival is a place where those around them will accept their deeply held feelings about... well, whatever! Be it political freedom, environment, workers rights, social justice, community banking - you name it.

At the volunteers party after the festival I found myself sitting next to Peter. He described his festival work as "dish pig" in the volunteer kitchen. "Dishpig," he told me is a technical term in the catering trade for the specialist kitchen hand who cleans food scraps off plates ready for the dishwasher.

Chatting around the campfire, I mentioned to the person sitting next to Peter my interest in nature. I saw Peter's ears prick up immediately, and he was off and running - on the subject of worms.

Peter is a scientist with a young family. He moves from place to place to pick up contract work pursuing a career in worms as saviours of our natural environment.

Peter explained how hard it is to get government and agriculture to help this silent army of workers to make our world a better place. "If earthworms were a pest, like marine worms or grasshoppers or blowflies, the dollars would flow. But because they do nothing but good, our society ignores them."

It's obviously a real struggle for Peter to find someone who will pay him to look after Australia's worms. It seems as if no one cares but him alone.

I had mentioned earlier that I had organised for Peggy Rismiller - the world expert on echidnas - to talk to the Field Nats in May. This confession immediately opened another can of worms, so to speak.

Peter jumped in with: "Worms not only condition the soil so that we can grow all the food we eat. They are the base of the food chain for almost all animal life. Echidnas, for example - people think they eat just termites and ants - but they eat a whole lot of worms. (Peggy Rismiller's web page confirms this. They also swallow a large dose of the agricultural chemicals poisoning our soil.)"

"A lot of nature lovers adore bird life", he added, only to snort: "What are these birds but a few feathers and feather light bones and not much else. For every kilo of bird life there would be many kilos, perhaps six or so, of earthworms to keep them alive."

"And worms are so tolerant of the vagaries of the Australian environment. When droughts come, they just go down deep and wait till the rains come."

"I have found at least eight species of worms in my backyard here in Canberra. There are probably twelve species or more there."

As a clincher, Peter rounded off by declaring:

"I come from Shrewsbury in England. Did you know this is where Charles Darwin was born? Did you know that the subject of his very first scientific paper was worms? Did you know Darwin's last paper was also about worms?"

I just sat there, squirming. Faced with questions like these, there was no worming my way out.

Clearly, we need more poems and songs about our dear friends, the worms.

### Surfing on the NET

[http://www.latrobe.edu.au/boxironbark/pollen/thumbnail\\_table.htm](http://www.latrobe.edu.au/boxironbark/pollen/thumbnail_table.htm)

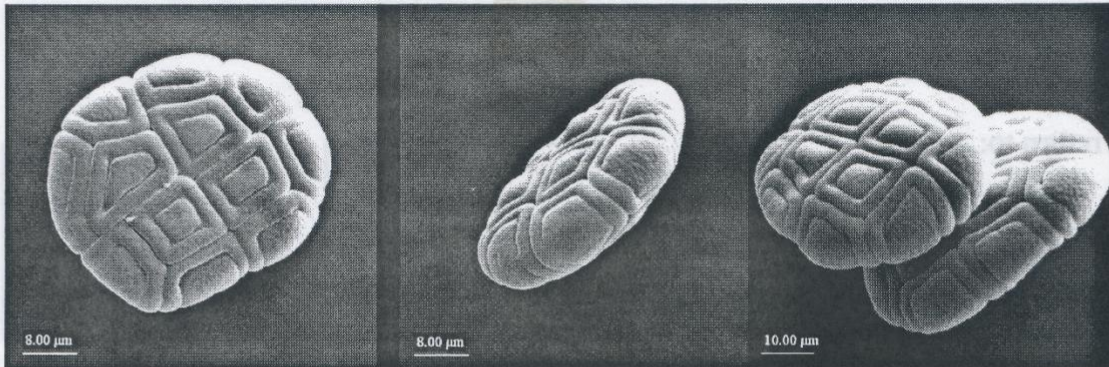
(continued next page)

The Bendigo campus of **La Trobe University** is fortunate to include a section of preserved bushland adjoining the newly proclaimed Greater Bendigo National Park and is thus in a unique position to contribute to the knowledge of these interesting forests

The aim of this internet site is to increase the appreciation of the Box-Ironbark forests by providing public access to images of their smaller components, those that generally escape the casual visitor or avid bushwalker.

Beneath is one example electron photographs of golden wattle pollen. Many other examples are available at this site

*Acacia pycnantha* is commonly known as **Golden Wattle**. It flowers from August to October. 50-80 bright yellow flowers make up a ball, 8-10mm in diameter. In many wattles the female organ, the style, emerges first. On that day, the flowers are female and receptive to pollen from another flower. The next day the pollen bearing organs, the stamens emerge and the balls gain their usual fluffy appearance. Honeybees are commonly seen on Golden Wattle blossoms but birds may actually also be involved in the pollination of this species. Sixteen united pollen grains make up the dispersal unit.



#### Walking universe/s

Stepping lightly  
from star to star  
I'm out around the universe

Tripping here and there  
foot down a black hole  
and out again.

The miracle is that I haven't  
fallen or skidded on a  
shooting star

Stamping my feet  
Rumbling up thunder  
the atmosphere darkens

Silently I steal away/  
Om

- Lisa Bell (inspired by our February talk)

**FIELD NATURALISTS ASSOCIATION OF CANBERRA INC.**

The Field Naturalists Association of Canberra was formed in 1981. The aim of the club is to stimulate interest in the natural history of the ACT through regular meetings and field outings. Meetings are usually held on the first Thursday of each month. Field outings are also planned each month and range from day outings to long weekends and camping. The emphasis is on informality and fun. New members are always welcome, especially family groups and young people. Information on activities is circulated in the monthly newsletter. If you wish to join FNAC, please complete the form below and send it with the appropriate subscription to: The Treasurer, FNAC, GPO Box 249, Canberra ACT 2601.

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