



# FIELD MATTER

## FIELD NATURALISTS ASSOCIATION OF CANBERRA

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

NEWSLETTER — FEBRUARY 2006

MEETING

Thursday 2<sup>nd</sup> FEBRUARY - 8 pm

## The Fauna of the Fauna

— effects, evolution, anatomy, radiation, diversity and zoonoses.

**{No you are not seeing double – this is the same talk that had to be aborted last May due to computer troubles}**

David Spratt, Post-retirement Fellow, CSIRO Sustainable Ecosystems.

Dave Spratt commenced his science career working on the ecology of timber wolves in Algonquin Park, Ontario, Canada. This magically transformed into a study of the brain nematode paralysing deer and killing moose for his Master's degree at University of Toronto. A World Health Organisation scholarship brought him to the Antipodes and PhD studies on the knee worm of kangaroos and wallabies at the University of Queensland. In 1973 he was appointed as a research scientist at the CSIRO Division of Wildlife Research in Canberra where for the past 32 years he has been engaged in taxonomic, life cycle, epidemiological and pathological studies of the parasites of wildlife, their role in animal population regulation and their potential as agents of domestic animal and human disease or zoonoses.

Australian marsupials are a unique biological accident, having undergone an evolutionary radiation unparalleled among other mammals, evolving in relative isolation from 65 million years. The diversity of their helminth parasites (nematodes, cestodes, trematodes and acanthocephalans) is striking, given that the Australian marsupials form a monophyletic assemblage. We are now able to trace the origins of these helminths and three routes are evident. Comparative assessment of the anatomy of the gastrointestinal tracts of marsupial families provides a fascinating insight into the development of this

helminth parasite diversity. A glimpse into the inner cracks and crevices of the tiny marsupial mouse, *Antechinus agilis*, weighing in at about 23 grams, gives another almost unbelievable insight into parasite diversity.

The talk will commence with an issue which troubled the fledgling kangaroo meat industry back in the late 1960s and early 1970s — large white worms garnishing the product when unpacked in importing countries. Dave will then examine the manner in which parasite species may affect the community of free-living animals, using a number of examples from Australian wildlife and contrasting the parasite problems in wildlife in the two southern continents, Australia and Africa.

He will conclude with a brief view of emerging parasitic diseases in wildlife, domestic animals and humans with a final scenario of a most perplexing problem. We have now diagnosed three cases of life-threatening human disease caused by a nematode living inside skeletal muscle cells in field or bush-typees from Tasmania, the origin of which could be a vertebrate, an invertebrate, a plant, soil or water ..... or, are we witnessing a legacy from the first convicts transported to that penal colony and who, on managing to escape, at times resorted to "predation" of their fellow-escapees in order to survive?

## OUTING:

### Field trip- Farrer Ridge- Sunday 5<sup>th</sup> February

Working bee — 8:30-10am

Field Nats will be joining Farrer Ridge Park care group for an early morning working bee (weeding), short discussion on the Farrer ridge plan for the year, and perhaps after 10am members may wish to walk the Signposted trail.

Wendy Rainbird tells me that Farrer Ridge Parkcare group has been going since about 1989 with an initial focus on woody weeds, where they removed extensive stands of cotoneaster, pyracantha and briar rose. The Groups focus expanded to ecology and they have mapped dominant veg communities of the Ridge. More recently, since the 2003 fires, the group has been monitoring sites using the Greening Australia Guidelines. The Ridge has rich biodiversity including endangered Small Purple pea- *Swainsona recta*, and I was impressed by bush tomatoes, The Eucs, large stands of *Indigofera*, *Cassinia* and *Lomandra*. The Ridge has an excellent signposted trail describing ecology and species. **Meet at the Parks and Conservation depot, Athllon Dr near the corner with Sulwood Dr.** Bring sturdy shoes as the path is rocky and steep, a hat, suncream etc. Weeding will probably focus on Horehound- so bring gloves and equipment.

Further contact Benj Whitworth 62 544 556

## NEWS AND EDITORIAL

Our monthly raffle needs more donations. Now after Christmas maybe you have that unusual gift that you weren't really expecting. Well maybe it's suitable as a raffle contribution.

### A rail tale of 3 cities:

And a sustainable transport parable for Canberra — Philip Bell

There's a rail tale in the very first chapter of field natter history. The very first Field Naturalists Club (set up in London in the late 19<sup>th</sup> century) was the Epping Forest Naturalists Field Club. Charles Darwin was elected an honorary member at its first meeting, an honour that he wrote to accept.

The Epping club was set up to oppose putting a rail line through Epping Forest. Informal groups of naturalists who had been meeting in pubs around London for some years decided they needed to get together to show their concern for a threat to their local environment.

At that time, our civilisation had yet to formalise the concept of a "nature reserve" or even invent this notion. What they had were "commons" which could be used for all sorts of purposes, including economic and recreational. It was from movements such as the setting up of Field Naturalist clubs that the notion emerged that tracts of land should be set aside purely for the enjoyment of nature – and be undisturbed as much as possible. In the words of a report by Charles Smith in the 1st November 1878 number of the London Fortnightly Review:

*We have now a far pleasanter task, that of calling attention to one of our ancient woodland wastes, Epping Forest, which, in the words of an Act of Parliament passed at the end of last session, is to be for ever preserved as "an open space for the recreation and enjoyment of the public." Here at length every one will have a right to roam unmolested, and to enjoy the beauties which nature so lavishly spreads around when left to her own wild luxuriance. We shall possess, close to our capital, one real forest, whose wildness and sylvan character is to be studiously maintained, and which will possess an ever-increasing interest as furnishing a sample of those broad tracts of woodland which once covered so much of our country, and which play so conspicuous a part in our early history and national folk-lore.*

More than a century later we can see how much the views of environmentalists have changed and how much they remain the same.

One of the few positives that emerged from Canberra's GDE road debate was a renewed interest

in light rail for Canberra. We are now coming to realise that Australians generate more greenhouse gas per capita than any other country – and that Canberra is Australia's most car dependent city with associated major costs, including environmental.

Field Natters who set up the Friends of Black Mountain felt that we needed to do more than simply oppose a road which will mar the beauty and wildness of our sylvan open spaces. We also needed to make suggestions for alternatives to our increasing car dependency, for more sustainable transport for our city. So we organised a public transport conference. In 2001 we invited Professor Peter Newman of Murdoch University – a world expert on sustainable transport - to come to Canberra and address a number of public and private meetings on sustainability and specifically on light rail options for Canberra.

[Aside: in April 1991 Peter Newman (with Jeff Kenworthy) published a detailed report entitled "Towards a more sustainable Canberra", showing public transport patterns around the world and how best practice could be applied to introducing light rail to Canberra. Unfortunately, almost the entire print run of this report was destroyed by an ANU academic – and so this excellent piece of research never saw the light of day. A copy survives in the ACT public library.]

What emerged from the 2001 meetings held with planning officials during Peter Newman's visit was widespread support for light rail – but in the words of St Augustine "Not yet, O Lord, not yet!" Planning officials argue that Canberra is still too small to justify the initial expenditure. **We have been constantly told we must wait till our population reaches half a million.**

Peter Newman's 1991 report shows how **a number of cities in Europe and North America with populations smaller than Canberra's have adopted light rail in response to the pressures of urban car traffic.**

Last year Maureen and I visited a number of cities in the south of France and also – en route to Paris – Orleans (where Joan of Arc defeated perfidious

Albion). We relied almost totally on public transport for our trip – and sampled light rail everywhere we found it. We discovered that the historic city of Orleans in particular has a telling lesson for Canberra.

Situated 130 kms south of Paris, Orleans has doubled its pre-war size and now numbers 150,000 residents – that is, **less than half the current population of Canberra.** We stayed in a new area to the north of the old town centre called "La Source", which is a garden dormitory town much like Canberra's Weston Creek. We stayed with a host family in a tree-filled neighbourhood with a nearby artificial lake surrounded by parklands.

Orleans has just emerged from intense debate about light rail. A north-south light rail linking La Source to the old city of Orleans commenced service recently. It was not cheap to build and is a model of how to do it. The public official who put forward the plan was voted out of public office because of delays and expense involved in getting the plan implemented.

Yet now the tide has turned. The people of Orleans love their light rail. Public opinion has demanded a second line linking areas east and west of the old town centre. Plans for their second light rail network have been finalised and building was about to begin at the time of our visit last May.

At the moment here in Canberra we lose about \$1.5 million per week on a public transport system that is used by a very small percentage of our population. The average annual subsidy for our bus service is more than \$500 p.a. per household. Our buses fail to attract much patronage. The photo essay below shows how the public purse is spent in Orleans on a public transport system that the city both likes and uses.

So in my view **what is needed for sustainable transport in Canberra is not a half a million people** – but unbiased advice from its planning officials and (as Sir Humphrey might put it) brave political leadership prepared to implement a light rail plan for our city. The basic research for this was done long ago.

## **Photo essay on light rail in Orleans, France – Philip Bell, Jan. 06**

Below are some photos of Orleans' light rail. They attempt to illustrate:

- The dramatic improvement this system has made to the city centre and its liveability as a car-free area
- How differently people feel about the public space of the street when they share it with light rail rather than with buses and cars
- Compare the carriageway landscaping with the bitumen landscape of our Canberra roads and car parks
- How popular light rail has become with the Orleanais
- How it has been integrated into a dispersed garden city rather like Canberra
- How light rail reshapes a city towards sustainability – as the city "densifies" along the light rail route which should link town centres and other centres of attraction such as universities, hospitals etc.
- What we are missing out in Canberra due to poor planning.



The new light rail system has transformed the central plaza of Orleans. An area that used to be jammed with cars is now a place for people.

Every few minutes a light rail moves across the plaza. The driver has to clang his bell constantly - to ask people to move out of the way to let him past, please.

The people of Orleans have reclaimed the streets. It is remarkable to note how differently people feel about the street space they share with light rail - without fear of being skittled by a bus or a car.

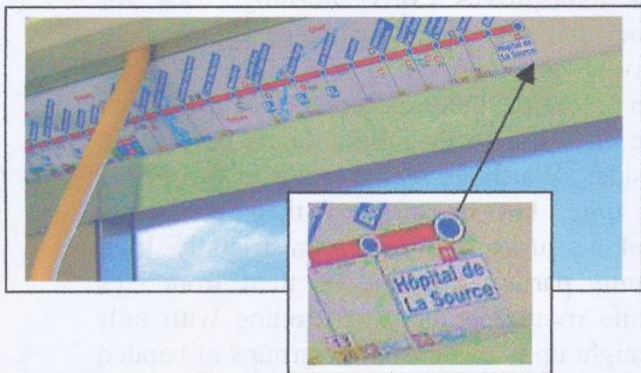
Because the light rail's path is so predictable, people wander across the street as if it is their exclusive domain, even when a light rail is heading straight towards them.



It makes a big difference to the urban panorama when a carriage-way can be landscaped with shrubs and grass rather than with bitumen.



Some passengers got window seats with garden city views for our trip from old Orleans to La Source. But the light rail is so popular that it was standing room only for many during the early part of the trip.



The light rail route map is everywhere to be seen. Note the terminus at the hospital. Light rail needs to link main centres of attraction such as town centres, unis, hospitals etc. Rail then reshapes the city as it “densifies” along the route. Everyone likes to live near the light rail. When you catch light rail you don’t need a timetable, just wait a few minutes for the next one. And you know exactly where it will go. Just step aboard.

Here is our host family’s local light rail stop in a leafy neighbourhood of La Source. Note the ramped platforms for easy pram & wheelchair access .



Here local police here are interviewing fare evaders! “Make sure that you “compost” (machine stamp) your tickets!” was firm advice from our host family. Their son was recently fined for failing to do so.

Other advice was to tell everyone you meet in France that you are Australian and not English. In Orleans cathedral we saw a memorial to two Scotsmen unrelated but of same name who died in different centuries past to defend France against the English.

## SPECIAL REPORT

A Visit to Namibia, 1-18 August 2005 By Kay Hahne (Part 4 -final)

### Etosha National Park and the Etosha Pan

This 23,000 km<sup>2</sup> park is situated in the north-central part of Namibia. It surrounds a pan, or shallow depression 130 x 50 km. Etosha has been interpreted both as 'great white place' and 'place of mirages' - both are applicable. This salt pan, similar to Lake Eyre, is often bone dry, with just a few waterholes to sustain a stunning number and variety of big game animals. Some of the waterholes are enhanced by pumping up more water from the reserves below the surface - by solar-powered pumps. Also the waterholes near the three rest-camps are floodlit at night, with some benches provided for your comfort as you gaze at the unfolding events before you in relative safety. We did hear that a few years ago one German tourist was taken by a lion, as he had fallen asleep in his sleeping bag while lying on a bench behind the stone wall and the wire fence! We slept inside our rondavels with shut doors, comfortable beds and en-suites, thank you!

Our first stop was two nights at the western camp, Okaukuejo. Our rondavels were only a few steps away from the waterhole. That first night we watched 2 females, 2 young and 1 bull Black Rhinoceros drinking. There were 4 lionesses about, but the rhinos seemed unfazed. Then a huge bull Elephant came lumbering in, right down the smooth path on which the lionesses were lying. He came closer and eventually they all reluctantly got up and moved away. As the last one moved off he flung out his trunk at them as if to say "get out of here, girls, I'm coming through". Then he kept coming around to the near side of the waterhole where one rhino family of three stood. The bull rhino swung around and faced the bull elephant. There was a big, long, silent stand-off. Finally the elephant turned away and the bull rhino turned back to his family. The young one had finished nursing and was ready to play with dad. They had a little head-butting session and eventually dad lay

down and junior puts his front feet up on him and rocks back and forth as if to say "come, on dad, let's play - mum's tired of me!" The giraffes kept their distance, watchfully alert and aware of the lionesses. They would not come down to drink as it is so cumbersome for them to get their long neck down to the water level. They are very vulnerable with their front legs spraddled out, or slightly bent at the knees. Their only real enemy is the lion, but even then a well-aimed kick can break a jaw or rib.

We took drives every morning, back for lunch and a rest/diary writing or digital photo sorting and then out again from 3:30-5:30 pm before the gates closed. All of the camps are enclosed so that the animals do not get inside. Warthogs seem to slip in from time to time, but in spite of their ferocious-looking tusks, they were in friendly little family parties, kneeling on their front legs while rooting around, or running with tails straight up in the air. Little groups of banded mongooses and bushy-tailed ground squirrels were also entertaining to watch inside the camps. Often we saw Black-backed Jackals slinking about hoping for a handout. Horst was lucky enough to see two Honey Badgers as they rampaged through the garbage tins, but I was in the shower and missed the event!

We were all impressed by the big numbers of animals we saw at the various waterholes. A herd of 30 elephants in all sizes, little ones bathing or following mum. The youngest was having a nurse and we discovered that elephants have two teats just behind the front legs, not in the back like cows or goats. As many as 22 giraffes at once. One day two young males were having a bit of a fight. They stood shoulder to shoulder, pushing against each other and thrashing their necks about. That will be young males, Mark told us. "You know, 20 foot tall and bullet proof."

Two hundred one day and 300 the next of Burchell's Zebras. The young ones stuck very close to their mothers, appearing as double images. The adults weren't afraid of biting and kicking each other to get the best spot at the waterhole. In fact, they looked downright mean at times and we learned that the zebra has never been domesticated by man – too downright ornery (and clever, perhaps?). I didn't bother to count the number of Black-faced Impala, a subspecies of impala found only in northern Namibia, or Springbok, or Oryx (Gemsbok). Red Hartebeest, Eland and Kudu were fewer in number, but no less impressive with their heads of spiralled horns. Each kind of antelope has their own unique style of horn – twisted, spiralled, curved, straight, long or short – an amazing variety.

We spent one night at the middle camp, Halali, and two nights at the eastern camp, Namutoni. Each was delightful in its own way. We were amazed that during our entire time in Namibia we were able to drink good-tasting tap water and enjoyed wonderful food everywhere we went. People were friendly, animals and birds obliging, except for the elusive leopard and cheetahs. None to be seen this time. In fact the only cat species seen was the lion.

There were many species of circling raptors and vultures perched in the tops of trees waiting for something to die, and one morning a White-faced Owl sitting quietly in a tree with its eyes closed. There were tall, stately Kori Bustards, little parties of Helmeted Guineafowl scuttling about (hors d'oeuvres for lions, Lesley said), trees full of iridescent blue-green Cape Glossy Starlings, ugly Marabou Storks with bare head and necks – but a very impressive wingspan, and as a contrast the beautiful Lilac-breasted Roller (lilac breast and aqua belly) and Namibia's national bird – the Crimson-breasted Shrike. This attractive bird, slightly smaller than our Magpie Lark, is black with a thick white wing bar and brilliant crimson breast from chin to vent. A real beauty in the bleak desert! Thankfully we didn't have to put up with the monotonous calling of the

Cape Turtle Dove, as we saw many more Laughing Doves plus a few Namaqua Doves and very few Capes. We saw very small flocks of Red-billed Queleas in the rushes near the Namutoni Waterhole. These tiny (13cm) thick-billed seed-eaters are often found in immense flocks of tens of thousands, covering many hectares of bush or crop-land. A huge flock is comparable to a cloud of locusts and just as devastating. It is the most numerous bird species in the world and there is research being done on how to reduce their numbers in certain areas.

We were sad to leave Etosha and its incredible numbers of wildlife, the sharply pointed termite mounds, the typical-shaped African tree - the Umbrella Thorn *Acacia tortillis*, the numerous smaller *Acacia nebrownii* shrubs just coming out in the familiar round yellow wattle-type blossom, the vast empty spaces, or the jostling at the waterholes by the animals themselves (not to mention the tourist cars and buses!) But we've all come away with loads of photos and stories and an increased knowledge of a magnificent country of which we knew very little. The memories are all good!

#### References

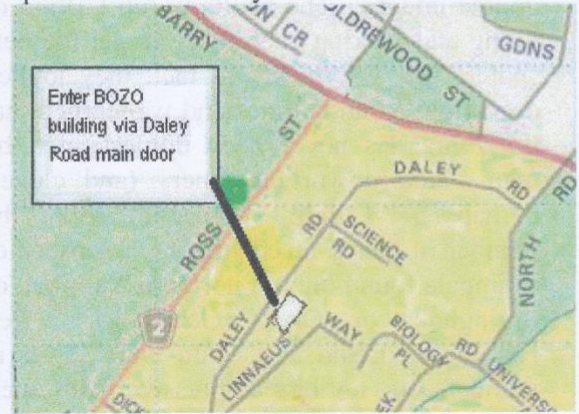
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**Who are the Field Naturalists?**

The Field Naturalists Association of Canberra (FNAC) was formed in 1981. Our aim is to foster interest in natural history by means of meetings and regular field outings. Meetings are usually held on the first Thursday of each month. Outings range from weekend rambles to long weekends away. Activities are advertised in our monthly newsletter. We emphasise informality and the enjoyment of nature. New members are always welcome. If you wish to join FNAC, please fill in the member application below and send it in with your subscription to the FNAC Treasurer at the address below:

**President:** Benj Whitworth, tel 02 6254 4556  
**Secretary:** Rosemary Blemings, tel 02 6258 4724  
**Website:** www.geocities.com/fieldnaturalist/index.html  
**Newsletter editor:** Chris Bunn <chris\_b@webone.com.au>  
Tel 02 6241 2968. Member contributions welcome.

**Monthly meeting venue:** Division of Botany and Zoology, Building 44, Daley Rd, Australian National University, Park in Linnaeus Way. Meetings start at 8pm and are followed by refreshments.



**FIELD NATURALISTS ASSOCIATION OF CANBERRA INC.**

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CANBERRA ACT 2601

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**MEMBERSHIP APPLICATION OR RENEWAL**

Family name: ..... First name: .....

If a family membership, please include the first names of other members of the family:

.....

Postal address: .....

Suburb: ..... State: ..... Postcode: ..... Home phone: .....

Work phone: ..... Email address: .....

Subscription enclosed: \$.....(Single/Family \$20) Donation: \$.....

How did you hear about FNAC? Please circle: FRIEND? OTHER? Please specify: