

March 2013  
ISSN: 1836-2761



FIELD NATURALISTS' ASSOCIATION OF CANBERRA INC. GPO BOX 249  
CANBERRA ACT 2601

**FIELD NATURALIST**

*OBJECT: To foster an interest in nature*

**MEETING—THURSDAY 7th February**  
**7:30pm Australian National University**  
Gould Seminar Room, Building 116, Daley Road, ANU, ACT  
details back page

# **BAT MATTERS**

***Urban bats***

***BatWatch***

***Hollows (in relation to bats)***

***Michael Pennay***

***(President Australasian bat society)***

***“Something very odd has happened in Canberra and we have no idea why,” said local bat expert, Michael Pennay***

***Darren LeRoux***

***PhD student on tree hollows and  
their use by bats***



**Nyctimene robinsoni**

Australian tube nosed bat

Photograph by Mikael Pennay

CHECK DETAILS ABOUT A BAT  
OUTING ON PAGE 3

## The parasite made me do it.....

The word “parasite” comes from the Greek words, meaning “beside the food.” The ancient Greeks reportedly used it to refer to people who served food at temple feasts. Somewhere along the line, the word left that meaning and was (and still is) used to refer to people who curry favour with others in order to receive food or other benefits. After a very long time, the word was applied to animals and other organisms that live off of others. OK, so parasites are creepy, disgusting, and often debilitating (but sometimes useful!). They sneak into a host’s body through food, drinking and bathing water, air and soil, or an insect bite. Less well-known, however, is their ability to alter a host’s behaviour.

There are much more perfidious ways that parasites affect host behaviour, such that the host ceases to do its normal things and, instead, behaves erratically in ways that altogether favour the parasite, usually improving its transmission to the next host. Some examples.

Parasitic fungi called *Cordyceps* use insects as a means of promoting spore dispersal to new hosts. There are many kinds of *Cordyceps*, each with its own kind of host insect. An infected ant, for example, climbs up a plant stem. Somehow, the fungus alters the ant’s brain chemistry and the ant gives up all normal ant-ly behaviour and just hooks itself to the stem, never to move again. The fungus gradually consumes the ant’s innards and eventually sends out a shoot that releases the spores to any passing wisp of moving air. By forcing the ant to climb upward and stay there, the fungus has improved the chances of finding a small breeze to carry its spores away. A spore that disperses successfully and lands on another ant dooms that ant to repeat the whole process. Flukes or cestodes are a kind of flatworm, and they too can create behaviour modification in their hosts. For example, one species of fluke infests certain snails and castrates them. The snails go on eating, but they can’t reproduce, and the flukes multiply asexually inside the snail. The asexual offspring leave the snail and swim around looking for a fish. If they find one they hook onto the gills, move into the blood vessels until they find a nerve, and follow the nerve to the fish’s brain. They carpet the surface of the brain and sit there until the fish is eaten by a bird.

Infected fish behave differently than normal fish — they swim jerkily, too close to the surface, and turn to expose their shiny sides to the light. They become so conspicuous that foraging herons or shorebirds are way more likely to capture an infected fish than an uninfected one. Once inside the fish-eating bird, the flukes feed in the gut and reproduce sexually; the eggs pass out in the bird’s droppings and get picked up by wandering snails. By entering a bird, the flukes can then be carried to new ponds and estuaries — the whole complex life cycle is geared to achieve successful dispersal.

Or how about the lancet fluke inside an ant; it makes the ant run up a blade of grass each night until the grass is eaten by an herbivore, where the fluke can reproduce. Or the horsehair worm that makes an infected cricket jump into water where the worm can reproduce. Or the parasitic wasp that makes a spider spin a novel kind of web — a protective awning under which the wasp larva will hang its cocoon. Or the several kinds of microscopic parasites that clog up the biting apparatus of mosquitoes or flies, such that they have to make many bites in order to get a good blood meal, thus spreading the little parasite to many new hosts. Then there’s the virus that seems to make male rats more aggressive, spreading the virus with every ratty bite, and a micro-parasite that makes rats unafraid of cats, which then pick up the parasite from the rats.

Those are just a few examples of behaviour modification induced by parasites. Long before psychologists concocted the term, parasites were already very good at it. There are now so many examples from the rest of the animal kingdom, that one really must consider the possibility that parasites might be able to modify human behaviour and personalities as well. Indeed, research is beginning to demonstrate that this is so!

• Adapted from an internet article written by Mary F. Willson, a retired professor of ecology.

# FIELD OUTING Sunday March 10

## BATS

**We meet BBQ area near Regatta Point at 6.00 pm if you wish to bring a picnic evening meal and meet others, OR 6.30 pm without picnic. The bats fly out of Commonwealth Park at dusk. Maree Kerr and others from the Australasian Bat Society will have detectors to see if there are microbats about. Wear sturdy shoes and bring a torch, food if eating.**

**Maree is the bats night and event co-ordinator with the bat society. Their website is <http://ausbats.org.au/>**

This month's natural history piece comes from an item written by Alec Chisholm.

## EARLY CONTACTS WITH SNAKES

Although Australia contains approximately 140 species of snakes, of which at least twenty are venomous, and although the environs of Port Jackson originally carried a strong representation of the reptiles, settlers at Sydney Cove do not appear to have been troubled by them to a noticeable extent.

Thus, Surgeon-General John White's *Journal* of 1790 contains only brief descriptive references to some few kinds of snakes, and it is added that, "None of the above Serpents appears to be of a poisonous nature". Moreover, in Captain Watkin Tench's book of 1793, there are these statements:

Reptiles in the swamps and covers are numerous. Of snakes there are two or three sorts: but whether the bite of them be mortal, or even venomous, is somewhat doubtful. I know but one well-attested instance of a bite being received from a snake: a soldier was bitten so as to draw blood, and the wound healed as a simple incision usually does, without showing any symptom of malignity.

Tench went on to say that a dog died in agony after being reported to have been bitten by a snake, but, being a cautious recorder, he added, "I will by no means affirm that the cause of the animal's death was fairly ascertained." What Tench did affirm was that the reptiles had their uses in a place such as the struggling settlement of Sydney. "I have often eaten snakes," he declared, "and always found them palatable and nutritive, though it was difficult to stew them to a tender state."

Subsequently, snakes were given some attention, if only slight, in early issues of Australia's first newspaper, the *Sydney Gazette*. On 11th September 1803 the *Gazette* reported that "a small viper", upwards of four feet in length, had been killed in a house "at the upper end of Chapel Row" (later Castlereagh St), and a week later it stated that "a snake of extraordinary size"—and this adjective was justified as the specimen was said to have measured "more than 17 feet"—had been killed on the banks of George's River.

Perhaps the most picturesque of the records relating to early contacts with snakes in Australia are those concerning the novel made by Lady Franklin, wife of the Governor of Tasmania during 1837-43, to rid the island of these reptiles. As a result of her offering a shilling for every snake's head lodged at a police station, she found herself £600 the poorer in one season, and because of that expense, as well as the fact that snake-gathering was affecting discipline among the convicts, the enterprise had to be abandoned.

Well-meaning though she was, Lady Franklin became subject to some ridicule over the matter.

## A donation for frogs

Your FNAC committee has authorised a donation of \$250 to the Amphibian Research Centre (ARC) after nine members were inspired by a presentation from Gerry Marantelli during the Snakes Alive display in January.

Gerry spoke of his wide-ranging experiences with frogs over several decades and about the numerous threats posed to frogs, worldwide, by environmental conditions. Gerry is just the kind of speaker we enjoy as he had a range of relevant, evocative images, anecdotal experiences and scientific reports to present. He spoke with passion and fluency about the ARC's numerous projects including recovery and breeding programs, the causes of frog species declines and the ingenuity that ensured facilities developed regardless of small budgets.

The ARC is proactive in supplying common species of frogs and tadpoles, with appropriate 'housing' to those wishing to care responsibly for frogs. This represents income for ARC which simultaneously has teams of volunteers and students placed from Universities and TAFEs.

There is much more information at [frogs.org.au](http://frogs.org.au) . We hope you will agree that it's appropriate for naturalists to support studies related to the natural history of amphibians by this small donation.

We also felt it was a way to thank the ACT Herpetological Association for the years of *Snakes Alive!* presentations they have organised.

And as a P.S. The Reptile Sanctuary at Gold Creek has a new name because it's under new ownership...Peter Childs of long-standing reptilian fame in the ACT.

Rosemary Blemings

### EDITORIAL

Unfortunately, due to a wedding in Melbourne I am unable to attend this month's talk and excursion about bats. It sounds very interesting.

Before retiring from the public service I did work in the area and specifically diseases in bats. I am concerned that the Federal Department of Health (or whatever the department is currently called) continues to put out the wrong message.

The extreme danger with lyssavirus is from bats showing clinical signs. These are either unusual aggression, for example showing no fear of humans, or the reverse being very lethargic and can easily be approached. Bats with these signs should not be handled, without absolute protection. (It makes sense that those handling bats should be vaccinated as a protection.) Lyssavirus has not (so far as I know) been isolated from a healthy bat.

We will never know the circumstance of the latest lyssavirus death in an 8 year-old child. Maybe the child found a bat that could easily be approached.

*The world's heaviest flying bird is the Kori bustard from Namibia in Africa. On average, male birds weigh between 10.9-16 kg, averaging 13.5 kg (30 lb) but exceptional birds may weigh up to 20 kg. The Australian male bustard only weighs in at an average of 6.3 kgs. Maybe fewer predators?*

**Dr Richard Blewett** from **Geoscience Australia** will present a public lecture that will take you on a journey through Australia's long and complex geological evolution and how this geological legacy has shaped the Australian nation.

**10 April 2013, 6:00pm - 7:00pm**  
**CSIRO Discovery Centre,**  
**North Science Road, Acton ACT**



*Shaping a Nation: A Geology of Australia* is the story of a continent's geological evolution as seen through the lens of human impacts.

The lecture highlights the underlying narrative of the book, which has been recently published by Geoscience Australia and the ANU E Press.

Exploring the geology, resources and landscapes of Australia, the book reveals how these have helped to shape this nation's society, environment and wealth.

Dr Blewett is also talking at the Belconnen library on the March 12 at 6:00 pm. To book for this event visit:

[http://calendar.boston.com/belconnen\\_australia/events/show/307708965-geology-of-australia-how-a-continent-shaped-a-nation-belconnen-library](http://calendar.boston.com/belconnen_australia/events/show/307708965-geology-of-australia-how-a-continent-shaped-a-nation-belconnen-library)

This year the President and committee are advanced in their planning for the monthly meetings. Speakers may change, but it is a good start for the year. Outings will aim to reflect the topic of discussion for that month

MONTH	SPEAKER	TOPIC
<del>FEBRUARY 7</del>	<del>Scott Ryan</del>	<del>Brush-tailed rock-wallaby research at Tidbinbilla.</del>
MARCH 7	Bat people	Bats!
APRIL 4	Tonya Haff	White-browed Scrub Wren
MAY 2	Richard Baker	"Traditional Ecological knowledge: the Yanyuwa"
JUNE 6	Marianne Horak	The scribbly gum moth (Canberra the scribbly moth capital)
JULY 4	Dierk von Behrens and others	Clouding visions
AUGUST 1	Ric Longmore	Dangerous snakes of Australia
SEPTEMBER 5	AGM, members' night	Member's choice
OCTOBER 3	Trish McDonald	Macquarie Island, rabbit, rat, mouse control during her time as station manager for the Australian Antarctic Division
NOVEMBER 7	Under construction	
DECEMBER 5	Christmas party	

*The next committee meeting is planned for the third Wednesday in March (March 20) commencing 5:30 pm at the Conservation Council 17 Childers Street*



**Field Naturalists' Association of Canberra Inc.**

**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:** Rosemary von Behrens pH: 6254 1763

**Email:** fieldnaturalist@yahoo.com.au

**Website:** under construction

All newsletter contributions welcome.



**Monthly meeting venue:** Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. Park (the Xmas meeting is at the adjacent building 44 and will start at the earlier time of 6:30 pm)

**Field Naturalists' Association of Canberra  
GPO Box 249  
Canberra ACT 2601**



**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 \$25) Donation: \$.....

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