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GPO BOX 249  
CANBERRA ACT 2601

FIELD NATURALISTS' ASSOCIATION OF CANBERRA INC.

# FIELD NATURALIST

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

## **Adventures with Rosie: monitoring Rosenberg's Monitor on Mt Ainslie 2013–2016**

**Speaker: Matthew Higgins**

*Rosenberg's Monitor is a large goanna that is rarely seen in the ACT. This presentation looks at these beautiful reptiles in an ACT context, focusing on a project that recorded key activities of the monitors on Mt Ainslie. The project was a partnership between Matthew and ACT Government Senior Ecologist Don Fletcher. Rosenbergs lay their eggs in termite mounds and Matthew took what are probably the first ever photographs of egg-laying and hatching in the Territory and a good distance beyond. It is hoped that the project and this presentation will advance community education about Rosenberg's Monitor and assist conservation of the species.*



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# It isn't easy being green ... or brown

Growing up in Queensland, the frogs I knew and loved were the green tree frogs (*Litoria caerulea*) and the red eyed tree frogs (*Litoria chloris*). They were found in our garden in the deep shade of the big mango tree and often hopped into the laundry underneath the house. Sometimes, they even managed to find their way into the toilet. I didn't know at the time but have since discovered they can live up to 16 to 20 years. They were always remarkably calm and I have many fond memories of carefully picking them up and placing them in a safe spot.

According to Wikipedia the green tree frog was the first Australian frog to be scientifically described, with the original specimen finding its way into the collection of Sir Joseph Banks. Sadly, this specimen was destroyed when the Hunterian Museum at the Royal College of Surgeons in London, where it was kept, was bombed in World War II.

Also according to Wikipedia, the species was originally called the "blue frog" (*Rana caerulea*) despite its green colour. This is because the specimens that were sent to England were damaged by the preservative that was used. The colour of the frog is caused by blue and green pigments covered in a yellow layer; the preservative destroyed the yellow layer and left the frog with a blue appearance. However, *caerulea*, which is Latin for blue, has remained part of the frog's name. Many frog populations are in decline because of the fungus *Batrachochytrium dendrobatidis*, which causes chytridiomycosis. Thankfully secretions produced by the green tree frog and the red eyed tree frog are protective against the fungus and the population of these frogs is considered healthy and their conservation status is of least concern.



When I first came to Canberra I missed seeing frogs and although I have become inordinately fond of the eastern long neck turtle - *Chelodina longicollis* – the reptile I most commonly encounter, I still experience a sense of joy and childlike delight whenever I spot a frog. And this year has seen a number frogs hopping around my house. At first, because of their colour – most decidedly, not the luminescent green I associate with the frogs of my Queensland childhood – I thought they were toads but it appears that many of the southern Australian frogs are brown.

I spotted what I think was a Whistling Tree Frog - *Litoria verreauxii verreauxii*. (And Field Natters are very welcome to help with the correct identification). The frog was happily sitting on the kitchen windowsill, probably enjoying a rich feast of insects attracted by the light; a hunting practice shared with the green tree frogs.

Although the frog looks quite large in the photo the body wasn't much bigger than 4 or 5 cms. According to the Ginninderra Landcare *Frogs in Your Backyard* poster these frogs are considered common in this area. Their mating call is a 'cree...cree...cree' which I confess I have been hearing for years but misidentifying as a cricket. Although in my defense

I would say that, according to the poster, the mating calls are supposed to be heard from June to October, whereas my frogs seem to be much more romantically inclined in the warmer months.

I am not sure what the little frog on the cane basket is. Although very small, perhaps 2-3 cms, the frog was capable of a huge leap – almost 1 and half metres. I managed to catch him in a water glass and put him outside but either he or several of his comrades were quite taken with my house, as I found them in the bathroom several times over the next few days.

The grass under my kitchen windowsill, where most of the frog calls seem to emanate from is almost 2 metres high but I am pleased to have the perfect excuse for leaving it alone. It is obviously a haven for the brown frogs I am beginning to know and a delightful reminder of the green frogs I love but haven't seen for the longest time, and not merely proof of my terrible laziness in the garden.

<http://www.ginninderralandcare.org.au/res/File/PDFs/Frogs%20of%20the%20ACT%20Region%20Poster.pdf>

Rhiân Williams

# Real-life zombies that are stranger than fiction

Some fungi, viruses and bacteria have evolved a spine-chilling way of being transmitted from one host to another. They turn their hosts into witless zombies

The zombies we know from fiction are ferocious, flesh-eating post-humans. And while such stories have never come true, nature is full of disturbingly similar cases of zombification among plants and animals. Sometimes the parallels are striking.

There is something particularly disconcerting about the idea that an animal's behaviour could be drastically changed by an infection or parasite, but it is a phenomenon well-established in nature.

In fact, fossils showing evidence of zombie ants – including the apparent marks their infected, mind-controlled bodies left on leaves – have been found dating back 48 million years.

Meet the real-life zombies, some of which are even stranger than fiction.

## Zombie ants

A couple of years ago, Matt Fisher was on a night-time research stroll through the dense forests of French Guyana when he stumbled on a grisly sight. “We found the cadavers of insects that were parasitised, clamped up high to vegetation, with these horrendous spore-bearing bodies projecting out of their skulls,” he recalls.

Fisher, a fungal disease epidemiologist at Imperial College London, knew instantly what they were. These were the remains of ‘zombie’ ants – insects infected with a fungal parasite that controls their body and mind, making them crawl up plants where they stay put. When they die, their infectious fungal spores rain down on other ants

below, spreading the contagion far and wide.

The group of fungi that can do this belong to the genus *Ophiocordyceps*. Once infected, the zombie ant will mindlessly crawl to a specific type of location determined by the species of fungus to which it has fallen victim.

Perhaps the most famous fungus, *Ophiocordyceps unilateralis*, prompts its hosts to end their days perched under a leaf. Those that have succumbed to *Ophiocordyceps australis*, meanwhile, will die in the forest litter below.

It is not immediately apparent how a fungus has this surprisingly specific effect on an organism so much more complex than itself. But David Hughes, Harry Evans and colleagues hope to find out – they have been studying cordyceps fungi for decades. Over the years, they have discovered that different species of *Ophiocordyceps unilateralis* have evolved to match the different lifecycles of whichever species of host ant they take as their victim. It is “a stunning example of coevolution”, says Evans.

In a 2016 article, Evans and his co-authors explained that the fungus likely uses a series of enzymes that alter processes in the ant host's body. These enzymes may, for example, change the expression of genes in such a way that influences the ant's behaviour.

It is also known that, once ‘zombified’, muscular tissue in the ants gradually breaks down.

There may also be direct manipulation of the ant's nervous system, and control of neurotransmitters or “chemical messengers” like dopamine, which can also modify behaviour. However, this interaction is not fully understood. What is clear

is that more examples of fungi-insect zombies are still being discovered.

“The next question we are trying to solve is: does the same thing happen in spiders,” says Evans. “And, the answer would appear to be: yes it does.”

These real-life zombies now even influence the representation of zombies in stories. As they have become better known, cordyceps fungi have inspired modern tales about the undead. For instance, in M R Carey's novel, *The Girl With All the Gifts*, and in the video game *The Last of Us*, human victims fall foul of a fungal parasite, not a zombie virus.

## Zombie parasites

The situation in which the lives of two organisms are directly linked – such as with a parasite and host – is known as symbiosis. In the insect world, there are lots of examples of this.

Take, for instance, the parasitoid wasp *Glyptapanteles*, which lays its eggs in the body of caterpillars. When the eggs hatch, the wasp larvae feed on the host caterpillar's bodily fluids before eating their way out and forming a cocoon nearby.

But the caterpillar, though damaged by this process, is still alive and remains in position as a sort of zombie bouncer that aggressively knocks away beetles that come near to – and might prey on – the cocoons. Researchers studying this have found that, with a zombie caterpillar guard in place, the number of predators approaching the cocoons can be halved – an obvious advantage for survival.

This full article can be accessed at: <http://www.bbc.com/earth/story/20170313-real-life-zombies-that-are-stranger-than-fiction>

# *Saratus hesperus* spider discovery in the vines at Mount Majura vineyard

*Saratus hesperus* spider discovered in Canberra by Stuart Harris

“I was on my hands and knees probably pulling out weed around the bottom of a vine had a look and saw this hop, hop, hop, and there it was. This bright blue jumping spider.”

Four years on from the discovery it has been officially named *Saratus hesperus* and described within the science journal *Peckhamia*.

What stands this discovery apart from the three prior, and three he has co-discovered with other spider fans, was that this was the first of a new spider family or genus.

“This little one for all intents and purposes is a peacock spider it is just when they did the dissections and had a look at the genitalia it’s totally different to all the peacock spiders,” Mr Harris said.

“That anatomical difference is enough for the taxonomists Dr Otto and Dr Hill to give it its own genus.”

Mr Harris said this was the first *Saratus* found, the holotype, but over the past decade there had been a spike in discoveries with 52 peacock spider types found so he was hopeful the *Saratus* wouldn’t be a family of one for long.

The tiny spider is just 4 mm in size but with help from a macro photographic lens Mr Harris was able to look at its patterning - a feature that determined the second part of its name.

“Hesperus is greek for the planet venus,” he said. “Once I saw it had the yellow dot on the two-tone blue background. Venus is a very sulphuric planet and so has that connection with the yellow and it also has the yellow legs. So it seemed like a no-brainer.”

Mr Harris said his life has transformed by his passion for science and spider scouting and his three year quest for the first *Maratus* was the subject of a short documentary film of the same name released in 2015.

He first discovered the *Maratus harrisi* in 2011 and went on to discover the *Maratus calcitrans* in 2012 on Black Mountain and *Maratus elephants* in 2013.

Mr Harris was also credited with the co-discovery of three other peacock spiders in 2014 in Wangaratta, in 2015 at Mt Hotham and in 2016 in Bermagui.

His work as a citizen scientist led him to take up work at Questacon and he devotes his annual leave to springtime searches for new peacock spider varieties.

“When it is in your blood, and you have had this sort of success, when it has had this sort of impact on one’s life you can’t give it up,” he said.

“I save my money, my energy and my leave for spring period when they are most active. I am already making plans this year to year to look around the Grampian in Victoria.”

## Dead Leaf Dreaming: Echoes

**D**ead Leaf Dreaming is about the hot, dry Australian summer, redolent with plants, animals, insects and artefacts, all of which reveal themselves as echoes of having been something more. There is nothing large or lush, but there is a nuggetty toughness in these subjects, which is a precondition for survival in gardens and a bush heavily impacted by a hot, dry climate.



Sharon Field’s works capture the transition

of her subjects into new forms— her finely rendered watercolour paintings capture the beauty of a grasshopper, a leaf, a stalk of grass and the relationship of these natural forms with other more sculptural elements often found in the bush - bones, bullets, barbed wire.

Exhibition opening: Saturday, 25th March 3-5 pm, by Roy Forward

Gallery: Suki and Hugh, 38A Gibraltar Street, Bungendore

Gallery Hours: Thursday - Sunday 10 am - 4 pm.

Other times by appointment (Phone. 6238 1398)

# Orchid spotting on Mount Majura

Some members may remember a talk on given last year by Geoff Robertson in which he talked about the citizen science web site Canberra Nature Map. Canberra Nature Map basically is a web site to which anyone can contribute photos of flora, insects, birds, mammals, fungi etc, but the photos must have GPS location. Since that talk I have been uploading many of my photos to this web site.

There are those opposed to this project, rightly thinking that the location of rare orchids should not be made known publicly. Having looked at the site, I can assure those that in these cases the location is hidden and not made public.

With this in mind, the creators of the web site have sent out the following invitation.

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Autumn is here and while it feels like the sun is starting to fade away, it opens up the chance to spot a whole new variety of amazing plants. So we have a special giveaway competition for the keen orchid hunters among you.

We have a brand new copy of *Growing Orchids in Cool Climate Australia - Second Edition* by M J Fraser, J Wright and W Ferris up for grabs as well as the rare opportunity to be publicly acknowledged in a dedicated section directly on the main Canberra Nature Map home page and social media for your expertise. BUT only if you can out-hunt your orchid hunting peers to discovering some really special orchid treasure...

You see, Mount Majura wants to have autumn orchid species. It deserves it! And we know it must have them. There has been the odd autumn orchid leaf reported in the past, but never a flower in plain sight! So we have clues, but no real, full proof. And we think Mount Majura deserves this new discovery to clear it up for good.

So we are calling on you to help us search for and report any sightings of the following species during the next 1–3 months AT MOUNT MAJURA, as its prime time orchid hunting season:

- <http://canberra.naturemapr.org/Community/Species/107> (Parson's Bands)
- <http://canberra.naturemapr.org/Community/Species/79> (Rufous Midge Orchid)
- <http://canberra.naturemapr.org/Community/Species/80> (Horned Midge Orchid)

The first fully confirmed sighting in full flower of any of the above species AT MOUNT MAJURA wins the book posted to your address for free as well as the 2017 Canberra Nature Map Orchid Warrior Citizen Science award and acknowledgement.

So get hunting and maybe a member of FNAC will be the winner of this prize.

# Night parrot sighting in Western Australia

A group of four birdwatchers from Broome has photographed Australia's most mysterious bird, the night parrot, in Western Australia. The sighting is all that more remarkable when you consider that the night parrot was not confirmed as still alive in Australia until three years ago, and that the photograph was taken in a patch of spinifex 2,000 kilometres from where the bird was rediscovered in Western Queensland. While the group described the parrot as a "fat budgerigar", the sighting was the equivalent of winning the bird watching lotto.

"I grew up knowing that the bird was extinct and didn't expect to ever see one in my life," says Adrian Boyle from Broome, part of the group that found the bird.

"I just knew it was a fairly small green and yellow parrot that used to live in deserts in spinifex countries that was sort of the unseeable, that it was the holy grail if you get to see one."

To find the bird, the team travelled to a habitat they identified by poring over detailed aerial maps, and camped out, listening for the calls of the largely nocturnal parrot.

The night before, we actually heard the birds, which sounded very unusual to us actually. We couldn't sleep, we were just pondering the question: 'what was making

this noise?'" says Nigel Jackett, a warden at the Broome Bird Observatory.

"There were quite a few of them, there were at least five or six of these things calling around us, so we didn't know what they were, but we saw the habitat was beautiful and thought that they could be night parrots."

"The next day we walked out into that area and one just burst out from under our feet from the spinifex."

In that moment, one of the members of the group, Bruce Greatwich, managed to take a photo of the south end of the northbound bird. It was definitely a night parrot.

The men's discovery is the first confirmed sighting of a night parrot in Western Australia for nearly a century. There have been other rumours of sightings throughout the 2000s, but no evidence accompanied them.

The sighting increases the known range of animals by thousands of kilometres, from the site in Western Queensland all the way across the Northern Territory to patch of rocky spinifex in Western Australia, the exact location of which is not being disclosed.

The birds are so difficult to spot, even in their known Queensland

habitat, that even the chair of the Night Parrot Recovery Team, Allan Burbidge, hasn't even seen one.

Alan Ford

Alan is a member of Field Naturalists Canberra.

John Harris sent him this reply.

Thanks Alan. This is heartening news indeed but hardly something to 'shock' us! Excite us, yes, but after all the Night parrot was described first from a Western Australian specimen – hence its name *occidentalis*. Their habitat spans the vast spinifex plains especially where there is *Triodia* grass - ie Western Queensland, the Northern Territory, Western Australia and the north of South Australia. I would not be shocked if they were discovered in Western NSW, very excited but not shocked!

I described my sighting of them in the 1960s north of the the Barkly Tableland (NT) on this chatline two years ago. You can, I think, find it under night parrot or 13 Feb 2014. The Aboriginal men I was with called them *Mirr*lambing with a hard 'b' - (*Mirr-lam-bing*). *Mirr* means to call out so the name means something like night calling bird. This name or a similar name can be found in the older bird literature which used to record Aboriginal names.

## *Lorikeet escapees: further evidence*

In an earlier newsletter I suggested evidence that the Canberra population of Rainbow lorikeets came mainly from escapees from the Federation Square avian enclosure. Further evidence seems to support this theory.

While Rainbow lorikeets have been seen and heard flying overhead for quite a few years, they had not previously been seen actually landing in the trees in my yard until very recently. They have been seen feeding on eucalypt flowers a few street away, but no closer: that is until this year.

One pair landed in my Chinese elm tree late last year but then left.

This year I saw a pair in my apple tree, but since it was late in the season with virtually no fruit left to pilfer I was surprised to see them migrate to my bird seed feeder out front.

Thinking they weren't really seed feeders I went inside and came back with a couple of slices of apple. I'd barely come into the yard when one of the lorikeets flew to a nearby tree branch, then was happy to eat the apple from my hand. An obvious escapee from Federation Square?

This seems even more likely as since then no other lorikeet has been brave enough to come close or indeed even recognise the sliced apple left out for them.

**Alison Milton**

## Activities

Month	Speaker	Topic
6 April	Matthew Higgins	Rosenbergs Monitors
4 May	Glenn Cocking	Moths
1 June	Brian Hawkins	The Bush Blitz scheme
6 July	Megan Dixon	Molonglo Catchment Group
3 August	Members chance to shine	AGM
7 September	Martin Royds	Organic/non-industrial farming
5 October	Alex James and Jennie Curtis	Small Farms network
2 November	Meredith Cosgrove	Photographic gUide to ACT native plants
7 December		Xmas party

# Environment Exchange 2017

Environment Exchange events are held monthly to provide for informed, in-depth discussions on environmental issues in the region. Member groups are encouraged to attend and to publicise the events to their members and supporters.

The Conservation Council 'Environment Exchange' series is held at the Renewable Energy Hub, 19–23 Moore Street, Turner (just off Barry Drive).

All events are scheduled from 12–2pm starting with a light lunch (donations welcome). We have moved the events to Tuesdays rather than Thursdays and have adjusted for public holidays.

Events are: (click on the link to book or go to the conservation council web site).

- [Tuesday 28 March: Using Nature for Power: how soon to a 100% renewable energy future](#)
- [Tuesday 18 April: Climate Change Action: Getting to Zero Net Emissions](#)
- [Tuesday 23 May: Overcoming the Growing Pains: Building a Sustainable Compact City](#)
- [Tuesday 27 June: Reducing Canberra's Waste Mountain](#)

## Book contribution opportunity

Some of you may be aware of the Bird Feeding and Watering Study being conducted by the Deakin University. The study coordinators are now planning on publishing a book and offering an opportunity to contribute! The book is focused on birds who visit us in our backyards and gardens and will be published by Allen and Unwin Publication. The working title is "The magic of your garden birds". The book will be very much about you and your interactions with garden birds. Why you love them so much? What do they do to make you laugh? Have you witnessed any interesting behaviour? What is your favourite bird and why? The author wants to capture and share the passion and love you have displayed for birds.

The copyright and ownership of the photos, stories and anecdote you send in will belong to you. If you wish to participate by sending in stories and photos please ensure that you tick the consent boxes. You can fill it out on line or download it from the [web site](https://csdb.org.au/book/consent-form.aspx) (<https://csdb.org.au/book/consent-form.aspx>).

If your story and photo is published in the book, your first name, surname and the state you live in will be used. So if you do have amusing stories or anecdotes and photos about birds you wish to share and possibly have published in the book, please email them to [g.cleary@deakin.edu.au](mailto:g.cleary@deakin.edu.au). You are most welcome to email questions and queries you may have.

Don't be shy!



Field Naturalists' Association of Canberra Inc.

### Who are the Field Naturalists?

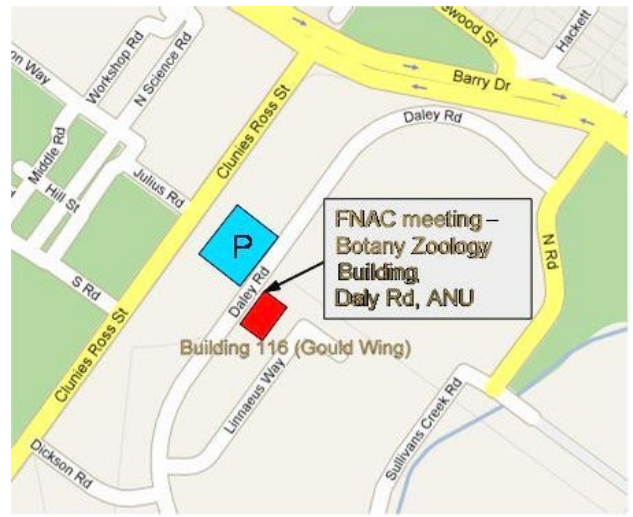
The Field Naturalists' Association of Canberra (FNAC) was formed in 1981. Our aim is to foster interest in natural history by means of meetings and regular field outings. Meetings are usually held on the first Thursday of each month. Outings range from weekend rambles to long weekends away. Activities 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 **Phone:** 6254 1763

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

**Website:** under construction

**Editor:** Alison Milton All newsletter contributions welcome. **Email:** apm56@optusnet.com.au or cc' Alison.milton@health.gov.au



**Monthly meeting venue:** Division of Botany and Zoology, Building 116, Daley Road, Australian National University. (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: