

April 2014  
ISSN: 1836-2761



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

## **Koel, calm and collected: Responses of native Canberran wattlebirds to an unfamiliar enemy**

**Speaker: Laura Johnson**

The eastern koel (*Eudynamis orientalis*) is a species of cuckoo; a brood parasite, which imposes the care of its young on a host parent of another species. The koel has recently begun breeding in Canberra and has adopted a new host species, the red wattlebird (*Anthochaera carunculata*). The red wattlebird doesn't occur in the koel's original breeding grounds in Queensland and it is not currently known whether red wattlebirds possess any defences against brood parasitism by koels. For my Honours project, I assessed whether Canberran wattlebirds possess one of the most foundational anti-parasite defences: the ability to recognise the koel as an enemy.



## Contents

“Snakes of the ACT”	2
It began with cowrie shells	5
Weereewa - Lake George outing March 15, 2014	6
Backyard visitors	7
Activities	7

Ric Longmore  
 Guest speaker for Field Naturalists of ACT  
*“Snakes of the ACT”*

6 March 2014

Notes by Christina N Zdenek

### Snakes in general

- Nine species recorded (via museum specimen) in the ACT. Eight are elapids.<sup>1</sup> One is a blind snake. (No pythons in the ACT, probably due to the 525 m elevation)
- All elapids have fixed fangs, not hinged fangs (like Rattlesnakes and Vipers overseas)
- 2,000 species of snakes in the world (CNZ note: as compared with ~10,000 species of birds)
- 175 species of snakes in Australia, 75 of which are elapids (CNZ note: 43%)
- Australia has the highest number of pythons in the world (16)
- 2–3 snake-bite deaths per year occur in Australia (mainly due to bare feet; figure would be larger but Australia has great access to anti-venom)
- 20,000 snake-bite deaths per year occur in India, as a comparison (due to bare feet in rice fields + not good access to anti-venom)
- All (Australian) elapids have very short fangs, except the Taipan (12–14 mm long fangs)
- Reptiles are more closely related to birds than amphibians
- Scott Keogh: great herpetology professor at the ANU
- Herpeton=Greek word for ‘crawly animal’
- Snakes are identified by counting scales (e.g. the mid-body count, anal plate, and sub caudal scales)
- Snakes exude pheromones via the cloaca to attract members of the opposite sex
- Male has a hemipenis (CNZ note: plural=hemipenes)
- Snakes only have 1¼ lungs (left lung is vestigial because of the long body and not much lateral room; top part of the left lung is also vascularised, so it does play some role in oxygen intake)
- Anti-venom used to be called anti-venene. In Australia, it’s made by CSL in Melbourne)
- Most snakes in Australia carry neurotoxic (preventing messages from being sent along the neurons, affecting the nervous system) venom; the Mulga Snake carries hemotoxic (affecting the blood) venom. Cytotoxic venom acts on destroying the cells.
- Ham bags at Christmas time are great snake bags – much better than mum’s old pillowcases.
- Snakes taste the air with the two forks and
- No pythons occur in the ACT or Tasmania
- Snakes grow their whole lives but slow down as they get bigger
- 4 jaws work independently with recurved teeth to engulf prey by dislocating their jaws.
- They don’t blink their eyes. They can’t close their eyes. When they shed their scales, the eye surface sheds, too.
- No Australian snake can eat a cane toad and survive
- Snake venom is so deadly so as to immobilise their prey immediately so that they don’t lose their prey (e.g. Death Adder cannot chase their prey); whereas the python overpowers their prey by constriction
- The five monovalent anti-venoms are a) the Tiger Snake Group (including Red-bellied Black, the Copperheads, and the Rough-scaled Snake; b) the Brown Snake Group; c) the Mulga or King Brown Snake; d) the Death Adder Group; and e) the Taipan Group.
- There is a polyvalent anti-venom, if you don’t know what you were bitten by, but this leads to bad side-effects and reactions
- Tiger Snake anti-venom was the first one developed by CSL
- Ric has been bitten by a Tiger Snake, Brown Snake, and Small-eyed Snake
- Rattlesnakes and vipers overseas are mainly hemotoxic and (necrotic: local tissue damage)

<sup>1</sup> Family Elapidae (venomous land snakes): venomous, front-fanged snakes with enlarged, syringe-like fangs set at the front of the mouth and connected to a venom gland at the rear of the head via a duct beneath the skin on the upper jaw; lack a loreal scale (CNZ note: a scale b/w the eye and the nostril) (Source: Wilson & Swan (2008)).

## Report on March speaker

- Snake venom is ranked by LD50 (lethal dose 50%); but doesn't take into consideration the length of the fangs, the proximity to people, its temperament
- If you encounter a snake, stand still, and if you can retreat slowly, do so; every situation is different though.

### Species

#### Blind Snake (*Ramphotyphlops nigrescens*)

- Two tiny remnant eyes on the head and a couple of teeth
- They eat termites and other small, (subterranean) insects
- They come to the surface when there's heavy rain
- 32 species in Australia, all non-venomous and have a spike (CNZ note: small spike) on the tail
- It develops blisters on the skin if kept out of dirt after one day, so it's hard to study them or keep in captivity
- Ric has found some on Mt. Ainslie.

#### Eastern Brown Snake (*Pseudonaja textilis*)

- 2nd most venomous snake in the world that has ever been tested
- Most common snake in the ACT and the snake that Ric gets the most calls for to remove from peoples' houses and properties
- One of the most difficult snakes to catch because it rears up, it's very fast moving and striking, and it's aggressive
- It's unpredictable and deadly
- Has small fangs (CNZ note: 2–3 mm) that won't penetrate thick jeans or boots
- Baby Eastern Browns always have the black nuchal crest and dark head but does not always have the bands across its body. Bands are lost at about 1 year.

Eastern brown snake at the Pinnacle Reserve, Hawker



- Lays 20–30 eggs on rotting vegetation and female never sees them again after that
- They eat small lizards when young
- Their colouration is very variable (ie. sometimes spectacled, black, or grey, not always brown)
- They don't like water much. That's more the Copperhead, Tiger, and Red-bellied Black that like water.
- They don't eat chicken eggs. They go into chicken coops to eat the rats and mice that live in there.
- Mating can go on for hours, rubbing his body on hers, prior to connecting cloacae for the male to transfer his sperm
- Females can mate with many males

#### Red-bellied Black Snake (*Pseudechis porphyriacus*)

- "The pinnacle of vertebrate evolution"
- Swamps occupied by Tigers and Copperheads; riverine areas occupied by Red-bellied Blacks, where they are very common in the ACT
- They're ovoviviparous: egg hatches in the oviduct and the young born in translucent sack/balloon that they break out of
- Belly is pink; there is a red line along the side of the body
- Related to cobras: they flatten the neck out (called a false hood when they do this)
- Mulga Snake (King Brown), Collared Snake, and Blue-bellied Snakes all in the same genus but lay eggs, not live young. Red-bellied Black Snakes are the only member in the genus that lays live young
- Can have very little or no red on the side of the body, which may look like a black Tiger Snake, but it's not a Tiger snake if it has a pink under belly
- No deaths have been recorded by this snake (CNZ note: a travelling snake display show (RADOA.com) claims that there was 1 recorded death in 1804: a 6-year-old boy who was walked all night as medical treatment)

#### Tiger Snake (*Notechis scutatus* ssp. *longmori*, named after Ric Longmore)

- Same genus as the cobra
- Frog-eaters and often loaded with parasites (eg. nematodes) from the frogs they eat. This is why they sometimes have parasitic lumps on them.
- Rose Lagoon is great for Tiger Snakes
- Due to the drought, there is a decrease in frog populations and this results in less snakes and

smaller Tiger Snakes now (used to be 1.5 m). Tiger snakes are also taken for the pet trade and to milk for venom.

- They curl up for winter in rabbit burrows
- Neurotoxic venom, leading to not being able to contract the diaphragm properly and therefore not be able to breath properly after a bite
- Before anti-venom was developed, 40% of all Tiger Snake bites were deadly
- Ric was bitten by a Lake George Tiger Snake on the left thumb in January 1969
- They can give dry-bites so as to save energy-expensive venom

### **Copperhead Snake (*Austrelaps ramsayi*)**

- 3 species in Australia
- Characterised by the teeth-like black and white colouration on the lower jaw (white leading edge to labial scales)
- same anti-venom as Tiger Snake
- 6 years ago in Cooma hospital, 1 man died from a Copperhead. He only got one ampule of anti-venom. They claimed it was a Tiger Snake, but Ric strongly reckons it was a Copperhead because of the region in which the man was bitten.
- Can eat other snakes
- They live above the snowline, so they must spend half the year in a torpor
- Eat frogs and lizards, too.

### **White-lipped Snake (*Drysdalia corinoides*)**

- Grows up to 30 cm
- Live-bearing
- One of 3 species found in Tassie (other two: Tiger Snake and Copperhead)
- Inoffensive but venomous. A bite will give you a sore finger and a headache. No deaths recorded.
- Pink or yellow underneath

### **Black-headed Snake (*Suta spectabilis dwyeri*)**

- Up to 25 cm. Live bearer. Venomous. Eats skinks
- One guy really got sick from a bite from one of these snakes. He did not die and maybe he just had a bad reaction)
- 15 mid-body scales

### **Eastern Small-eyed Snake (*Cryptophus nigrescens*)**

- One death recorded from a bite from this snake
- Can be pink underneath. Live bearer. 9–10 young, but you'll never find them.

- Mainly nocturnal. 30 cm maximum length.
- Bite throbs like a bee sting (Ric has been bitten by one; he reckons it wasn't too bad)

### **Bandy-bandy (*Vermicella annulata*)**

- Mildly venomous
- Throw body in a hoop as a threat display (hence the old wives' tale about the "hoop snake")
- Feed on blind snakes
- Snakes not recorded (via museum specimens) in the ACT, but rather in NSW near the ACT:

### **Death Adder (*Acanthophis antarcticus*)**

- Caudal lure is characteristic. It puts it in front of its head to lure birds to eat the 'grub.' They are ambush predators, laying and waiting in the leaf-litter.
- Live-bearing. Medium-sized fangs.
- Remarkably-fast strike: 0.14 seconds (CNZ note: which equates to 425 km/hour or striking twice in the time it takes you to blink your eyes)
- Elliptical pupil. Primarily nocturnal.
- It is easiest to catch them with a garden rake (to find them).
- Prior to anti-venom, 50% of all people bitten by this snake died

### **Little Whip Snake (*Suta flagellum*)**

Looks like black-headed snake

- Live-bearer
- Not in the ACT
- 17 mid-body scales
- Sexually dimorphic: males have longer tails.

### **Mulga Snake (*Pseudechis australis*)**

- Sometimes referred to as the King Brown, but is not a Brown (*Pseudonaja* genus) snake but actually a black snake (*Pseudechis* genus)
- Egg-layer
- Hemotoxic venom
- Found in western NSW

### **Coastal Taipan (*Oxyuranus scutellatus*)**

- Biggest fangs (12–14 mm) of any Australian snake
- Highly venomous, fast-moving, encounters people
- Don't eat cane-toads so are now occupying ecological niches of snakes who have been battered around by the cane toad



# It began with cowrie shells



Two Cowrie shells have emerged from the family's souvenirs collection after 20 years in a cupboard. The exquisite, porcelain-like shells came from sea snails in the Cypraeidae family of molluscs. The Italian name for Cowrie shells, porcellina, has morphed into porcelain in honour of the smooth but durable shells of the molluscs. Whilst we've not used the shells as currency, taking time to feel them, examine their colours and patterning stimulates thoughts on the sheer and constantly amazing beauty we are privileged to have surrounding us.

Since Rachel's presentation of her cloud photographs to Field Naturalists it's rare to see the sky without admiring shutter-worthy cloudscapes. The recent tendency towards thundery afternoons brings pre-sunset glory to the observer. Grey, steel-blue, purple and all shades of orange, pink and red bring our cameras and phones out of pockets to help the memory take in the ever-changing glory of light at dusk.

Sunset from Flynn



There is an awakening from contemplating the small cowries and the majestic panoramas of sunsets and sunrises. Is it just lack of time that causes so many take these moments, this excellence from nature, for granted or not notice what we see at all?

After a still sunrise a Rocket's yellow flower bounces back from an early bee's take-off. The flower has rewarded the pollinator for its services and we'll have self-sown rocket for next summer's salads.

A shrieking Green Leek flies south past the bus-stop. Is the Superb parrot a scout for its flock or a miscreant that has been left behind after Flynn foraging? It seems a good number of these treas-

ured birds will over-winter in our region again. Adaptation and behavioural changes in our own short lifetimes.

Is the caterpillar on the steps preparing to eat away at the *Hibbertia scandens* as the Grapevine moths' larvae did last autumn or do they know not to damage the same plant in consecutive years? Pretty day-flying moth, striking caterpillar...decimated leaves!

We have access to the finest music in a range of genres. Over thousands of years humans have designed and built magnificent cathedrals, homes, cities, aquifers, irrigation systems and expressed artistic creativity though all manner of inspiring media. Isn't this creative genius similar to the cowries' evolved perfection, flowers' evolving to entice pollinators, the colours of birds' plumage and insects' patterned diversity?



These everyday examples of the planet's amazingness and sheer sustaining beauty show me that we are right to continue to move outside our comfort zones to protect the natural world and its communities from the seemingly overwhelming threats, which are peaking in the 21st century.

In 2006 Field Naturalists compiled a list entitled What can be done? We collected planet-friendly ideas for practical ways to make a difference.

Since adopting many of those measures we've received and responded to countless online petitions that are messages to the powerful aimed at righting wrongs here and round the world.

We have marched and rallied to protest actions of the powerful against the vulnerable both here and overseas. Recently, colleagues have been to the Maule's Creek Blockade, locked themselves to machinery to show widespread objection to the expansion of coal mining and the obsession with using this fatally-polluting fossil fuel. In the U.S.A. 350.org was born out of the citizens' abhorrence for the Keystone pipeline, which would bring Tar Sands oil from Canada into and across the U.S.A. The 350.org movement is now world-wide often bringing people together yet under-reported.

On May 2nd & 3rd Market Forces aim to have thousands more Australians divesting their money out of the banks, which use it to build coal mines, CSG gas wells and infrastructure. These projects threaten the Places we Love and the communities, farmland, marine zones and nature reserves..... the very lives of real Australians. This is happening here not just in far-away countries.

And on 15th, 16th and 17th March over 100,000 people from all walks of Australian life marched through their towns, cities and the capitals to show a solid vote of NO CONFIDENCE in recent and present governments' policies. These policies

threaten the lives of trillions of Australians including Australian cowries, birds, insects, plants and the Indigenous and newer migrants to Australia who depend on them.

As naturalists let's continue to look at the natural world and have it stimulate our awe, curiosity and create our wellbeing. But let's also continue to work together, regardless of the original directions we have come from, to demand justice and the right to survive and flourish for ecosystems, landscapes, the oceans and communities here and worldwide.

**Rosemary Blemings**

## Weereewa - Lake George outing March 15, 2014

Rosemary von Behrens

It was a small but fortunate trio who embarked on this excursion. My apologies if anyone looked for Silver Wattle Road. Silver Wattle is a Quaker Centre at the end of Lake Road and their old sign was no longer visible on Bungendore Road, but we waited for 20 minutes at the row of letter boxes for any late-comers who hadn't notified me beforehand.

Twenty-five Sulphur-crested Cockatoos (*Cacatua galerita*) and several Galahs (*Cacatua roseicapilla*) grazed in an adjoining grassy paddock while a Crimson Rosella (*Platycercus elegans*) enjoyed the red berries of the Hawthorn shrubs, and there were plenty to satisfy its appetite. A bird's nest nestled among the Hawthorn berries. Too many exotics altogether we discovered, Hawthorn, Elm, Tree of Heaven becoming rampant; a thicket of *Eucalyptus bridgesiana*, *Acacia mearnsii*, and *A. dealbata* provided an oasis for us and the two horses, which kept the grass under control, natural fire break helpers. The dwellings at the end of the road were situated in a cleared landscape, old sheep country, although wind breaks had been planted.

Flocks of birds seemed to be the order of the day, Double-barred finch (*Taeniopygia bichenovii*) 8, Red-browed Firetail finches (*Neochmia temporalis*) 15–20, Welcome Swallows (*Hirundo neoxena*) 30, Yellow-rumped Thornbills (*Acanthiza chrysorrhoa*), and two flocks of Starlings (*Sturnus vulgaris*).

The finches were moving between the road verges and the nearby shrubs. They were not unduly perturbed by our vehicle or us when we alighted to get a closer look. I have only ever seen isolated

pairs of swallows with their offspring, but here were what I thought a large number of swallows coming and going perching and preening on two power lines. Their preening exposed the lighter feathers on the abdomen and the tan colour under their beak and was just glorious – binoculars are an asset. In Autumn large flocks of swallows fly north to east and north-east Queensland and the Torres Strait Islands to escape the southern winter. Perhaps we saw the beginning of such a journey.

Other birds noted were Magpie, Crested Pigeon, Magpie Lark, and Willy Wagtail. At one point I counted 50 wind turbines visible on the eastern horizon.

The Lake Road is fenced on both sides except in one section, which gives access to the lake – flat and dry although cracked soil lying in vehicle tracks indicates that recent rains had settled in them. The temptation to drive across was ignored as the destination was unknown and the distance deceptive. Holes in the lake bed provided contemplation, what creatures caused them and used them, or were they animal tracks that had broken through the surface on an illogical basis? Succulent “water weed” and a plantain(?) grew out on the flat.

We completed the day by visiting the Bungendore Woodworks Gallery where an exhibition devoted entirely to Weereewa exhibited landscape paintings, ceramics, aerial photographs and sculpture and Gallery X (for Xanthe) displayed photographs of Weereewa's fantastic cloudscapes and wind turbines as part of the 2014 Weereewa Festival.

# Backyard visitors

Undoubtedly, like many other homes in Canberra, my backyard has been visited by many birds and creatures over the years. Common visitors have been the many native bird species. Take one day last year.

Early May and daily temperatures of 22°C and no sign yet of early morning frost. The back yard is full of sparrows, much to Samson's (my dog) chagrin, or perhaps he just likes barking at birds.

Later that day I notice an unexpected bird in the front trees. Too large for the silver-eyes, which had recently returned, and too colourful for a sparrow.

Sit and wait. Finally they return, wrens, silver-eyes and flame robins; at least two females and one male. One robin sits on my back gate, then on the fence, while the female comes down for a lengthy visit.

It's good to know that these small birds have returned.

Next morning sit on the patio listening to a chorus of small birds greeting the morning. It's like a bird sanctuary: a pair of currawongs; a family of eastern rosellas; the call of a King parrot and a red wattle bird; a peewee fossicks for food on the ground; a flock of silver-eyes soar overhead on their way to the large gum tree, while the wrens and robins shyly flit among the defoliated plum tree; the distinctive caw of a raven; and in the distance the early morning carolling of a magpie, waiting for me to walk Samson and Kateena and deliver breakfast.

Perhaps already come and gone are the regular visitors to my bird feeder: sulphur crested cockatoos; galahs; crested pigeons; crimson rosellas; we don't really want to mention the pest birds such as sparrows, but yes, they are there also.

I've previously seen a black-faced cuckoo shrike and a sacred kingfisher (last year a pair) and black honey-

eaters, and just last week the rainbow lorikeet ventured up from the end of the street to my neighbour's tree, for the first time.

Apart from the birds, there have also been other visitors: possums of course, rats and mice we really don't want to mention. A neighbour reported a metre long brown snake entering my front garden. Then there was the pygmy bat roosting in my garage last year.

A few years ago I discovered a family of geckoes living the banksia rose bush growing on my back porch railing. Mum, dad, and up to six babies. Not the house gecko, which is displacing the native geckoes, but indeed a native gecko. Despite looking for them in later years, I only once spotted a couple of babies.



Then last Sunday I was coming inside after dark. I opened the back screen door and something dropped to the ground in front of me: a gecko tail.

From the size it was from an adult. Not seeing how the door could cut the tail, I had hopes that the gecko simply took fright and 'threw' its tail as a decoy. At least it was a sign that my geckoes are still around.

Two nights later I opened the screen door to go outside (again after dark) and spotted an adult gecko on the *inside* of the door. It quickly skittered outside so I took care in closing the door so as not to squash it, though it was by now nowhere in sight.

Sometimes it feels like living in a nature sanctuary. Wonderful!

## Activities

### Sunday 6 April 9.00 am, Dungowan St entrance (end of short dirt section), Hawker

We will be joining the Friends of the Pinnacle (FOTPIN) on the first of their Autumn walks this year. Our guide is John Brannan who will be concentrating on birds as it 'promises to be smack in the middle of the Autumn honeyeater migration, if current sightings are any indication.' It is also part of the ACT government's program of Heritage walks. Wear appropriate clothing, shoes for walking, a hat. Bring: Water, snack, and, if you like, binoculars and/or camera. If you need further directions please ring Rosemary vB on 6254 1763

### ANN 2014

This year, 2014, the Australian Naturalists Network are meeting in Tasmania at THE LEA, Kingston, south of Hobart. Registration forms will be sent in march this year. Please visit the following website for more information regarding accommodation as the better beds are already booked. The proposed program looks interesting and varied, the speakers numerous, and breakfast lunch and dinner food provided. Costs will depend on how many people register. <http://tasfielddnats.weebly.com/australian-naturalists-network.html>

Approximate costs are as follows: The costs (program and food) should not exceed \$900/person, PLUS your accommodation (see website), PLUS the transport to get to Tasmania (air fares OR bus,ship,bus OR car/ship), It's up to individuals to make their own arrangements.

Month	Speaker	Topic
1 May	Stephen Utick	Camellia Ark and Australia's role: Floral treasures of the vanishing forests
5 June	Dr Alex Ritchie	Ages of fishes





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.

Editor



**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: