Land for Wildlife and Garden for Wildlife

Central Australia Newsletter

November 2018

From the *Stand-in* Land for Wildlife Coordinator

I'm back! Kate has taken a post-PhD break and is off to Morocco (I can relate to those feels, and to be honest, I'm a bit jealous). But in an attempt to help hold down the fort while she's gone, I've returned to do a newsletter!

I have been interested to read the updates in the Land for Wildlife newsletter since I've been gone, so I hope that you have been too. I'm in the thick of my new job, getting active in the Clarence Valley community on the northern NSW coast, engaging the masses about the endangered coastal emu population (there's fewer than 50 of them left) and also the vulnerable-listed Koala. I've been setting up online registers for the two species (much like the bilby blitz app mentioned in this newsletter), looking into options for creating an app, running koala threat information sessions and citizen science workshops, mapping their distributions with Geographic Information Systems (GIS) technology, and creating educational pamphlets. And I've only been in the role for a little over two months— tell me about hitting the ground running…!

Enjoy the newsletter and I hope that Alice is keeping you well.

A Puffball Fungus of unknown species. The Puffball is made up of a polyphyletic assemblage (*I.e.* not directly related) of Basidiomycota, with species in the genus *Bovista, Calvatia, Handkea, Lycoperdon, Scleroderma, Calbovista,* and *Pisolithus* (among others)… (*Image: C. Heenan*).

In This Issue

The Land for Wildlife Program

History

Land for Wildlife was first established in Victoria in 1981, and began as a community partnership between the Victorian government and Bird Observers Club (now BirdLife Australia). Since 1990, Land for Wildlife has been providing voluntary conservation agreements with landholders across Australia and New Zealand. In the Northern Territory, the program began its life in Central Australia in 2002 with the Alice Springs Town Council and was taken on by Low Ecological Services in 2005. Since the program's inception, Land for Wildlife Central Australia has grown in membership and recognition, winning seven Landcare and Territory Natural Resource Management Awards since 2007.

Introducing a New Program

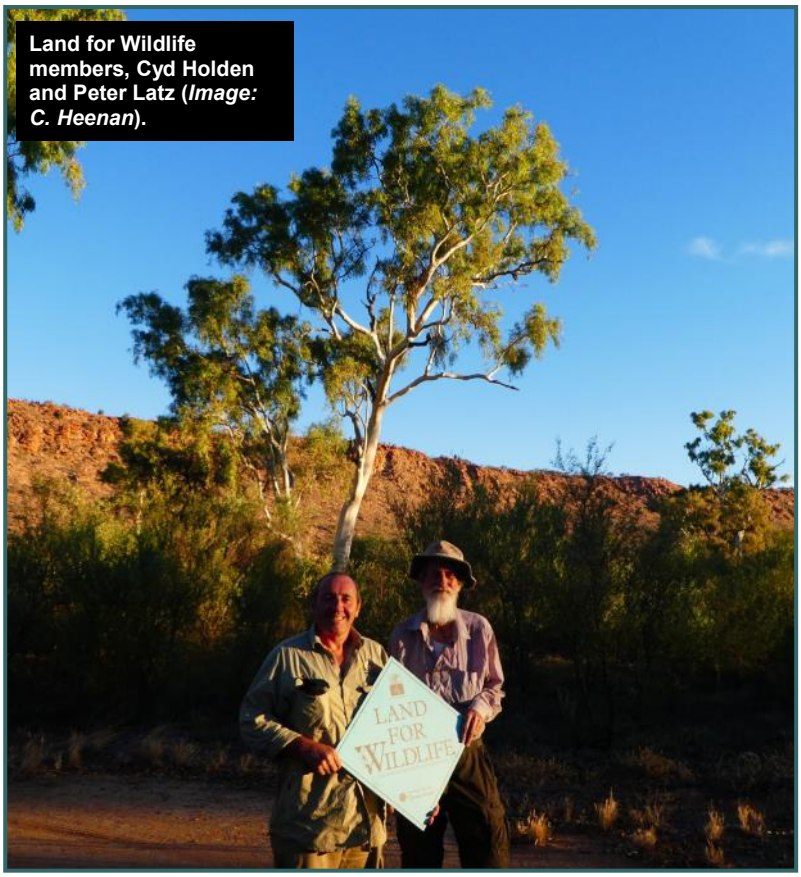
In 2012, Land for Wildlife introduced its urban sister program, Garden for Wildlife. The program arose out of a need to provide small property landholders with information and advice in a similar manner that LFW members received. While there was a program of the same name borne out of the Knoxfield City Council a short time earlier, several other incantations have arisen around Australia, including Gardens for Wildlife in Tasmania (run alongside LFW Tasmania) and Gardens for Wildlife Darwin (hosted by Darwin City Council). This program too has grown from strength to strength in Central Australia, registering over 130 urban gardens with a Garden for Wildlife conservation agreement. You may have seen some of these smaller Rainbow Bee-eater signs on garden fences and gates around Alice Springs!

The Newest Addition

Land for Wildlife Central Australia has undertaken the responsibility of managing the Northern Territory Register of Significant Trees from National Trust NT. This program, which was conceived in 1982 to coincide with the Australian Year of the Tree, aimed to create awareness and appreciation of tree conservation. Trees are an internationally recognised characteristic of outback landscapes and a significant part of the heritage of the Northern Territory.

Inclusive

Farms, bush blocks, parks, school grounds, golf-courses, municipal reserves, cemeteries, scout and youth camps, tourist enterprises, Commonwealth land, prisons, industrial land; small and large properties, are eligible.



Land for Wildlife members, Cyd Holden and Peter Latz (*Image: C. Heenan*).

Be a Conservation Champion

Encourage your neighbour/s, children's school, community organisation, church, or local member of Government, to consider participating in the Land for Wildlife or Garden for Wildlife scheme.

Some ways of incorporating nature conservation on your property are:

» Retaining and protecting remnant vegetation

» Allowing leaf litter, fallen logs and branches to accumulate in habitat areas

» Fencing areas near native bush to allow regeneration

» Restricting livestock access to (dry/wet) stream banks

» Leaving river snags in place as natural habitat for fish (when it rains), bird and insects)when it doesn't!)

» Protecting dead trees with hollows and providing nest boxes

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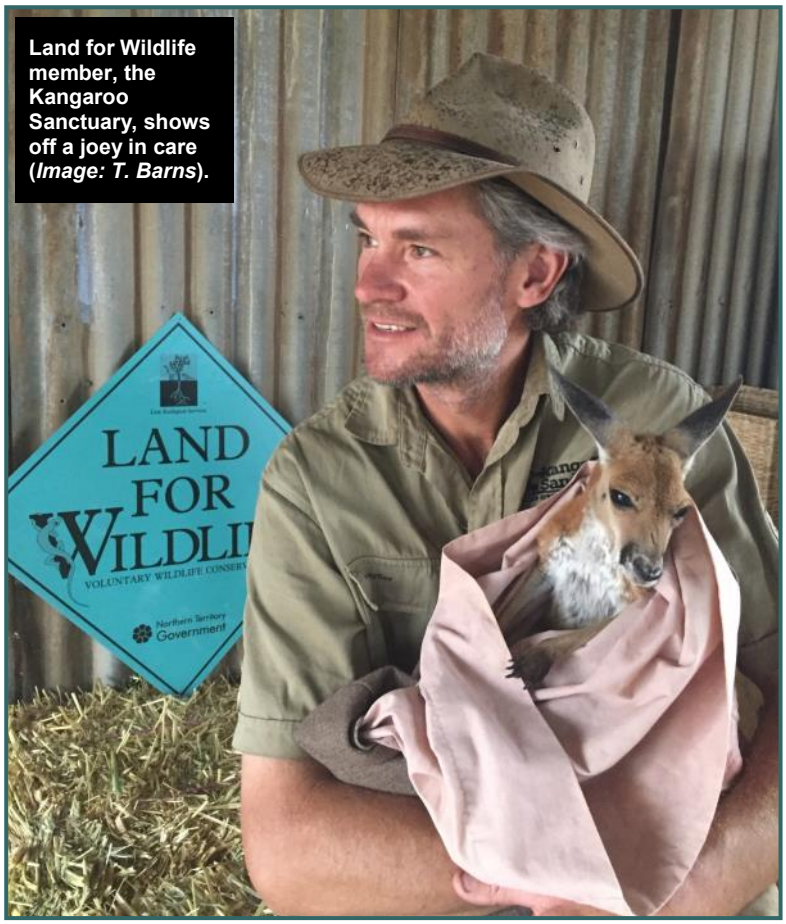
- Planting local native trees, shrubs and grasses
- Managing pets responsibly (e.g. restricting Cats to the indoors and Dogs inside your property boundary or on a lead when not)
- Controlling environmental weeds, and feral animals such as Rabbits, Foxes, feral Cats and Spotted-turtle Doves

How wildlife habitat can benefit your property:

- Help manage erosion and increase soil and microbial health
- Assist with salinity control
- Control pest animals and plants naturally
- Nurture biodiversity for sustainable urban gardening and agriculture in arid lands
- Provide links between nature reserves, allowing for wildlife movement and genetic interchange
- Increase land values



Land for Wildlife member, the Kangaroo Sanctuary, shows off a joey in care (*Image: T. Barns*).

Wildlife habitat can contribute to the survival of plants and animals that are dependent on the habitats that once occupied the fertile areas and lands are now largely under urban development and agriculture. Remnant native vegetation is especially important.

Most importantly, you can demonstrate your commitment to maintaining our native plants and animals so that they continue to characterise our environment. Every LITTLE bit, helps a BIG bit!

~ Kate Stevens

2018 TNRM Awards: Winners Announced

Land for Wildlife Central Australia was a finalist at the Territory Natural Resource Management Awards, which were announced in Darwin as part of the annual conference in November. The program and members were finalists in the 2018 NT NRM Environment & Conservation Award.

This category was won by the well-deserving Murnkurrumurnkurru Gurindji Rangers, a group based at Daguragu in mid-north-west NT. They carry out fire management, cultural site and biodiversity survey work, weed and feral animal management. In 2017, they also produced bilingual posters displaying traditional Gurindji medicines and their uses. Well done!

Our sister group, Land for Wildlife Top End (hosted by Greening Australia) took out the 2018 NT NRM Community Engagement & Action Award. Well done Emma Lupin and members!

TNRM Award Winners in 2018 (*Image: TNRM*)

Ant Antics

While Kate was busy networking at the Territory Natural Resource Management Conference, she met an entomologist, Alan Andersen. Kate was excited to share the article from the October 2018► Newsletter regarding Mulga Ants and learn more from Alan.

'Ants are deeply embedded in all sorts of processes integral to ecosystem health, such as nutrient cycling'

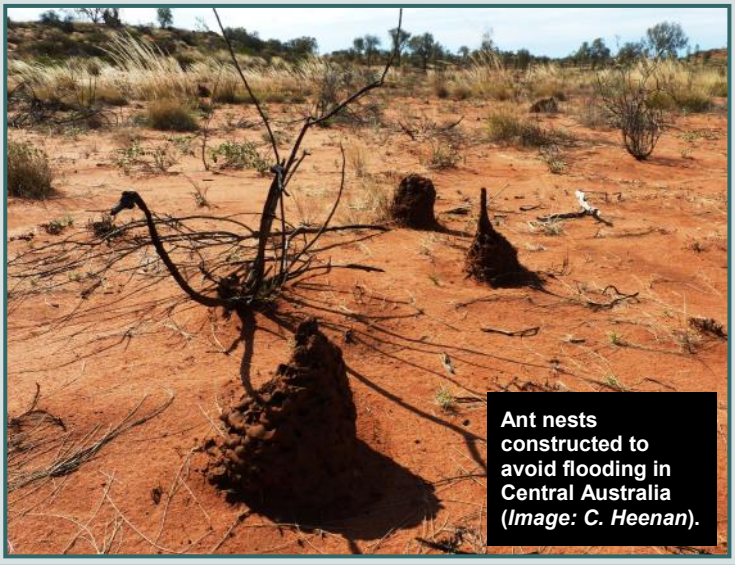
~ Alan Andersen

A Mulga Ant (*Polyrhachis macropus*) carrying a phyllode (*Image: A. Andersen*).

Consequently, Alan has kindly shared an image he took of a Mulga Ant (*Polyrhachis macropus*) carrying a phyllode, as well as the progressive stages of nest building. The Mulga Ant starts with one little hole, which becomes two, then three holes and phyllodes are added to outside. These 3 are then amalgamated into one large hole in the centre. Alan thinks that the last three holes are still extent, just existing in the ring of the final nest. You can read more about Alan's work on ants and ecosystem heath in a 2013 article in ECOS Magazine►.

Mulga Ant (*Polyrhachis macropus*) nests in various stages of progression (*Images: A. Andersen*).

On introduced ants, following on from the African Big-headed Ant (*Pheidole megacephala*) article reprinted in the October 2018 Newsletter, Lord Howe Island has reported that they have eliminated the ant from their shores. Read the article: How we wiped out the invasive African Big-headed Ant from Lord Howe Island► to find out more. Do you want to know about Big-headed Ants in Alice Springs? Check out the Big-headed Ant Control► fact sheet on the website.



Ant nests constructed to avoid flooding in Central Australia (*Image: C. Heenan*).

Further **BUGGY** Reading

Click the link symbol to be redirected to the article

- *Video* • True facts: Ant mutualism *(Language warning)*
- *Article* • Termite colonies in Japan have been found completely without males - and they're thriving
- *Gallery* • Bees of Australia: up close with native species – in pictures
- *Article* • The daddy longlegs myth that we keep falling for
- *Article* • Where have all the Christmas beetles gone?

Red Mulga Lerp (*Austrotachardia acacia*) (*Image: C. Heenan*).

Red Mulga Lerp

At a recent Land for Wildlife property assessment, I came across a great example of Red Mulga Lerp that I wanted to share with the members. Red Mulga Lerp (*Austrotachardia acacia*) is a structure produced by the larvae of psyllid bugs, also known as lerp insects, or jumping plant lice (singular: louse). The Red Mulga Lerp is, as the name suggests, found on Mulga (*Acacia aneura*). The crystallised structure is produced when the branches are attacked by the lerp insect and feed on the sap. The lerp insect then excretes a delicious sugary gum (called the honeydew), which crystallises around the insect larvae.

It is suggested that the psyllid bug larvae produce the structure as protective cover in an insect-plant interaction, where the herbivorous insect would likely have evolved long after the plant itself. Honey Ants (*Camponotus inflatus*) are fed by the honeydew made by the Red Mulga Lerp. The Honey Ants can then protect the psyllid larvae from other predators, while receiving their sugary reward. The honeydew is used by the worker Honey Ants to feed to the repletes (living larders), which are found in nests up to 2 m deep on the shady side below Mulga trees.

The red lumps (lerp) that form along the Mulga stems are edible and can be peeled or sucked off the branches, commonly used by many central Australian Indigenous groups as bush food. While we are talking about Mulga and the pantry of food that can be found among their branches, it is commonly known that Mulga seeds can be roasted and ground to a paste and eaten. In addition, the species produces an edible gall known as a Mulga Apple (as well as several other forms of inedible galls). These are produced by a Wasp larva and tastes like dried apple.

~ Caragh Heenan

***Left:* Honeydew from Lerp is eaten and fed to repletes of Honey Ant (*Camponotus inflatus*).**
***Right*: Lerps can be found on a variety of species, belonging to many species (*Images: C. Heenan*).**

Bilby Surveys Show Populations Steady (For Now)

A baby Bilby emerging from its burrow (*Image: Department of Natural Resources, NT Government*).

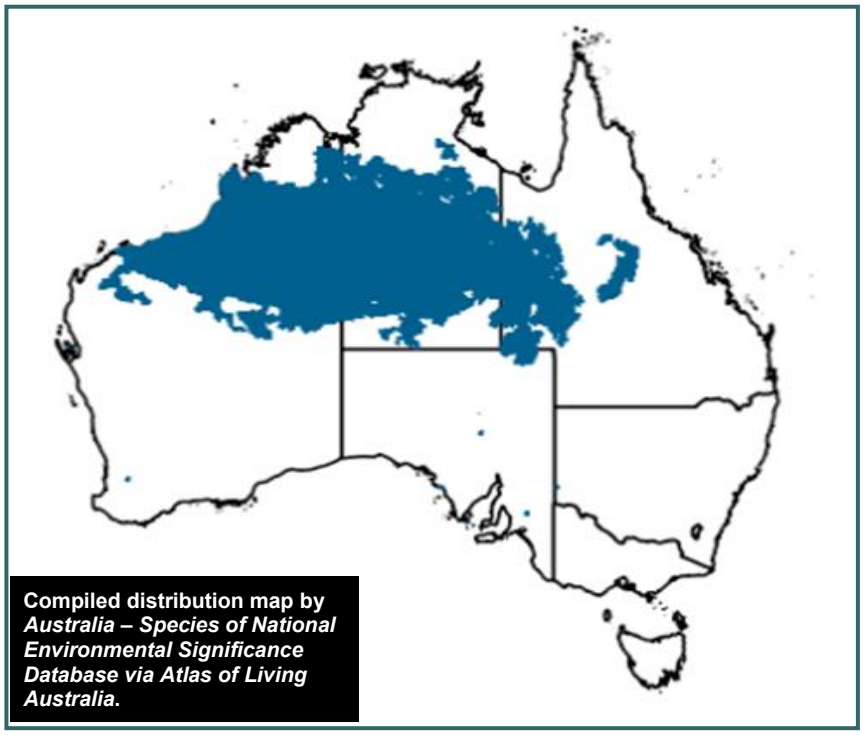
The Central Land Council launched an innovative conservation program earlier this year that aimed to establish baseline population numbers of the Greater Bilby (*Macrotis lagotis*) across their currently known range.

Bilbies are high on the National threatened species list and now are only found on Aboriginal owned or managed lands in arid parts of northern and central Australia. Within the Northern Territory, Bilbies occur in the central and western parts of the Tanami bioregion, the southern Sturt Plateau bioregion and the northern Great Sandy Desert bioregion. The distribution is highly fragmented, with habitat characterised by sandy soils dominated by hummock grasslands covered predominantly by Spinifex (*Triodia sp*.).

Bilbies are omnivorous, eating seeds of various grasses and sedges, bulbs, fruiting bodies of underground fungi, and invertebrates. Breeding can occur at any time of the year, with litters of one to three young being raised in a pouch for 75 days before being cached in burrows for two more weeks.

In captivity, Bilbies can live for up to ten years, however in the wild they are at risk of predation. This enigmatic species is threatened by feral Cats, Foxes, weeds and uncontrolled fires.

The 'Bilby Blitz' program has involved Indigenous Rangers using tracking skills passed down through generations to find active burrows across the Northern Territory and Western Australia. One Ranger from Tennant Creek, Gladys Nungarrayi Brown remembers how she was shown the skills to find Bilby burrows by her parents.



Compiled distribution map by *Australia – Species of National Environmental Significance Database via Atlas of Living Australia*.

According to a recent ABC News article, since April, Indigenous Rangers have surveyed 248 sites, each two hectares in size, and found evidence of Bilby activity in 58 of them. Therefore, populations are holding steady, but that's the [better] news. The worrying news is that Rangers found evidence of feral cats in 111 of the sites, and foxes in 50. Surveys also included areas where Bilby presence had been recorded in the past, but hadn't been seen for a while. Sadly, but not surprisingly, no new populations were found in those areas.

Bilbies in the Northern Territory appear to be nomadic and undergo large population fluctuations in response to food availability. These

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characteristics result in it being difficult to accurately assess population trends. The innovativeness of the Central Land Council program includes the multilingual 'Bilby Blitz' mobile phone app which is the key to gathering accurate and reliable data. Often field methods and data records from different surveyors can be misleading or inaccurate because data collection methods may differ between individuals. However, the Bilby Blitz phone app is purpose-built and includes English and two Indigenous languages, with the potential to be expanded. The app is user friendly and standardises the data collection, making it a reliable and robust method which provides opportunity for scientists to run all sorts of useful analyses and comparisons on the data.

The tracking skills of the rangers facilitates identification of prime locations in which to set up motion activated cameras, and the recording of Bilby evidence and predator activity in the phone app.

Do your part:

» Have a conversation with your neighbour/s about the Bilbies plight and your actions (if appropriate, suggest connecting habitats with a vegetation corridor)

» Financially support organisations involved with conserving native species or habitats that are Bilby-friendly

» Exclude pets and stock from native vegetation on your property

» Conduct pest animal management including feral cat trapping, wild dog trapping, and fox baiting

» Observe and record native species on your land and provide records to conservation/science agencies (*I.e.* Submit your data through the Atlas of Living Australia)

» For more information on Greater Bilbies, their distribution and ecology, check out the **NT Government fact sheet**►.

~ Kate Stevens / Caragh Heenan

2018 TNRM Awards: Tjuwanpa Women Rangers Take Another One Home

Central Australia representation at the 2018 Territory Natural Resource Management Awards included the Tjuwanpa Women Rangers, who were a finalist for the Indigenous Natural Resource Management Award. Danielle Shallow, Sonya Braybon and Genise Williams were in Darwin representing the group at large. They were a finalist alongside Mimal Land Management and the Li-Anthawirriyarra Sea Rangers, two excellent finalists!

The Tjuwanpa Women Rangers won for their significant contribution to conservation land management, inter-generational sharing of knowledge between West Arrarnta woman and their many community development activities across southern Central Australia. Extraordinary women leading the way for future generations of women rangers in Central Australia! Congratulations to the Tjuwanpa Women Rangers for inspiring Indigenous leaders in the NRM field.

Tjuwanpa Women Rangers took a win for the TNRM Awards in Darwin, with representatives for the team including Genise Williams, Sonya Braybon and Danielle Shallow (*Images: K. Stevens*).

Birds of Prey are at risk of secondary poisoning from Pindone and hence care should be taken when using poisons. Pictured here is an Australian Hobby (*Falco longipennis*) (*Image: C. Heenan*).

Unusual Raptor Deaths in Alice Springs

In early August of this year, a pair of Black-breasted Buzzards (*Hamirostra melanosternon*) were found dead under their nest in the Todd River, around the Amoonguna area. Concerningly, three to four weeks later a pair of Little Eagles (*Hieraaetus morphnoides*) were also found dead on the ground under their nest, approximately 100 m from where the Buzzards were discovered. The carcasses were too decomposed to enable authorities to conduct tests on them, but it was noted that the skeletons were intact and didn't appear to have been shot. One of many possibilities being considered for the suspicious mortalities is secondary poisoning from Pindone.

So now seems an opportune time to provide an update about Pindone use in the NT and raise awareness of other options that are available.

Pindone is primarily used to reduce Rabbit (*Oryctolagus cuniculus*) populations in areas where it is impractical or unsuitable to use 1080 poison (e.g. urban/residential and semi-rural areas), a Schedule 7 chemical which requires a permit for use. Pindone is an anticoagulant and takes a number of exposures for the target animal to reach a lethal level where the animal essentially bleeds to death internally. Although it can be effective for controlling rabbit populations, the use of Pindone can impact non-target species that are exposed to the poison, including wildlife. Dogs and Cats can be affected if they ingest large doses, but animals that are particularly susceptible to direct poisoning from Pindone are Wallabies, Kangaroos, and seed-eating birds. Birds of prey are also at risk of death through secondary poisoning; as poisoned Rabbits become lethargic and less aware of their surroundings, they become more vulnerable to predation by raptors.

NT Governance of Pindone Use

Pindone is registered for use in the Northern Territory both as a bait concentrate, which needs further preparation before use, and as a ready-to-use form where the Pindone is supplied already applied to an oat bait. The bait concentrates are declared to be 'restricted chemical products' under Schedule 4 of the Agricultural Veterinary Chemicals Code Regulations 1995. Restricted chemical products may only be supplied and used by 'authorised persons' (for example, qualified pest controllers). The ready-to-use forms of bait are not declared to be restricted chemical products.

However, all forms of Pindone, whether declared 'restricted chemical products' or not, must only be used and applied in accordance with directions from the appropriate State or Territory Department in compliance with the relevant State or Territory legislation. In the Northern Territory, you are required to contact the ***Chemical Services Branch at the Department of Primary Industry and Resources (Phone: 08 8999 2344; email: chemicals@nt.gov.au***), to determine what steps you need to undertake to be able to use Pindone baits in the situations you require. Generally this will require you to have access to appropriate management. Such a plan includes initially providing 'free' feeds to gain an understanding of who/what is being attracted to the bait, how to lay the bait, carcass removal, prevention of availability to non-target species, and so on. Management plans are readily available online.

Alternative Control Methods

There are several other options available for Rabbit control. Methods such as warren ripping and trapping are less harmful for wildlife. Remember though, any type of Rabbit control method won't do much good in the long term if initial efforts are not followed up with further control methods such as removing or excluding rabbits from potential habitat and attractants. Rabbit virus releases such as the recently (2017) released calici virus, and warren fumigation, are more appropriate for use by qualified pest controllers. While these are more specific, their use is more technical and it is difficult to obtain Schedule 7 fumigants.

The rabbit shows the typical pose in which rabbits are often found if they have died of RHDV – lying on their side, neck arched back and legs extended backwards (*Image: Biosecurity SA*).

NT Parks and Wildlife would like to hear from anyone that is using Pindone on their property, especially given these recent raptor deaths. Additionally, if you observe any mass mortality events (such as the recent Rainbow Bee-eater's plight at Ilparpa), or wildlife with suspected infectious diseases, please contact John Tyne at the Department of Parks and Wildlife: 8951 8283, 0401 115 731, wildlife.management@nt.gov.au.

It would also be a great help to John if you could collect a fresh sample (carcasses less than 12 hrs old). These samples are sent off to a veterinary pathologist in Darwin for assessment and analyses.

As an adjunct, if someone is using Pindone, they could contact a group of researchers in the ACT who are conducting research on secondary poisoning. I am sure they would be pleased to know of another potential data source for their project and you might even have the opportunity to take part in their research!

You can read more about **Rabbit Control**► in the Land for Wildlife fact sheet or check out the other **Feral Animal Resources**► on the Land for Wildlife website. Also, check out the **January 2017**► newsletter for more info on Rabbits and virus releases. ***Blog***►

~ Kate Stevens

Want to recognise someone but don't have the time? No problem, click the LBB —> LITTLE BLUE BUTTON

Wildlife Watching in the East

You can take the girl out of the Land for Wildlife Coordinator role, but you can't take the wildlife passion out of the girl. Or something along those lines. Since I'm putting together the newsletter this month, I thought I'd indulge in sharing some of the wildlife I've been spying in my new home town of Glenreagh NSW. I go for the occasional walk through a patch of scrub nearby and there have been some beauties! Some of the species will be familiar to Land for Wildlife members, and others have even been new to me—I'm ticking them off! Common visitors to my yard include Grey-crowned Babblers (*Pomatostomus temporalis temporalis*), listed as Vulnerable in NSW, and Satin Bowerbirds (*Ptilonorhynchus violaceus*). There are also the usual garden visitors such as Willie Wagtails (*Rhipidura leucophrys*) and a Magpie-lark (*Grallina cyanoleuca*) family with one very hungry young'un.

~ Caragh Heenan

***Top Row (L-R)*: Rufous Whistler (*Pachycephala rufiventris*), Black-faced Monarch (*Monarcha melanopsis*), Eastern Yellow Robin male (*Eopsaltria australis*). *Middle Row (L-R)*: Grey Fantail (*Rhipidura albiscapa*), Lewin's Honeyeater (*Meliphaga lewinii*), Satin Bowerbird female (*Ptilonorhynchus violaceus*). *Bottom Row (L-R)*: Large-billed Scrubwren (*Sericornis magnirostra*), Rainbow Lorikeet (*Trichoglossus moluccanus*), Eastern Yellow Robin (female) (*Images: Caragh Heenan*).**

Termite wings shed after a rain event at Mutitjulu NT (Image: *C. Heenan*).

Further Reading

Click the link symbol to be redirected to the article

- *Article* • Silent and deadly: Fatal farts immobilize prey
- *Article* • The habitats of threatened species are shrinking, despite laws set up to protect them
- *Article* • Should I kill spiders in my home? An Entomologist explains why you shouldn't
- *Article* • How soot-covered birds narrate pollution's toxic legacy
- *Article* • Dingoes have changed the actual shape of the Australian desert

Cheers,

Kate, Caragh, Candice and Bill

Do you have any stories or images to share? Get in touch! We are always looking for members to share their experiences via our social media and newsletter. Email us with your suggestions of articles or topics that you

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