

# LAND FOR WILDLIFE



## & GARDEN FOR WILDLIFE



**Land for Wildlife and Garden for Wildlife**  
**Central Australia Newsletter**

September 2018

## From the Land for Wildlife Coordinator

Caragh has wrapped up her central Australian leg of Land for Wildlife and is settling in well in north-coast New South Wales. Taking on a project on the endangered coastal emu and vulnerable koala populations was never going to be easy, but she's well on the way to learning a new environment and the associated issues and will be engaging community about the importance of koala habitat and food trees, as well as permeable fencing for emus.

Kate is now on board with the Land for Wildlife team and is ready to take on the Land for Wildlife program. Learn about Kate over the page!

Things have been heating up in Central Oz and the Bearded Dragons and other reptiles are making their way back out into the world after a period of brumation. You may see them out and about in your gardens or on the road so please take care and slow down on the roads for our wildlife.

*"Nature is the mother and  
the habitat of man, even if  
sometimes a stepmother  
and an unfriendly home"*  
— John Dewey



The Red-headed Mouse Spider (*Missulena occatoria*) is found across Australia, but is distinguished by its bright red fangs and blue abdomen (Image: X. Tingle).

## In This Issue

From the Land for Wildlife

Coordinator • 1

Introducing the New Land for  
Wildlife Coordinator • 2-3

FrogID Week is Coming • 4

A Snippet From Significant

Trees » Boab (*Adansonia  
gregorii*) • 5

Wild Time • 6

Dormancy Schmormancy • 7-8

Pop Up Discovery Trail • 9

Further Reading • 10



**Left: Kate Stevens, the new Land for Wildlife Central Australia Coordinator, is ready to roll! (Image: C. Appleby)**  
**Right: The northern race of the Grey-crowned Babbler (*Pomatostomus temporalis rubeculus*) is found in central Australia (Image: C. Heenan).**

## Introducing the New Land for Wildlife Coordinator

Hi everyone, my name's Kate, the new Land for Wildlife & Garden for Wildlife Central Australia Coordinator. I join the team here at Low Ecological Services with a background in landscape ecology and [basic!] landscape genetics from a few dedicated years at Deakin University. Ensconced in my heavy bias toward, and love of, the Australian bush and landscapes, I am a bit of an amateur bird nut and spent several years researching the effects of habitat loss on the ecological and genetic processes of the Grey-crowned Babbler as part of my PhD. While I undertook my field work in Central and Northern Victoria, I am so happy to be within 'cooee' of the northern race (*Pomatostomus temporalis rubeculus*) of these engaging birds as their population range incorporates Central Australia and Alice Springs.

During my studies I undertook some teaching and demonstration work for Environmental Science courses at Deakin Uni which assisted to keep my student funds afloat. However, following completion of my Doctorate, this opportunity turned into a more serious career choice for a couple of years. I really enjoyed engaging and supporting both local and International tertiary students (up to 40 Chinese students this year), and being privy to witness their passion and enthusiasm for learning about environmental systems and the governing and policy-making processes that our Governments' use to oversee management of the environment.

My true passion however, lies in community engagement and the environment. While I have many years of experience in community engagement from employment positions in and outside of Government, the reason I undertook environmental science studies in 2006, finishing with a PhD in 2016 (how did that happen?!) was to purposefully marry my two passions into a career...somehow.

Cutting a long story short, a 'chance conversation' at the Alice Springs Running Festival in mid-August this year led me to apply for the position of Land for Wildlife Coordinator with Low Ecological Services. A month later... I am wishing my husband, dog and bird farewell, undertaking a 4 day road-trip from Kyabram in Victoria pulling my house behind me (a first), and here I am in Alice ready for work!

Caragh Heenan, the previous Land for Wildlife Coordinator, is still working with us a day a week, but off-site. Caragh has done an extraordinarily efficient and effective job of having left the position in the most manageable and professional state possible. I feel extremely lucky to be afforded such a comprehensive handover. I am sure you are already aware of

(Continued on page 3)



Caragh's amazing capacity to get things done, follow things up, tie up loose ends and be an engaging and motivated coordinator to boot. From the members and [new] coordinator of Land for Wildlife, Central Australia, and our host Low Ecological Services, thank you Caragh for your huge efforts that have benefited not just us, but ultimately Alice Springs environments and wildlife. My aim in my new role as the Land for Wildlife coordinator, is to take up the baton that Caragh has handed to me, and follow her shining example of engaging, supporting, motivating and educating interested members and non-members alike, of the benefits of maintaining and increasing habitat values on their land for the benefit of our beautiful local wildlife, and to better the state of our beloved planet. Every LITTLE bit helps a BIG bit.

Since I'm new to Land for Wildlife and Alice Springs, please come say hello if you see me around. I will be keeping up appearances at the usual places such as EcoFair, the Alice Springs show and presenting my PhD research for Low Ecological Services sometime at one of the regular Rangelands Seminars held at Charles Darwin Uni. Keep an eye out in our upcoming newsletters, or on our Facebook page, as to where and when I am out and about next. I will also endeavour to be meeting with members for a 'hello cuppa' ad hoc, as well as purposeful undertakings of biodiversity assessments and reassessments on their properties. I very much look forward to meeting you soon!

~ Kate Stevens



Kate Stevens is geared up to take on wildlife habitat conservation and restoration in central Australia (Image: C. Appleby).





## FrogID Week is Coming

In a bid to better understand Australia's national frog health and distribution, the Australian Museum (AM) has created FrogID Week from **9-18 November 2018**.

Frogs are one of the most threatened groups of animals on Earth, primarily because of habitat loss, disease and climate change. To be held in November each year, FrogID Week will create an annual 'audioshot' of Australia's frogs, allowing scientists to better understand Australia's frog population.

Community groups, councils and schools across the nation are invited to participate by running activities during FrogID Week. [Click here to register now!](#) Do you know where frogs live in your local area? We need you to identify a local pond, dam, stream or wetland that you can visit regularly to capture the croaks, whistles, bleats and barks. And don't forget to invite a friend to join!

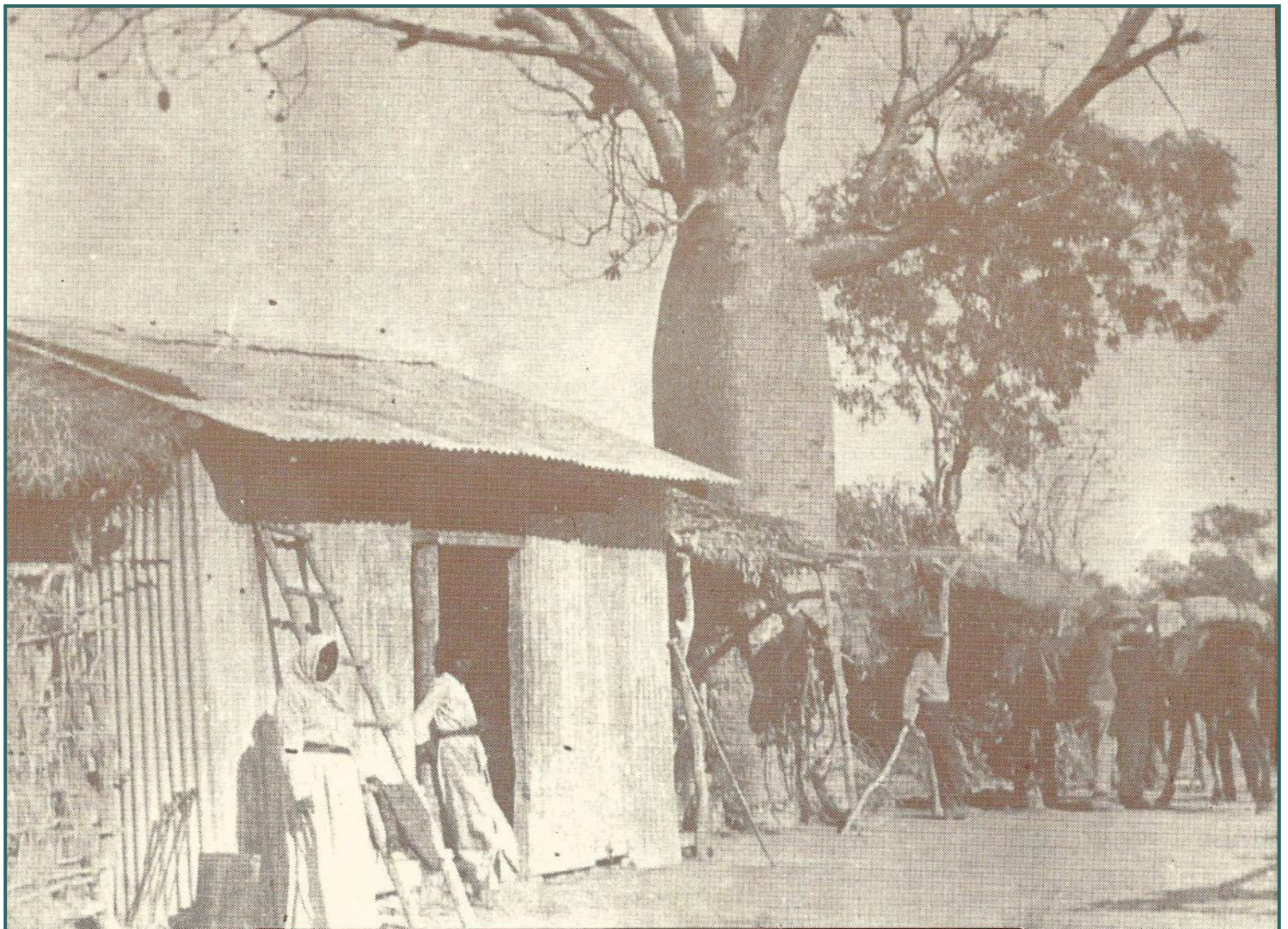
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*Let's hope for rain so central Australia can take part!*

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This Boab (*Adansonia gregorii*) is listed on the Katherine Daly Rivers register, but the status of it is currently unknown. Feel free to go exploring and help us to obtain updated information on our trees.

# NORTHERN TERRITORY TRUST NEWS

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## A Snippet From Significant Trees

### » Boab (*Adansonia gregorii*)

This Boab (*Adansonia gregorii*) is listed as register 9 on the Katherine Daly Rivers Register. It was blazed to mark the death of a carpenter in Augustus Charles Gregory's exploration party. The area was known as 'Bradshaw's Run' as it was a pastoral lease held by Joseph Bradshaw in 1894. In 1995, the area was acquired by the Department of Defense to form the Bradshaw Field Training Areas. It is unknown if the Boab still stands.

Did you know that you can browse the NT Register of Significant Trees online and view listings such as this one? If you are in the area and can locate the tree to provide us with an update, you are contributing to the protection of our trees through community awareness. Get in touch if you can inform us of any *tree-mendous* discoveries you've made via our register.

View the [NT Register of Significant Trees](#) page to learn more about the register. *The NT Register of Significant Trees was established by the National Trust NT and Greening Australia and is managed by Land for Wildlife Central Australia.*



# Wild Time

2018

Have a *Wild Time* with Parks, Wildlife and Heritage these school holidays!



## Nature Detective

**Monday 1 October**

**10.00 - 11.30 am**

Use your 'nature finder' to look for wildlife clues while we take a hike up to Trig Hill!

**Where:** Alice Springs  
Telegraph Station

## Prehistoric Meal

**Wednesday 3 October**

**10.00 - 11.30 am**

Have you heard of a giant bird? What were these prehistoric animals and how did they survive?

**Where:** Megafauna Central,  
Todd Mall

## Birds and Beaks

**Monday 8 October**

**10.00 - 11.30 am**

Shapes, sizes, colours, beaks! Let's discover how birds are all so different!

**Where:** Alice Springs  
Telegraph Station

## Build a Bird Hide!

**Friday 12 October**

**10.00 - 11.30 am**

Let's learn about local birds and build a bird hide that could be used to watch those feathered friends.

**Where:** Megafauna Central,  
Todd Mall

## Who's at Wild Time?

Children between two and eight years of age and their families.

Children who want to learn more about their world.

## Remember to bring...



## Parent Supervision Essential

For more information please contact Jennifer on 8951 8247



# Dormancy Schmormancy

By Caragh Heenan

I was talking recently to a Land for Wildlife member about why there aren't any reptiles around in the cooler weather and this sparked the thought that while most of us know about the fact that reptiles are cold-blooded and therefore may slow down in winter, not many people know about the term brumation. Furthermore, anyone that grew up watching American-centric cartoons will know about hibernation – but what about the native animals in Australia? Did you know that there are several species that use a physiological dormancy known as torpor?

I'll give you a run down here on the various types of dormancy in animals. I am, afterall, an adept practitioner of winter lethargy and therefore feel that I have some authority on how it works (plus, my PhD was focused on energy expenditure in birds during reproductive phases, including the use of torpor).

## Torpor

Torpor is when an endothermic (warm-blooded) animal goes into a period of physiological inactivity, usually resulting from a reduction in the body temperature of the animal and an altered metabolic rate. Torpor in Australian animals usually lasts less than 24 hours, known as daily torpor. Birds such as the Australian Owlet-nightjar (*Aegotheles cristatus*) undergo daily torpor and so does the Western Pygmy Possum (*Cercartetus concinnus*) in southern Australia (among other species). Several small Mammals, Bats, and Rodents also use daily torpor. Daily torpor is where the animal will function normally during the day, maintaining a normal body temperature and activity levels, but will drop their body temperature at night time in a controlled manner to conserve energy (through a reduced metabolic rate). Torpor is not seasonally dependent and therefore can take place at any time of the year.

Torpor is beneficial to an animal for many reasons, but largely seems to have evolved to help animals survive during periods of cold ambient temperature, enabling the animal to conserve energy. This is likely to have arisen in the evolutionary sense with the development of homeothermy (maintaining a stable body temperature above the ambient temperature), giving a fitness advantage over those who can't modify their body temperature or who are more susceptible to extreme drops in temperature. Benefits of torpor include fat conservation (especially in migrating birds) and the ability to weather unpredictable food resources (especially to cope with the high energy-use period of reproduction).

Bouts of arousal can be energetically expensive, but can be necessary for the animal to feed and consume water before descending into another period of inactivity. It can also be important to arouse from torpor periodically to reinvigorate the immune system and prevent the animal from succumbing to parasites or diseases.

## Hibernation

Seasonal (rather than daily) periods of inactivity are often made up of multiple bouts of torpor and is known as hibernation if it takes place during winter. There aren't any Australian species that technically hibernate, as most go through extended periods of daily torpor.



**Right:** A Western Pygmy Possum (*Cercartetus concinnus*) in torpor, yet to warm up for the morning (Image: C. Heenan).

The Australian Owlet-nightjar (*Aegotheles cristatus*) is a bird known to use daily torpor to conserve energy (Image: C. Heenan).



(Continued from page 7)

Hibernation is driven by day length and hormone changes, as opposed to torpor which is driven by ambient temperature and food availability. A hibernator can spend periods of time (days to weeks) at a low body temperature. Mammals that hibernate generally don't eat or drink during this period of dormancy, therefore will store up fat reserves before entering a period of hibernation to ensure that it has the resources to cope.

Furthermore, there is true hibernation and false hibernation. True hibernators are unresponsive to sound or touch and other outside influences. False hibernators, on the other hand, can be roused easily from their dormancy. The Bear, for an international example, is a false hibernator (therefore crushing all my pre-conceived knowledge from those aforementioned childhood cartoons).

### Aestivation

Periods of inactivity during summer are called aestivation, and this is usually a way to avoid periods of high temperature, rather than low temperature. Aestivation is used by frogs in the family Limnodynastidae (the Australian ground frogs) that we have here in central Australia, such as Spencer's Burrowing Frog (*Platyplectrum spenceri*). They burrow down after the puddles dry and become inactive in

deep, cool, moist sand waiting for the next big rain, when they can become active and breed. Therefore they are generally active around November to February if there has been rain. Another species that uses aestivation is the Echidna (species in the family Tachyglossidae), burrowing down before summer and becoming active just before winter to breed.

### Brumation

Brumation is a type of dormancy seen in reptiles. The rationale for using the word brumation, instead of torpor, is that unlike endotherms that use torpor (who have a reduced body temperature during dormancy), reptiles do not have a changed physiological state with respect to temperature. They are already ectothermic (cold-blood), which means that they cannot alter their body temperature, and therefore become inactive by reducing their rate of breathing. In addition, unlike animals that go into torpor who are generally unresponsive during their period of dormancy, reptiles can be responsive and arouse periodically.

### Diapause

While torpor and brumation relate to an inactivity status of an animal that allows it to escape harsh environmental conditions, diapause is where the development of an individual is suspended. Diapause is seasonally independent and is seen in insects most commonly, but can occur in other animal groups (such as embryonic diapause in Kangaroos... but that's a whole new story!). This is why insect abundance and rapid growth is so often seen in conjunction with massive shifts in the weather.

~ Caragh Heenan [Blog](#) ►



Right: Spencer's Burrowing Frog (*Platyplectrum spenceri*) uses aestivation (a period of inactivity during dry conditions) to avoid desiccation (Image: C. Heenan).



# POP UP DISCOVERY TRAIL



**Ormiston Gorge - Pop Up Discovery Trail!**

**22 September to 14 October**

**Grab your FREE map outside of the kiosk  
and join in the fun!**



ParksandWildlifeNT

[www.nt.gov.au/parks](http://www.nt.gov.au/parks)



NORTHERN  
TERRITORY  
GOVERNMENT





Bearded Dragons (*Pogona vitticeps*) are out and about now that the weather is warming (Image: C. Heenan).

## Further Reading

Click the link symbol to be redirected to the article



Article • Can you beelieve?! Our guide to native bees



Article • Dingoes to remain classified as non-native wild dogs under reform to Western Australian law



Article • Gardening with Em: Elements of great garden design



Article • A burning issue: Forest fires make more fires



Article • Broken Hill plagued by emus as they head into town in search of food, water

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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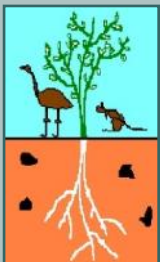
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