Land for Wildlife and Garden for Wildlife
Central Australia Newsletter

August 2017

From the Land for Wildlife Coordinator

We don't seem to sit still for too long here at Land for Wildlife! While the Domestic Cat Monitoring and Awareness project is in the last month of wrap-up, we have been hot on the media to get the word around about the results.

The warmer weather has also meant a few more property visits to sign up new Garden for Wildlife and Land for Wildlife members and revisit existing members to ensure the program is working effectively.

But in more exciting news—we are busy arranging a birthday celebration for Land for Wildlife and Garden for Wildlife to take place in September. The event will include fun workshops and there will be the obligatory cake! Don't miss it!

Land for Wildlife will be celebrating its 15th Birthday next month, as well as Garden for Wildlife's 10th Birthday! Pop the 30th of September in your diary!

A Spiny-cheeked Honeyeater (*Acanthagenys rufogularis*) feeding on Ruby Saltbush (*Enchylaena tomentosa*) fruits in the yard of an Eastside Garden for Wildlife property.

In This Issue

Domestic Cat Purrr-ticipants Receive Results

The introduction of cats to Australia is considered to be one of the most significant conservation issues in Australia. Cats will often hunt wildlife through instinct, even if their dietary needs are being met. While they have been known to feed on invasive mammals such as mice and rabbits, they also prey on native wildlife. At a local scale, there are currently 12 threatened native species, for which cats are listed as a threatening process. Land for Wildlife is working with domestic cat owners in central Australia to address responsible cat ownership, a key objective of the threat abatement plan for predation by feral cats.

Despite the staggering statistics, there is a great deal of variation in the behaviour of cats (which comes down to differences in management) and the perception of cat owners regarding their cat's behaviour. Management of owned cats can be varied, ranging from well-cared for individuals that are maintained indoors, to outdoor cats that do not stray from home, and at the extreme scale to roaming cats that may have a negative impact on their surroundings. Poorly managed domestic cats can have a negative impact on wildlife populations through predation, add to the feral cat population, become a nuisance to neighbours, have an increased risk of catching or transmitting disease, or suffer injury as a result of roaming behaviours.

A recent survey conducted by the Alice Springs Town Council, found that over a third of cat owners allow their cats to roam, which indicates that there are a significant number of cats roaming within the Alice Springs municipality. The Alice Springs Town Council by-laws state that a domestic cat must be registered with the council, and that a cat must be kept within the property boundary at all times of the day. Despite the high number of roaming cats in Alice Springs, most of the general public care about the issue of predation by cats on native wildlife. This gives hope that the management of domestic cats can be modified with some education regarding the local bi-laws, the impact of domestic cats on local wildlife and the extent to which an individual cat can roam.

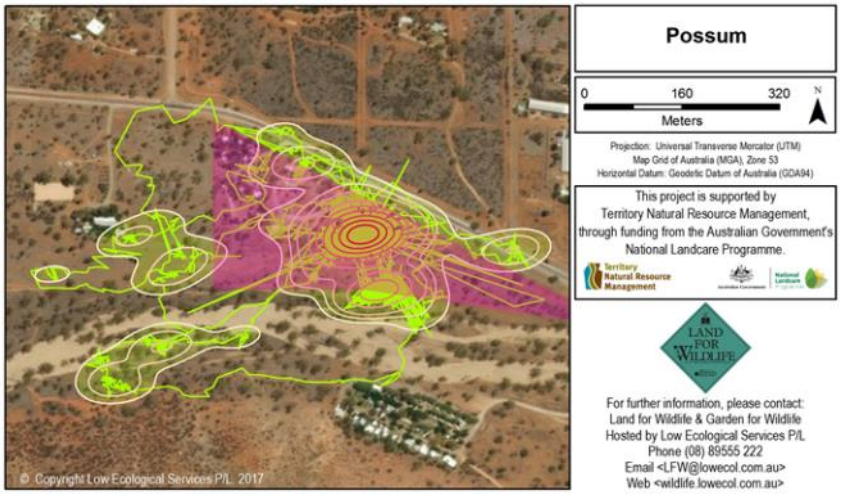
The Domestic Cat Monitoring and Awareness in Alice Springs program was established to engage domestic cat owners regarding the travelling patterns of their feline friends, to help them to make informed and responsible cat management decisions. We conducted a range of activities, including surveys conducted by domestic cat owners to ascertain their management priorities, GPS-tracking of domestic cats to assess the movements of domestic cats while roaming outside of the house and develop spatial maps for engaging with domestic cat owners, video surveillance of domestic cats to obtain visual footage of the travelling behaviour of roaming cats, and scat analysis to identify the diet of cats that roam outside of the house.

A total of 15 cats and their owners took part in the latest round of Domestic Cat Monitoring and Awareness, with only a half of the Alice Springs cats

being registered with the town council. While all cats included in the study are known to roam away from home, three quarters of the owners agreed that their pet cat could be impacting wildlife while outside.

» Cat Tracking

CatLog (CatTraQ) devices were used to track the domestic cats for a one-week period. The data obtained was used to develop spatial maps and calculate core home ranges of the domestic cats. According to the trackers, cats were recorded outside of the property boundary on 47 % of occasions, with 53 % of the tracked points occurring on the owner's property. The cats in the tracking project travelled 31 m from home on average, with the furthest distance from home averaging 352 m. One particularly adventurous cat travelled as far as 500 m from home. The average cat did not venture further from home at night, compared to during the day, which is contrary to popular belief. The area covered by cats during the tracking period was 14 hectares on average (ranging from 3.5 Ha to 27.1 Ha), however the core home range area was 1.4 hectares on average (ranging from 0.2 Ha to 10.8 Ha).



» Video Surveillance

A trial of the Eyenimal Cat Camera was conducted to determine the behaviour of the cats while roaming. Recording video footage of cats while outside of the house helped to highlight what the cat was doing while roaming. The cats involved in the surveillance portion of the project exhibited a range of behaviours, from extensive periods of sleeping, to active roaming in nearby native habitat. Several cats were observed wandering along river beds and neighbouring hillsides, trailing the scent of an animal, or simply exploring. Only one cat was

caught on camera feeding on wildlife (a grasshopper). Video summaries for each cat are available on the Land for Wildlife YouTube channel: Domestic Cat Monitoring Stories.

» *Scat Analysis*

To assist us in understanding the impact of predation by cats that are roaming outside, we analysed scats for foreign food items. Food items we were on the lookout for included components of birds, rodents, reptiles and insects. Processed commercial food was expected to break down, while other animals consumed would likely leave portions of bone, scale or fur, which could then be identified. Alice Springs based domestic cat scats contained insect material, Red Kangaroo (Macropus rufus) and Fat-tailed Dunnart (Sminthopsis crassicaudata). The mammal contents were confirmed via hair samples contained in the scats, as well as a fragment of lower mandible (jawbone).

The Dunnart findings are surprising, given that there is very little knowledge regarding the habitat preferences of Fat-tailed Dunnarts close to urban areas. This native animal is commonly found in grass, shrub or woodland in native habitat surrounding Alice Springs. The species is listed as 'Least Concern' and is therefore not threatened, despite many other native mammals becoming threatened by introduced predators, such as feral cats. The presence of Dunnarts in town blocks of Alice Springs is great news and the findings indicate that the Dunnart is capable of residing on, or travelling through, suburban town blocks.

The finding that a scat contained remains of Red Kangaroo is not as surprising, given that kangaroos can be found more commonly on the outskirts of Alice Springs. Kangaroo tail is also often brought into town by Indigenous community members returning from hunting trips. The skin and small meat remains of this species can often be found near fire pits following such visits to town. Kangaroos living on the outskirts of town may also succumb to demise through other means, before being fed on by roaming cats.

The domestic cats involved in this study roamed to neighbouring properties, road verges, adjacent bushland and some cats were observed to impact the local wildlife through predation. The results of the study show that even the domestic cats that do not leave their property boundary often, still have the capacity to negatively impact native wildlife. This suggests that the management of the domestic cats could do with improvement. We encourage all domestic cat owners to consider managing their domestic cats in a manner that will protect our native wildlife.

The full Domestic Cat Monitoring and Awareness results report can be found on the Land for Wildlife website. *Blog*►

This project is supported by Territory Natural Resource Management, through funding from the Australian Government's National Landcare Programme.

Responsible cat management options include:

- De-sex your cat to prevent it from adding to the feral cat population
- Microchip and register your cat with the Alice Springs Town Council so that it can be returned to you if it goes missing
- Keep your cat indoors so that it is not a nuisance to neighbours and does not negatively impact the local wildlife
- Install an outdoor cat play area to provide your cat with environmental stimuli that won't impact on the local wildlife
- Provide toys and play options for your cat to keep it stimulated indoors
- Fit your cat with a bell, luminescent scrunchie, sonar or other device to alert wildlife to its presence
- Provide food ad libitum so that your cat has adequate access to food, to limit its dependence on wildlife as a food source
- Don't release unwanted animals into the bush

Centralian Blue-tongued Lizard (*Tiliqua multifasciata*) sunning itself at the Desert Knowledge Precinct. This photo was taken on a very chilly morning indeed, the cold-blooded reptile slowly walked off to find a sunnier spot a while later.

DesertSmart EcoFair: Schools Day Workshops

The DesertSmart EcoFair Schools Day, run by the Arid Lands Environment Centre, is a great way to engage with the young crowd of Alice Springs and was a great success.

Costa Georgiadis got the students all riled up about the fun of science and let them loose on the workshop hosts.

Land for Wildlife took students on a walking tour of Olive Pink Botanic Garden, talking about habitat and biodiversity. The students learned some difficult words, which expanded on the theme, including the meaning of diversity, the requirements of animals when it comes to selecting habitat, how plants conserve water, competition between species, effects of land clearance, and symbiotic relationships. A great day was had by all!

The DesertSmart EcoFair Schools Day was another great hit! Land for Wildlife took students on a walking tour after Costa got them enthused about science!

EcoFair Significant Trees Walking Tour

As part of the DesertSmart EcoFair, Land for Wildlife's Candice Appleby guided over twenty of Alice Springs's tree lovers on a walk around some of the locally registered significant trees. The walk was around one kilometre long, and quite manageable despite the heat of the day!

Thanks to all who attended the EcoFair workshop Significant Tree Walking Tour! Missed out? You too can take a walk of the Significant Trees in Alice Springs. Visit the LFW website and browse the Significant Tree online register. There are fact sheets to download and an interactive map of the registered trees. Alternatively, see over the page for a short walking tour you can do in the CBD.

Left: **Over 20 keen tree-lovers attended the Significant Trees walking tour run by Land for Wildlife at the 2017 DesertSmart EcoFair.**
Right: **Land for Wildlife's Candice Appleby guided EcoFair enthusiasts on a walk around Alice Springs' CBD to view a selection of the locally registered Significant Trees (*Image F. Walsh*).**

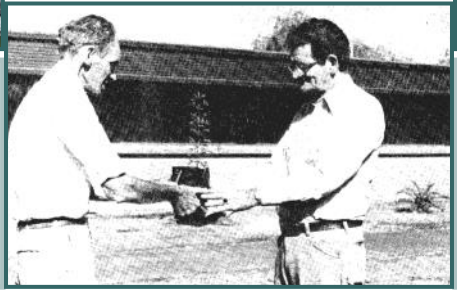
1. Date Palm on the corner of Wills Tce and Bath St planted in 1913 and initially positioned in front of Myrtle Villa—home to the first resident sister appointed to Alice Springs, Jean Finlayson.

2. River Red Gum that provides evidence of past Todd River flood levels, estimated at over 160 years old. Registered for Age, Historical, Cultural and Unique Location—this is a centre piece for Todd Mall.

3. Grown from seed taken from the first Jacaranda in Alice Springs, which was located nearby in the yard of Ottilie Johannsen. This species was planted widely in the area for the shade they provide.

Images from various sources—check online register for details

5. and 6. at ASTC Chambers. The Date Palm seedlings came from Dalhousie Springs in 1914. The Waddy Wood is one of the rarest in the arid zone—planted to mark World Environment Day in 1981.



4. Planted in the Hartley Street School yard in the 1940's, this White Cedar provided shade to students. The school was restored in 1980 and is open to the public, showcasing this historical tree.

7. This River Red Gum has survived development through appropriate urban design, integrated into the 1980's office development. It is registered for its Cultural value and Unique Location.

Quandong (*Santalum acuminatum*) seeds amongst the leaf litter at the Simmons property.

Property Profile

» *Bruce and Meg Simmons*

"I like to encourage others to remove Buffel Grass. It's rewarding to see their success from hard work.

~ Bruce Simmons

Bruce and Meg Simmons moved to Schaber Road in 1993, initially moving into a shed while the house construction was being completed. As an avid gardener, Bruce has been working tirelessly to remove weeds from their 2.0 hectare property ever since.

Bruce was 'Buffel busting' within the year—beginning with the western (roadside) portion of the property and working his way to the east. Shortly after beginning the Buffel Grass (*Cenchrus ciliaris*) removal from their property, the efforts spilled over onto the roadside verge adjacent to the block.

Around ten years ago, the whole street verge went under the mattock, with efforts ramping up in the last three years. Bruce has an agreement with many residents in the street that he is free to remove Buffel Grass inside the fence-line of their property. They are happy to have the help and Bruce enjoys the additional activity that it brings. Bruce's enthusiasm for landcare is catching—with a property to the south of the Simmons's now wishing to take on the Buffel busting challenge and signing up with Land for Wildlife to seek information resources and assistance.

Dense Cassia (*Senna artemisioides nothosubsp. sturtii*) in flower on the property provides an abundance of sweet nectar to honeyeaters and native invertebrates.

So what started this venture? Bruce Simmons had sought some information and advice from Clary Smith, who was running Olive Pink Botanic Garden at the time. Bruce was concerned about the effect of removing Buffel Grass on erosion. Clary had given Bruce the go-ahead and so on he went! Bruce's concerns were quickly alleviated, as the Buffel Grass made way for a host of native species that kept erosion issues in check.

A bore was installed early on and drip-irrigation was put in place along the eastern end of the property (which sits roughly 3 m higher in elevation than the western end). The irrigation assisted the germination of natives post Buffel Grass removal and resulted in an abundance of native grasses, herbs and forbs establishing naturally. The first to re-establish on this

(Continued on page 9)

sandy portion of the property were the *Aristida sp*. (Kerosene Grass), Small Yellow Button (*Chrysocephalum apiculatum*) and Ruby Saltbush (*Enchylaena tomentosa var. tomentosa*). Many mid-level shrubs such as Cassia (*Senna artemisioides ssp*.) and Fuchsia (*Eremophila sp*.) germinated freely. Colony Wattle (*Acacia murrayana*) were the first of the larger species to colonise the area, with the assistance of the irrigation.

A few prickly herbs have also taken hold, including Buckbush (*Salsola tragus tragus*) and Bogan Flea (*Calotis hispidula*). These aren't removed as they are native and provide seed for some of the birds such as Galahs (*Eolophus roseicapillus*) and Red-tailed Black Cockatoos (*Calyptorhynchus banksii*). The Simmons' don't mind their prickly nature and leave them be in favour of the benefits they provide.

The property slopes down to the east, resulting in an abundance of Ironwood (*Acacia estrophiolata*) and Witchetty Bush (*Acacia kempeana*) in the eastern third of the property. Heavy rains can cause the north-east corner to flood if the river breaks.

Bruce has refrained from doing extensive revegetation but admits that he deliberately planted a few species around the property. Such species include Quandong (*Santalum acuminatum*) to the west of the property (which now grow very successfully!), and Whitewood (*Atalaya hemiglauca*) to the east of the property.

The Simmons family has also been busy establishing an orchard and poultry yard to the east of the house, as well as a flourishing vegetable

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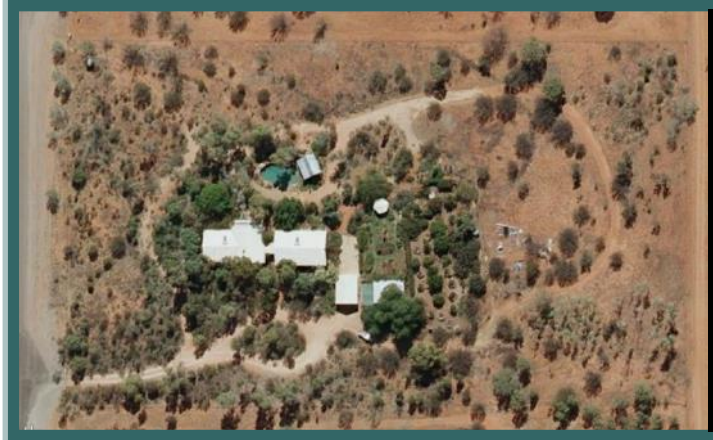
2004: **Satellite images from two months prior to the Land for Wildlife assessment show that the Simmons property was already punching above its weight.**



2009: **A dry year for Alice Springs, with the annual rainfall barely reaching 77 mm. The orchard (east of the house) is becoming established.**

2010: **382 mm of rain fell since the previous satellite image and several shrubs to the west have flourished. This was the wettest year since 1974.**

2016: **Many of the large trees have thrived due to moderate rainfall. The diversity of forbs is high and there is a clear distinction between adjacent properties.**

garden. Bruce spends several hours a day in his garden and also assists with the running of the Alice Springs Community Garden.

Additional landcare initiatives taken on include rabbit proofing the perimeter fence and enforcing a closed front gate. The Simmons family would regularly chase introduced Rabbits (*Oryctolagus cuniculus*) out of the yard if they slipped in through the driveway to help prevent grazing of small forbs. The benefits for natural regrowth are clear, with many shrubs having little issue in becoming established.

They still have the occasional challenge with fruit fly and grasshopper plagues, and the Buffel Grass regrowth after rain. Seed is able to blow in from neighbouring properties and the strip of land to the west (towards Amoonguna). Young growth is removed quickly before seeding and keeps Bruce on his toes.

Bruce signed up with Land for Wildlife in 2004 and the transformation on the property since this time has been remarkable (see inset satellite imagery from 2004 to 2016 on previous page). Unfortunately, satellite imagery isn't available as far back as 1993 to see the change over time since the property came under ownership of the Simmons family, however we are sure that it would be even more dramatic! The Buffel Grass removal efforts are also clear when viewing images from 2004 and 2017 side by side (see below). There has been a dramatic increase in the abundance and diversity of groundcovers and small shrubs, particularly to the west of the property where the Buffel busting began.

Land for Wildlife has provided Bruce with additional information, advice and support over the thirteen years of his membership, but Bruce was already well and truly succeeding with his habitat conservation efforts before joining the team. The Simmons family have worked hard to remove invasive weeds to allow the natives to re-establish and provide habitat and food for native wildlife. Has it all paid off? Absolutely! The property is home to a diverse range of avian and reptilian fauna, including cockatoos, honeyeaters, lizards and goannas.

Bruce showed off his great work in a recent Biodiversity Matters Buffel Busting Tour coordinated by Land for Wildlife and Arid Lands Environment Centre. You can read more about the tour in the February 2017 Newsletter, or watch the video of the Buffel Busters Tour on the Land for Wildlife YouTube channel. You can read more about Bruce's Buffel busting efforts in the Land for Wildlife July 2016 Newsletter.

2004 vs 2017:
Buffel Grass has been actively removed from the west portion of the property since the mid-1990's. Many groundcovers and small shrubs have responded well to reduced competition for nutrients and increased water access through irrigation.

2004 vs 2017:
The deliberately-planted woodlot to the south-east of the property has been slow in its growth, but the groundcover has responded well to recent rains. Buffel Grass is still a challenge, but the impact of its removal for native forbs is clear.

Upcoming Events

» *National Biodiversity Month: September*

National Biodiversity Month aims to promote the importance of protecting, conserving and improving biodiversity both within Australia and across the world. Read more at the Australian Government website. See also, the article in the Land for Wildlife September 2016 Newsletter.

» *National Wattle Day: 1st September*

The first day of September has marked National Wattle Day since 1992, celebrating the iconic plant. The Golden Wattle (*Acacia pycnantha*) is gazetted as Australia's national floral emblem. Celebrate by wearing a sprig of wattle!

» *National Threatened Species Day: 7th September*

National Threatened Species Day commemorates the anniversary of the last Tasmanian Tiger's death in 1936. Species Day is opportune to reflect on species loss or decline and how people can help to protect Australia's threatened species.

» *National Bilby Day: 10th September*

Officially launched in 2005, National Bilby Day celebrates all that is furry and fun about Bilbies. You can help save the Bilbies by heading to the Save the Bilby Fund website.

» *Red Centre Bird Festival: 20th to 24th September*

The Red Centre Bird Festival is back with an excellent program of events. Head to the Alice Springs Desert Park website to download a program and find out more about the photography competition.

» *Land for Wildlife's 15th Birthday: 30th September*

We will be celebrating the 15th birthday of the Land for Wildlife Central Australia program, as well as the 10th birthday of the Garden for Wildlife program. Read more in the attached event advertisement.

Australian Plant Society Plant Sale

Saturday 16th of September 2017

Sale starting at 8 AM

Olive Pink Botanic Garden

More info will be provided by the Australian Plant Society closer to the event

Australian Plant Society Propagation Workshop

Wednesday 6th of September 2017

5:30 PM to 7:00 PM

Charles Darwin University, Entrance 2, Grevillea Drive

Places are limited. Please contact Doug McDougall to register your interest or for more information.

stenocarpus75@gmail.com

0412 762 470

Do you have Spotted Turtle-doves visiting your yard and outcompeting the native birds? Did you know that you can borrow a dove trap from Land for Wildlife or build your own! Get in touch to find out how. We will be running a trap making workshop this quarter—stay posted for more info.

Further Reading

Click the link symbol to be redirected to the article

Website Resource • Birding Trails

Report • Alice Springs Town Council cat survey results

Article • Wildlife photographer David Stowe shares top tips for capturing Mother Nature at its best

Article • We should love our Aussie wildlife as much as we love our pets

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 wish to hear more about.

Cheers,

Caragh, Candice and Bill

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