

# LAND FOR WILDLIFE



Newsletter of the Land for Wildlife Scheme in Alice Springs Municipality, NT

December 2008

Welcome to our December 2008 Land for Wildlife newsletter!

Garden for Wildlife, which is the Land for Wildlife equivalent for town blocks, has surpassed its 100<sup>th</sup> member! Coincidentally, this block is on Chewings St in Old Eastside, which has the most Garden for Wildlife blocks of any street in Alice Springs, with seven houses registered for the program. As of this newsletter's publication, Garden for Wildlife now has a total of 105, and Land for Wildlife now has a total of 81 members. Given the total of rural blocks in Alice Springs is approx.300, this means approx. 25% of them are Land for Wildlife properties!

It's been a busy few months, with two workshops being held 'Habitat Creation: Natural Regeneration, Seed Collection and Propagation' and 'Bird Identification'. We also have conducted our second round of biodiversity surveys, taking place on Lillecrapp Rd Ilparpa and trapping a whole range of critters. Find more information on our surveys and workshops on pages two and three.

It's undoubtedly been a busy month for you also, with the 159.6mm of rain we received in November, (and more in December), causing the germination of buffel seeds, resulting in a relentless tide of buffel engulfing the landscape! Persistence will pay off, and the time to spray is now, while the buffel has green, fresh growth. Where buffel seed is close to seeding, it is preferable to slash before it sets seed, then spray the new growth. This is because Glyphosate takes time to work through the plants vascular system, and it may have time to seed before the herbicide takes effect. Alternatively, if you have previously undertaken substantial removal, chipping is effective where buffel growth is less dense.

We wish you a relaxing and festive Christmas period, whether you're staying in Alice, or escaping the heat for awhile. Just remember to make sure any irrigation you have is functioning properly, the timer is working, and the pipes aren't leaking, so your plants survive the summer! See you next year!

## Happy reading!

Danielle O'Hara and Bill Low  
Land for Wildlife Coordinators

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# Land for Wildlife Update

## Biodiversity Surveys

Rough knob-tailed gecko, Fat-tailed dunnart, Bynoe's gecko, Rock Ctenotus, Spinifex Slender Blue Tounge, Striped Desert Roach, Wedge tailed eagles, many enthusiastic kids, 159.6mm of rain...these are just a few of the things observed during our recent biodiversity surveys!



Left: David & Susan Moore and Amie Sanderson take photos of a Fat-tailed Psuedantechinus  
Right: Pat Hodgens shows Sarah Moore, Keira McIntyre and Indigo Sanderson a Spinifex Slender Blue Tounge

Throughout November, Land for Wildlife commenced its second round of biodiversity surveys, targetting 7 Land for Wildlife member properties along the base of the Blatherskite Range on Lillecrapp Rd. The purpose of this round of surveys was to increase member awareness of the species present on their blocks, compare species richness on properties at different phases of restoration, and encourage the self-assessment of habitat changes occurring over time.

Fauna surveying using Elliott trapping and Pitfall traps were conducted along a transect over three nights. Elliots are small aluminium traps, with a pedal inside that when the animal steps on it, it closes the trap door behind the animal. Rolled oats and peanut butter were used as bait. Traps were placed facing downwards to prevent the trap from filling with water in the event of rain (which occurred in abundance).

Pitfall traps were also used. A pitfall trap consists of a plastic bucket sunk in the soil so its opening is flush with the ground surface. Netting is constructed upright approx.5m each side of the bucket so each animal

that runs into the netting drifts alongside it into the bucket. All traps were closed during the day to prevent long term capture and heat stress to the animals. All animals were identified on site and released immediately.



A Fat-tailed Psuedantechinus caught in an Elliot Trap.

Bird calls and observations were recorded at the same time each morning along the transect line. Bird presence was recorded by vocalisation and visual observations. Pat Hodgens, an experienced ornithologist from the Alice Springs Desert Park, and Lillecrapp Rd resident, ensured that the observations were accurate and consistent. Vegetation species and their abundance on each property were recorded.

The surveys were conducted over a four week period, with two properties targeted the first two weeks, one week break and three the concluding week.



Glenn and Ruby Marshall and Keira McIntyre amazed by the above mentioned Pseudantechinus

In addition to the discovery of trapped animals, another, perhaps even more exciting factor of the surveys, was the participation of the kids on the street. At each survey round we had numerous kids helping to check the traps in the morning, but also one or two devoted helpers assisting with the comparatively boring job of opening and re-baiting the traps in the afternoon.

**Thanks to:**

Glenn, David and Bryan for digging holes.  
Andy and Pat for assisting me to dig holes, and Pat for helping with Bird Surveys and checking traps.  
Indigo, Ruby, Kiera, Sarah and all the other girls who helped check traps and open them in the evening.  
Susan, David, Amy, Glenn and Chris for coming out to check and close traps in the morning.  
Heidi for help with absolutely everything!

## Workshops

### Habitat Creation: Natural Regeneration, Seed Collection and Propagation

On the 11<sup>th</sup> of October, 25 Land for Wildlife members headed out of Ilparpa to attend a workshop facilitated by Chris Brock from Seed Savers, Glenis McBurnie from Greening Australia and Alice Quarumby from the Millennium Seedbank Project.

The workshop started with a walk around Land for Wildlife member Peter Mifsud's 1ha block at Ilparpa. Here, we heard how Peter had purchased the block in 2000, and has since spent significant time attempting to eradicate buffel. His primary method has been slashing, prioritising seed removal. Since commencing his buffel battle, a number of native grasses and seedlings have regenerated, particularly in areas which receive reticulation. Wildflowers have also appeared in abundance after periods of significant rain.

Chris Brock facilitated this aspect of the workshop, and mentioned many methods of encouraging regeneration in areas cleared of buffel. For instance, allowing the build up of leaf litter helps the soil to retain moisture as well as providing it with nutrients, each providing fertile conditions for seed germination.

Alice then proceeded to discuss the seed collection of species common to Alice Springs, and the importance of selecting healthy specimens to ensure strong, vigorous offspring. Vital to collection is to only take what is needed, leaving seed to be used as a food source for insects and other small animals, and to regenerate. When collecting, it is important to not take more than 10% of the seed present, and never remove seeds from trees or shrubs that only have a few plants left in a particular area.

Glenis then briefly explained different propagation methods for different Central Australian species. At the conclusion of the workshop she demonstrated how to propagate from cuttings, which is the most effective method for Eremophilas, Boobialla, Figs, Mint Bushes, Harnieria and Dipteracanthus.

A walk around Dave Albrecht's place also demonstrated the removal of buffel from a much larger 8.1 ha block. A variety of methods were used on Dave's block, including hand pulling and chipping, spraying and leaving the dead foliage, and burning. Plots were constructed to determine the most efficient method. Although currently the ground was quite bare, and regeneration sparse due to the the recent lack of rain, growth during more fertile seasons has been impressive, with native grasses, herbs, forbs and wildflowers prolific.

Thanks for Chris, Glenis and Alice for taking the time to facilitate on their weekend, and Peter and Dave for welcoming our 25 participants onto their blocks.

## Bird Identification Workshop

On the 23<sup>rd</sup> of November 33 adults and 10 children rose nice and early on a Sunday morning to head out to Alice Springs Desert Park to attend a bird identification workshop. The attendees were a mix of Land for Wildlife and Garden for Wildlife members, as well as non-members.

Facilitated by Pat and Bruce, keepers at the Desert Park, attendees broke into two groups, and took different routes around the park to explore the different desert habitats - Desert Rivers, Sand Country and the Woodland habitat, and the birds which were utilising them.

Both groups heard the calls of many species, spotted some, and learnt about the characteristics of the birds they encountered. The nest of a Brown Honeyeater suspended from the swaying end of a mulga branch by cobwebs provided an opportunity to discuss living in harmony with birds and spiders. Complex environments support more species of plants and animals which help to keep each other in check. More open environments provide habitat for some of the thugs of the bird world including Yellow throated minors, butcher birds, Spiny cheeked honeyeaters, while the White plumed honeyeater is the terrier of the dense riverine vegetation. Mistletoe Birds were prominent through the mulga woodland along with Grey Headed Honeyeaters and Ring-necked Parrots.

A big thanks to our guides, Pat and Bruce, who gave up their Sunday morning sleep-in to assist us with the bird-spotting, and the Alice Springs Desert Park for hosting the workshop.

Also, thanks to the members who brought along friends and kids to the workshop- as with the biodiversity surveys, it's great to see kids involved and intrigued about their surroundings

For those who missed out, but are interested in learning more about how to identify the birds on their 'Land for Wildlife', The Alice Springs Desert Park

holds regular 'Bird Walkabout' tours. These occur on Wednesday and Saturday, with other days by negotiation and groups by request (minimum numbers apply). Bookings essential on (08) 8951 8788.

## Articles

### Lerp insects

*By Christopher Palmer, Entomologist*



These strange things on leaves that look like fuzzy pieces of cotton wool are actually a protective covering (a 'lerp') for an insect. They're often seen on trees in parks, gardens and beside roads.

#### Biology

Because they have piercing and sucking mouthparts, lerp insects belong to the insect order Hemiptera (hem-IP-tera), or true bugs. Both adults and nymphs are sap-suckers, feeding on the sugar-rich sap of the plants on which they're found. Any waste from feeding is excreted by nymphs as a sweet fluid, and this is woven into shape to then harden in air, forming the lerp or shelter. The lerp is mainly made of sugars, with small amounts of fats and proteins.

Adults have wings and look like tiny cicadas, but the nymphs are very different, being oval, flattened, and wingless. There are five nymph stages between egg and adult, and each nymph lives and develops under its protective cover. The nymph starts to build its lerp soon after it hatches from its egg and starts feeding.

So that it doesn't get squashed as it grows, it adds more fluid to the lerp, so it gets bigger as well!

Adults of some species are known to communicate with each other. Scientists have recorded sounds made by both males and females; the insects do this by rubbing one rough surface against another. This is called 'stridulation', and grasshoppers and crickets communicate in the same way.



In a relationship called 'mutualism', many species of ants look after lerp insects and protect them from predators. In exchange for this, lerp insects excrete any leftovers from their feeding (called honeydew), which the ants then feed on. Sometimes the lerps know exactly when to do this, because the ants tap them with their antennae when they're ready! The lerps shown in these photos belong to the genus *Glycaspis*, and they're being tended by *Iridomyrmex* ants.

### How many are there?

Although the total number of described species of insects in Australia is well over 50,000, only a tiny fraction of this number is made up by lerp insects. There are only just over 350 species of lerps in Australia that are described, although there are many more that have been noticed but are not named or described. Different species make different types of lerps, so that some look like shells, while others look like scales, shells, cones, horns, fans, or even woven baskets. They're seen usually on native plants, especially *Eucalyptus* and *Acacia*.

Sugary lerps are a traditional Aboriginal bushfood, and lerps on the leaves of gum trees were described by European settlers and biologists in Australia in the first half of the 19<sup>th</sup> century. As lerps were eaten widely across Australia, they are known by many names in different parts of the country. In fact, the word 'lerp' comes from '*lerep*', in the Wemba Wemba language of northern Victoria and southern New South Wales, but they're called *ngkwarle aperaltye* or *merne aperaltye* in the Arrernte languages of central Australia. They were so popular that twigs with lerps on them were brushed across the lips and tongue, making them sore. When large numbers of lerps were found, they were cleaned and rolled into balls to eat later.

## Trees Under Stress

Previous to the recent rains, trees in Alice Springs were struggling! A lot were looking dry, stressed and lacking in vigour due to the continued lack of rain. Trees which are stressed are more likely to suffer from structural defects, loss of limbs or catastrophic trunk failure. The recent storm revealed the weaknesses in many of trees on our streets and in our backyards

Trees growing in urban areas typically live much shorter lives than trees growing in natural settings. This is due to stress, and stressed trees, having weakened defence mechanisms, are prone to pest and disease attack. These symptoms are commonly treated as causes, and energy is spent treating these as they occur. However these propensities are more often symptoms of larger systemic problems due to the trees location and environmental conditions.

### What makes urban sites and yards such stressful places to grow?

- Restricted root space- Building foundations, streets, driveways, and other obstacles limit the expansion of tree roots and significantly reduce the number of minerals available to the tree.

- Compacted soil; Urban soils are usually compacted from human activity, and this creates stress for a tree. Soils can become difficult for roots to penetrate, and compacted soils hold much less water and oxygen which are critical for tree health.
- Competition- Many yards have a dense layer of lawn that surrounds a tree. Grass competes for minerals and water, which reduces their availability to other plants.

### What does a stressed tree look like?

Dry, wilting leaves, reduced foliage and limb loss are all characteristic of dead trees. The uppermost small branches of trees and shrubs may die. Gradually this may extend to most of the crown. Intermittently, during wet periods, there may be a recovery of vegetation, leading to clumps of healthy foliage amidst dead limbs.

Severe infestations of mistletoe are often associated with stressed or ageing plants or disrupted plant communities. Trees heavily infested with mistletoe may be killed directly by them; but probably more often they die as a result of a combination of stresses, one of which is mistletoe



Photo: Alice Springs Desert Park.  
Healthy looking River Red Gum

### How can I contribute to the health of trees in my garden?

In order to encourage a healthy tree, you need to create a more ecologically healthy community where stress is reduced. When trees are younger, they are more capable of coping with the stress of pests and

diseases, however as they grow older the mechanisms they have to fight these incidences weaken.

Ideas include:

- Remove lawn- Instead of lawn, which provides competition for trees, add several layers of mulch within the dripline of the tree. This reduces competition, keeps soil cooler and retains moisture. Just remember to keep the base or trunk of the tree clear of mulch to prevent collar rot.
- Allowing leaf litter to build up will serve the same purpose. An added benefit is that ground cover such as leaves, branches and logs will provide habitat for small reptiles and invertebrates.
- Minimise fertiliser and chemical use around the bottom of trees.
- Consider planting slower growing trees- Slower growing trees will outlive trees that grow faster, especially in situations where space and resources are limited, such as backyards. This does depend on the purpose of the trees you're planting, and how long you plan on being at your current location! Sometimes fast growing trees will provide quick shade or a barrier.
- Remove excess mistletoe. Two or three plants are fine- they attract birds and are a natural part of a functioning ecosystem. More could increase the stress placed on the tree.
- Develop healthy watering patterns. Neither over or underwater. For established trees, overnight deep watering once or twice during summer is sufficient. For established plants under 3 years, deep watering every 2-4 weeks will suffice.

When planting seedlings, there are a number of things you can do to encourage strong, healthy growth in your trees as they age.

- Select healthy-looking plants, which are free from pests and diseases and have roots which are evenly dispersed throughout the pot.

- Dig a decent-sized hole with rough walls for easier root growth. It should be at least twice the width and depth of your pot.
- Plant your tree carefully- make sure the plant is straight and the soil surface is at the same level it was in the pot.
- Pre-water your seedling and planting hole, then water it thoroughly once planted. Create a small bowl around your plant so the water will pool around it.
- Irrigate regularly (but not too regularly!) until the seedling is established. Watering in the first two weeks should be daily and deep. Gradually reduce the frequency of watering but maintain the deep soakings. This encourages deep root growth and greater drought tolerance. Watering too frequently can cause plants to develop shallow root systems

It is inevitable that trees in urban settings will be under greater stress than trees occurring in their natural environment. It is also inevitable that they are stressed during the dry times, there are actions you can take to alleviate this. Starting from pre-planting, right through to adulthood, you can provide conditions so that trees are stronger and more capable of coping with harsh environmental conditions. It must be remembered that if very large trees are looking unwell, it could just be that they're reaching the end of their natural life!

Greening Australia, 2007. *Native Plants for Central Australian Gardens*, Greening Australia  
 Platt, S. 1993. 'Mistletoe and Wildlife- a positive view of a parasite', *Land for Wildlife Notes*, Aug. 1993.  
 Platt, S. 1999. 'Dieback lessons: learning how to manage sustainably', *Land for Wildlife Notes*, July 1999.

## Why?

### Are there so many species of Goanna in Australia?

Goannas, or monitors as they are known elsewhere in the world, are a very distinctive group of lizards. They range in body length from about 12 cm to 1.3 m, not including the tail. They include the largest lizard living today, the Komodo Dragon of Indonesia.

There are 58 living species of goanna and most of them are carnivores. Goannas find their food by searching widely across the landscape, catching animals by stalking or digging them out of shelters and nests. They are aided in their search for food by their long forked tongues which they flick in and out, picking up chemical scents in the air and on the ground. Goannas then "read" these chemicals with a special organ in the roof of the mouth.

Goannas evolved in the northern hemisphere in the Upper Cretaceous Period about 90 million years ago. However, in the Miocene Epoch, about 15 million years ago, goannas moved south into Africa and Australia. In Africa, only a few species evolved, but in Australia, goannas evolved into more than 20 species of which at least one is extinct. Goannas may have evolved in such profusion in Australia because when they arrived, there were relatively few medium-sized carnivores competing for the same resources. Africa, however, had a large number of medium-sized carnivores, especially mammals in the dog and weasel families.

One of the most distinctive features of the evolution of goannas in Australia is that their size range is enormous but their body shape has changed very little over time. The scarcity of competitors provided goannas with an evolutionary opportunity: to stick with one way of making a living and apply it over a range of sizes rather than changing the way of making a living within the same size range.

Allen E Greer [Herpetology](#) Australian Museum



Around Alice Springs look for the Sand Goanna, Perenti, Spiny Tailed Monitor, Short Tailed Mulga Monitor, Desert Pygmy Monitor, Gillen's Pygmy Mulga Monitor, Black Headed Monitor and read in the Reptiles of Alice Springs how they specialise in different habitats.

## Websites worth a look

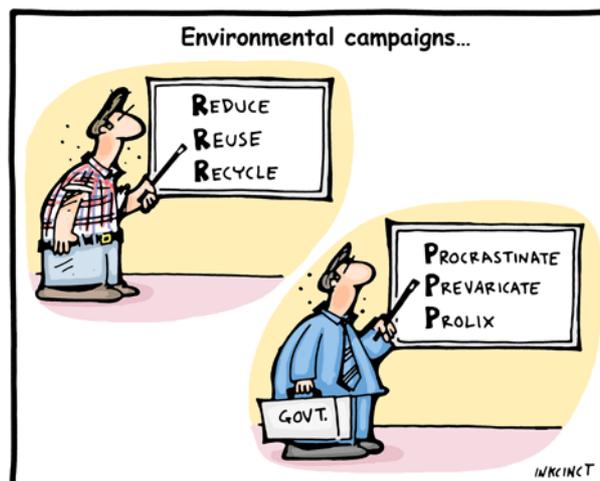
If you haven't already, take a look at Olive Pink Botanic Garden's website. [www.opbg.com.au](http://www.opbg.com.au). In addition to providing updates about events happening at the gardens, and fascinating history about Olive Pink, this website provides information about the diversity of species present in the Garden, their habitats and flowering times.

## Wildlife on Land for Wildlife Block



Land for Wildlife members Geoff and Denise Purdie recently spotted these Tawney Frogmouths on their property. Although they regularly hear them, they haven't seen them for a few year

## Bits and Pieces



## Calender of Events

**BOTH THE ALICE SPRINGS PLANT SOCIETY AND THE FIELD NATURALIST CLUB WILL BE IN RECESSION UNTIL FEBRUARY.**

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