Newsletter of the Land for Wildlife Scheme in Alice Springs Municipality, NT March 2009

Welcome to our March 2009 Land for Wildlife newsletter!

It was incredible the difference of the landscape a few months ago compared to when I arrived in Alice almost a year ago. Upon my arrival I witnessed a dry, stressed land, with brown patches of buffel littering the landscape and mulgas drooping under the strain. I recall being slightly underwhelmed by the variety of vegetation, and flicking through identification books curious about all the wildflowers and grasses lying dormant in the soil.

I was equally overwhelmed by the speed at which the landscape responded during the rains late last year. I have adopted some new favourites (Large Green Pussytail *Ptilotus macrocephalus,* Fairy Grass *Sporobolus caroli*) and have a newfound appreciation (or horror) at how quickly buffel invades in reaction to rain. Most importantly, I've realised how important it is to take advantage of the seasons, to be vigilant in protecting newly germinated seedlings after rain, to be persistent in spraying couch, when it seems to grow almost as fast as you remove it, and to get stuck into that buffel while the ground is soft and growth new.

The current season to take advantage of is that of ideal planting conditions! Native seedlings planted over the next month or so, while it cools, will have time to establish before winter starts. If you do wait until May or later to plant, protect frost sensitive seedlings with plastic sleeve tree guards.

Happy reading!
Danielle O'Hara and Bill Low
Land for Wildlife Coordinators

Workshops

Gardens Challenge workshop @ David Woods

DKA CoolMob Desert Smart Gardens Challenge was a recent initiative aimed at creating more sustainable arid land gardens.
Land for Wildlife members David and Sue Woods were one of the winners of this challenge.

On the 7th of March, they hosted a workshop facilitated by Gary Dinham, Assistant Curator of Botany at the Alice Springs Desert Park. Held at their property 'Campfire in the Heart', the workshop outlined the different topics landholders should consider when creating a weed and landscape management plan for their properties. With a turnout of around 20, landholders brought maps of their properties to work with, and topics such as weed control, species selection, erosion and soil management and planning in regards to amenity vs non amenity areas.

In addition to the constructive advice Gary provided, the workshop gave the opportunity for networking, general discussion on management techniques and a simple catch-up for those who hadn't seen one another for awhile.

Upcoming Insect Identification Workshop

On the 16th of April, Parks and Wildlife Entomologist Chris Palmer will facilitate an insect-identification workshop! Commencing at 6:30pm at Olive Pink Botanic Gardens, attendees will learn how to tell different sorts of insects apart, and recognise the characteristics of various sorts of bugs. Bring your own insects! Please RSVP by the 13th of April to 89 555 222 or lfw@lowecol.com.au

Articles

Planning Transformation

Garden for Wildlife, the program whereby Land for Wildlife has been adapted to town blocks, can provide examples of strategies that can also be applied to rural blocks.

This article outlines the process one Garden for Wildlife block underwent to create a healthy, flourishing and very unique native garden. Upon moving in in March 2003, Amiuus and Anna Lennie were faced with a couch infested and poorly designed garden, directing water toward the back veranda of the house.

The garden is now couch and buffel free, with water harvesting dispersing water throughout the block. Species have naturally regenerated and many planted seedlings are germinating and providing dense groundcover.

Originally, the back area, which is now covered by a variety of trees, shrubs and grasses at different stages of growth, was relatively bare. The gradient and levels sloped toward the house and gravel mulch was used to conceal termite entry points around the dwelling. Buffel grass covered the hill behind the house, dispersing seeds into the garden.

Essential to the development of the space was an original masterplan, outlining the aesthetic and landscape aspirations for the garden. This was created using Amiuus' experience and consultation with a surveyor-friend. Although plans such as this are usually modified as time progresses, they provide structure and a goal. Photo points are also useful to monitor the changes occurring in your garden over time.

One of the first tasks the Lennie's wanted to undertake was to eradicate the Couch and Buffel grass. The rain received during this period made the task much easier, softening the ground and allowing germinated weeds to be removed before they seeded. The Lennie's chose not to use any chemicals in their weed-battle, as Amiuus had found spraying couch ineffective in the past. All weeds were removed by hand, or bobcat. Buffel was removed from the hill behind the house, preventing the spread of seed further down the slope into the yard. However the primary weed to tackle was the ever-persistent couch.

In order to determine the depth of the couch, Amiuus dug eight different holes in different locations to a depth of 800mm. Upon the discovery that the couch didn't reach deeper than 200mm, a bobcat was brought in to rip up this layer of soil, and removed it from site. Couch around the large Ironwood was removed by hand to avoid unnecessarily disturbing the root system of the tree. This was done very innovatively! A hose was used to follow the rhizomes, moistening the root system. In addition to washing away soil to reveal the roots, the moisture prevented the excessive breakage that occurs when chasing the rhizomes of dry couch. Couch reappearance has been close to nothing, with a number of species quickly regenerating to stabilise the soil, including Ruby Saltbush *Enchylaena tomentosa,* Peppercress *Lepidium muelleri-ferdinandi* and Annual Saltbush *Atriplex elachophylla.*
Finally, the rain allowed the seeds of the Bogan Flea and Three Corner Jack to germinate profusely. Deciding these were undesirable species, unsuitable for small barefooted children (or adults), these were promptly removed.

The Lennie's strongly believe that in a landscape as dry as Central Australia, we need to use water available in the landscape to our best advantage. The water is now directed to disperse down the side of the house, and into a drainage pit in the front yard. The formations in place have withstood the heavy rain received late last year.

A noticeable feature of the garden is the abundance of native grasses present. Some, such as the Kangaroo Grass *Themeda triandra,* pictured above, have been planted. Although only one *Themeda* was planted, it has self seeded in copious proportions throughout the garden. The Lennie's have transplanted a number of very small seedlings into pots to distribute elsewhere in the garden. Also present was Purple Plumegrass

Triraphis mollis and Curly Windmill Grass *Enteropogon acicularis.*

The increased quantity of water flowing down the side of the house has allowed many species atypical to Central Australian Gardens to thrive. Cyperus sedges, *Diptericanthus australasicus,* Pituri *Duboisia hopwoodii*, Sticky Blue Rod *Stemodia viscosa*, Fruit Salad Plant *Pterocaulon sphacelatum* , Yellow Billy Buttons *Calocephalus knappii* , Golden Everlasting *Xerochrysum bracteatum* and Bluebells *Wahlenbergia sp.* are present, healthy, and provide a fantastic contrast to the front and back gardens. The photo above shows the different species the water-rich side passage supports, compared to the base of the Quartz hill commencing in the backyard.

Amiuus has provided a species list which is provided at the bottom of this article.

A variety of birds feed on flowers and seeds on the block, including a wide variety of honeyeaters and Diamond Doves, which have made a nest perched atop the Long Leaved Corkwood.
The large logs the Lennie's have left also provide habitat for reptiles and invertebrates of all kinds.
Burning is a management technique Amiuus has experimented with with great success on grass species on the block. Fire was used on individual grass clumps in order to control it closely. Burning encourages seed germination in many Central Australia species, breaking dormancy by smoking the seed to break chemical dormancy or cracking hard seed coats with the heat of the fire. A mature clump of Kangaroo Grass was burnt and died immediately, however seeds germinated soon after.

Arid land gardens provide countless opportunities for experimentation, there is no single formula! They needn't mimic the natural landscape if you're interested in creating something a bit different. Amiuus and Anna are happy to answer any questions you have about techniques they've utilised. Please email your Garden for Wildlife coordinator on lfw@lowecol.com.au and I can pass on any queries.

Chemical use on your block

If you use herbicides to control weeds in your garden, it's vital to know how to manage and handle
them safely and responsibly. For those who would prefer to avoid chemical use in their gardens, please refer to our 'alternatives to chemicals' section.

Glyphosate is one of the most widely used herbicides. It is sold under a variety of brand names, including Round Up, No Grow, Weed Master Duo, and Zero. It is a systemic, non-selective
chemical with very low toxicity that is effective in killing all plant types including grasses, perennials and woody plants. When applied post-emergence it shows no pre-emergence or residual activity.
In Central Australian gardens, Glyphosate is primarily used to eradicate Buffel Grass and Couch Grass using a spray pack.

How it works

Glyphosate is only effective against young, actively growing plants. In Central Australia this means it is crucial to use herbicide-based control methods following rain events. Alternatively, watering smaller areas of couch lawn can simulate a rain event and encourage new growth, after which spraying will be successful.

Glyphosate is absorbed through the plant leaves, then carried by the sap stream into the roots, where it prevents them from absorbing nutrients from the soil- thereby killing the plant. The plants need to be actively growing and have enough leaf area to absorb sufficient of the herbicide so that it can be circulated throughout its system.

Spraying is not a one-off solution; follow-up must be undertaken as weed seed remains in the soil and can germinate in subsequent rain events. Only spray where you will have time to follow up your actions over the year, otherwise your initial work will be futile.

In areas where you do not have the resources to follow-up your work, slashing buffel, or mowing couch before it sets seed, is effective in preventing the grass from seeding and spreading.

Weather conditions

Do not spray when plants are under stress, as stress reduces the plants ability to absorb and translocate herbicide. Stress includes conditions such as disease, low temperatures (12°C or below), lack of soil moisture and heat. Most problematic of these in Central Australia are lack of water and heat, so choose cooler days, early morning or late evening to spray. Don't spray under windy conditions, and ensure no rain is expected for at least 6 hours. Although less relevant in Alice Springs than other locations, it's vital to never spray near water bodies and drainage lines. Also avoid spraying onto hard surface areas (such as driveways or paving) where the herbicide may be washed into gutters and drains. Roundup® BIACTIVE has been specifically designed for safe use around waterways.

Personal protection

Always wear protective clothing, closed-in boots, gloves and safety glasses when spraying Glyphosate.

Preparing the mix

Make sure the water used for mixing is clean, not saline and free of dirt: rainwater is best. Put 80 percent of the required water into your clean sprayer, add the chemical, then slowly add the final 20 percent of the water to prevent frothing.

Quantities

Most people apply far more chemical than is needed to kill the weeds being targeted. The ideal ratio for specific weeds should be outlined on the product directions. The Alice Spring Desert Park has found a ratio of 15ml roundup/1L water to be most effective on buffel grass. Always use the minimum amount of spray mix needed to achieve uniform coverage of the target foliage without runoff. Glyphosate is non-selective, so make sure your spray only targets the selected weeds. Some native plants are very sensitive to spray drift, so spray as low to the ground as possible and be aware of the pressure on your spray pack.

Following spraying

Glyphosate takes time to work. Do not pull, dig or mow weeds for a week after spraying, and don't respray because you fail to see an obvious effect within just a few days. Grass will wilt and yellow after there has been time for the herbicide to be absorbed. Leaving the dead plant in the ground may be a useful option to control wind or run off erosion if Buffel is being controlled over large areas.

Alternatives to chemicals

Whilst chemical use is an easy, quick and effective means to control weeds, there are many reasons to reduce reliance on chemicals. Other than chipping or handweeding, there are other methods you can try to eradicate smaller infestations of weeds.

Reducing the sunlight available to your plants will cause any plants that germinate to die from lack of light. Laying a sheet of solid material over the surface of moist soil will have this effect.

Solarisation has also been effectively used in some garden-situations, whereby moist soil is covered with a sheet of plastic for several weeks during summer to cook any plants and seeds on the surface.

References

http://www.amlrnrm.sa.gov.au/Portals/1/Taking_action/Docs/RCU_-_Using_Glyphosate.pdf

Big-Headed Ants

They're small and they don't bite.

So why are Big Headed Ants an ecological and domestic nuisance?

Firstly, they're an aggressive species that kill of many other native insect species, particularly affecting native ant diversity. They affect native ants through direct predation, and through competition for food sources. Central Australia has a large number of native ants, all of which play a role in ecosystem functioning. The burrowing of native ants helps to aerate soil, their foraging adds nutrients to the soil and they assist in the break-down of organic matter, which benefits other plants and animals. Certain species also collect seed from various Australian plants and transport them underground, offering protection from predation by animals and harsh environmental conditions. A garden with a wide range of native ant species is a healthy garden! Secondly, they invade housing and cause infrastructural damage by chewing through electrical wiring and the grout between tiles and pavers. In severe infestations, Big Headed Ants have been found in beds, linen cupboards, pantries and washing machines.

So where did these pesky ants come from? And what do they look like- how big are their heads? And what's the best way to get rid of them? Well...read on...

The Big Headed Ant is an introduced species thought to have originated in South Africa. It is now widespread in temperate and tropical areas, however in arid environments such as Alice Springs it is found around human habitation in areas where moisture is more abundant.

Big Headed Ant's were first identified in Central Australia in the early 1990's, thought to have been transported by items such as nursery supplies, equipment and furniture from Darwin and the Eastern seaboard. The Big Headed Ant project was initiated by the Threatened Species Network in 2005 to raise local awareness about these feral ants and their impacts, and to try to limit their spread in Alice Springs. The current NRETAS 'Invasive Ants' project encourages the public to

collect suspect ants to get them identified, and is mapping existing distribution of the BHA and other feral ant species throughout the NT.

There are two sizes of worker ants in Big Headed Ant colonies. Both are slightly smaller than the Common Black Ant (those small, trail-forming black meat ants with vicious little bites you've undoubtedly had feasting on your legs at some point), and are light ginger brown to dark reddish brown. Under a microscope you can see they have sparse, long hairs covering an otherwise smooth and shiny exoskeleton. They move slowly in comparison to many native ants. They have no smell when crushed, unlike the Common Black Ant, which has a distinct acetone-like smell (try it!). Their bite is not painful to human beings.
The minor workers, which form the majority of the ant population, do not have large heads, and are 2-3mm long. The major workers are slightly larger than the minor workers (3-4mm long) and have a disproportionately large head. They make up roughly one in every hundred ants.

Big-Headed Ants. Minor and major workers.
http://anic.ento.csiro.au/ants/biota_details.aspx?BiotaID=38504

Examples of Big Headed Ant nests
Images sourced from the University of Nebraska website and the TSN CSIRO big-headed ant poster.

Another indicator of Big Headed Ant presence is a reduction in the native ant population in your garden. If you've previously noticed a variety of species on ants on your block, which seem to have been usurped by ants of the above description, it's time to get them identified!

So what do Big Headed Ants like? Big Headed Ants are attracted to sources of moisture. They are scavengers but prefer fats and proteins to sweet food. Inside they forage for meats, grease, liver, molasses, peanut butter and pet foods. Outside they feed on small vertebrates, seeds and other insects. This is bad for insectivorous species whose food supply is largely reduced by the presence of the ants.

Big Headed Ant nests are also important in identification. There are multiple queens per nest and nests are interconnected. Big headed ant

nests are generally not raised unlike the elaborate nests many native ants make. They are easily observed because of the ant's prolific soil moving activities. Nests characterised by lines of interconnected holes and small mounds of excavated soil. They have many openings close to one another. Piles of bodies of dead ants are often found near nest entrances. Ants from new and old nests cooperate, rather than compete like 'normal' ants, allowing super colonies to appear Big Headed Ants often nest in lawns, in between pavers or cracks in concrete and in tile grout. They will construct mud-tubes on foundations, which look similar to termite tunnels. They need a source of moisture to survive, so are often found in pot plants or along dripper lines.

So, what to do if you suspect you may have a Big Headed Ant infestation?
Firstly, get the ants and nests positively identified. Contact your Garden for Wildlife coordinator on (08) 89 555 222 or lfw@lowecol.com.au , or the NRETAS Invasive Ant Project on (08) 8995 5036 to order collection kits and jars. If you do find you have Big Headed Ants, they can be treated with Amdro, a hydramethylon based granular ant bait. Alternatively, get in contact with a local pest control company who can treat them for you. Try to coordinate treatment with neighbouring properties to reduce chances of re-infestation. However the most valuable and easiest way to control Big Headed Ant infestations is by preventing their spread through the movement of infested pot plants, gardening supplies and in household items. Because Queen Ants are unable to fly, their dispersal is dependant on accidental transport by people. A reproductive queen and at least 10 minor workers are required for a new colony to survive. This need for a certain initial population size means that vigilance for the presence of ants in goods being moved reduces the ability of the ant to be spread effectively by people.

Thoroughly check any material you bring into your garden that may contain soil. Get any suspect ants or nests identified immediately and be prompt to treat infestations.

You can help stop the spread of Big Headed Ants in Alice Springs, by inspecting your garden for their presence, and getting neighbours and friends to keep their eyes open for the pest.

Hoffmann, B. 2004. *Pest ants and their management on Aboriginal lands in the Northern Territory*, A consultancy report prepared for the Northern Land Council, December 2004.
Threatened Species Network, 2006. *The Feral Big Headed Ant: Recognising Big Headed Ants and their Nests,* Big Headed Ant Power Point, March 2006.
Young, G. 2000. 'The Coastal Brown or Big Headed Ant', *Agnote,* No. 152, March 2000

Letters to the Editor

Hi Danielle Just a little mystery we would like solved. Our local Torresion crows are nesting at the moment and are being constantly bombarded by the local black faced cuckoo shrikes. What is going on? I don't see how they can distract the crows enough to get into their nest so is this about pure hatred or some other higher purpose?
Peter and Thea Toyne

To the bird issue:

Basically it is a classic case of breeding aggression. Crows are predators to most smaller species (and will often raid nests for eggs and chicks) who are threatened by their presence. The BFC Shrikes may also be nesting nearby and are simply defending their territory and attempting to intimidate the crows.

Pat Hodgens

Hi Danielle,

Re wildlife, the most prolific form at the moment are the plague of grasshoppers!
We have recently been visited by a Stimson's Python. In fact it had obviously made itself at home, as the first I knew of it's presence was when it was exiting the house one morning, via the space between the glass sliding door, and the screen door.
Then, a couple of weeks ago, I was outside trying to clear some of the weeds, when I heard some Major Mitchells making a racket. I looked up to the range where a pair of them were harassing 2 massive Wedgetails, who were trying to bring down a roo. I thought the Major Mitchells were either very brave or foolish - the outcome was that the roo got away, and after watching the scene for awhile, the cockatoos departed. As did the eagles.
There has been a variety of birdlife, although I haven't seen the Mulga Parrots and their new offspring lately, but there are still flocks of Budgies around. We have also had the Black Monitor around the house in recent times.
Kind regards
Lesley

©Nic Gambold

Black Headed Monitor
Varanus tristis

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Stimson's Python
Antaresia stimson

Bits and Pieces

Photographs by Heather Preston. Land for Wildlife SEQ newsletter January 2000, Vol.3, No.1, Pg. 3.

These incredible photographs, taken by a South-East Queensland LfWer, show a Koala contorting itself to climb over a wire mesh fence. These photographs both demonstrate the significance of wildlife-friendly fencing, and reinforce the importance of responsible pet ownership. This Koala, if encountering a domestic dog or cat, would find itself in trouble.

Even though the majority of pet owners carefully meet their pet's requirements for food and shelter, instinctive hunting and chasing behaviour will continue. In Alice Springs Euro and larger reptiles are often targets of dog attacks, with cats by nature hunters are more likely to kill birds and smaller reptiles.

If there's a location on your property which you know to be an area of high wildlife activity, ensure that it's protected from any domestic animals. Cordon off an area of your block for your dogs for both day and night.

If you would like to control dogs in your area, please contact the Alice Springs Town Council Rangers to book a dog trap. The council will provide you with instructions on how to use the trap and they will retrieve any dogs caught and take them to the RSPCA

Calender of Events

Alice Springs Field Naturalists

8 Apr 2009: Monthly meeting. Jenny Purdie on Africa – 7:30 pm Olive Pink Botanic Garden

Easter 10-13 April: proposed trip to Newhaven.

13 May 2009: Monthly meeting. Guest speaker to be announced. 7:30 pm Olive Pink Botanic Garden

Olive Pink Botanic Gardens

April 17th - May 10th *Light and Distance.* An exhibition of beautiful works by Raymond Lodge opens at Olive Pink Botanic Garden on Friday 17th April at 6pm. All welcome! Exhibition then shows daily 10am-4pm until Sunday 10th May

This newsletter has been produced by
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