



NEWSLETTER – April 2012

Land for Wildlife News

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On our cover this month... Gould's Wattled Bat *Chalinolobus gouldii*, one of the most widespread of Australia's microbat species. This bloke is striking a pose during a recent Land for Wildlife workshop with Dennis Matthews (see articles).

Photo: Chris Watson



Name Your Newsletter



Get your thinking caps on folks. The Land for Wildlife coordinators are embarking on a mission to find a name for your newsletter, but we can't get there alone. Some of the interstate branches of Land for Wildlife have chosen the name of a distinctive local animal or plant as the name for their newsletter, so what do you think is representative of conservation and biodiversity in Central Australia?

If you'd like to email your suggestions to lwf@lowecol.com.au then we will have a good look at them and reveal the winner with the release of the May edition, which will no longer be known simply as "The Newsletter".



**Forest
& Bird**
GIVING NATURE
A VOICE

Forest & Bird Visits The Alice

Land for Wildlife Alice Springs recently hosted Alan Fleming from the Royal Forest & Bird Protection Society of New Zealand (Forest & Bird). He was here to have a look at the success Land for Wildlife is having in extending conservation management practices to private citizens across Central Australia.

Forest & Bird are testing the waters for a planned pilot program of Land for Wildlife to be rolled out in coming months, starting on the north island – our first international branch!

It seems fitting that NZ should be the next place for Land for Wildlife to catch on. Land for Wildlife was started 30 years ago in Victoria by members of BOCA (Bird Observation & Conservation Australia – now Birdlife Australia), and Aotearoa is widely known as the land of

birds. In fact there are no native mammals in New Zealand at all, and a lot of the native birds and invertebrates are struggling with similar challenges to those facing native ecosystems here; introduced predators, competitors, and invasive weeds.

Alan came and visited a few local Land for Wildlife properties, attended one of our workshops, and came on a couple of property assessments. Jesse, Chris and Bill extend their warmest thanks to all of those members who extended such characteristic Land for Wildlife hospitality, welcoming Alan and ourselves onto their properties.



1 Alan atop Mt. Gillen with Jesse and Chris

Our Kiwi mate struck a rich vein of good luck with our wildlife while he was here, and managed to see more of it than Jesse and Chris have seen in the last 12 months; Dusky Grasswrens, Spinifex Pigeons, Wedge-tailed Eagles, Black-footed Rock Wallabies, Painted Finches, Euros, Black-headed Monitors, Spiny-tailed Monitors, and to cap it all off, a hefty old Perentie.

Alan has already visited Brisbane, and Melbourne, and is now off to Perth for a look at Land for Wildlife in yet another time zone. He was very impressed with the results we are getting with voluntary conservation measures, and has headed off with plenty of ideas about how the program might be implemented across the Tasman.

Kia ora Alan, and the very best of luck!

Rabbit Workshop

Our season of rabbit monitoring and control commenced a couple of weeks back during Alan Fleming's visit. Territory NRM regional coordinator Heidi Groffen was on hand, as we held the first of a series of workshops funded by TNRM, and all aimed at controlling the population of the dreaded European Rabbit as it benefits from the last couple of seasons of decent rains.

This is a particularly well-timed project as the rabbit population has increased noticeably with the vigorous plant

growth of the last couple of years. A small, but enthusiastic group assembled to learn about the history of rabbit invasion in the NT and the various ways they act to damage native ecosystems.

Following this workshop, Jesse and Chris will be rolling out monitoring and control measures across six Land for Wildlife properties to establish the efficacy of different control measures. If you are interested in being involved or have any news for us which is relevant to the topic of rabbit control we'd be very interested to hear from you at lfw@lowecol.com.au

The Land for Wildlife Bird Counter

You may have noticed a new addition to the contents page of your newsletter. The bird list has been started to give us an idea of the diversity in the most obvious wildlife present on Land for Wildlife properties. According to all our assessments so far, we have 82 species that have been identified on Land for Wildlife properties to date. We hope this will encourage a few more land owners to start conducting bird surveys on their block to chart the seasonal and annual variation in the birdlife.

Whichever way you choose to conduct your surveys, the main thing is that you are consistent; conduct them at the same time of day, for the same period of time, and by the same technique. You can record your observations daily, weekly, monthly – it's really up to you as to how often you can conduct a survey. Your records can be kept in a simple notebook or you can go online and contribute your data to the national Bird Atlas. This enables your observations to be used by researchers and academics who use the atlas data to map bird distribution and movements. If you visit the website at www.ereamaea.com you will find it straightforward to register for a free account and you can start logging your sightings and mapping the bird distribution on your property.

For our part, we will maintain a list of bird species observed on Land for Wildlife properties and update this with your sightings each month. What are you waiting for? Grab your binoculars and get into the garden!

Articles

Would you like to share some of your stories and experiences of managing your property for wildlife? Maybe you've implemented a successful weed control program or simply have some interesting wildlife hanging around?

If you do, send us an email or better yet, write a short article about your experiences of natural resource

management in Alice Springs. We'd love some member input into our newsletter and blog content!

Central Australian Bats with Dennis Matthews

If you're interested in natural history, sooner or later you will come around to learning about a fascinating group of animals which are, traditionally, quite unpopular. I refer to bats. There are almost as many cultural associations with bats around the world as there are with birds. Bats are sometimes depicted as dark, supernatural and portentous. However there are still many cultures in which bats are venerated as deities of one sort or another or seen as good omens. The Poles, Macedonians, Chinese, Tongans and Arabic peoples have all used bats as symbols of luck, longevity or happiness. Modern western associations with bats tend towards the negative, (Dracula springs to mind) and this has not been helped along by the occasional story about Lyssa virus or Hendra virus. Even I can admit that at first glance, many bat species look hard to love, but as usual, a little bit of knowledge makes a big difference. Bats are extraordinary.

If you want to learn about bats, there's one bloke you can go to who has plenty of information – Dennis Matthews. Recently, Land for Wildlife were lucky enough to have Dennis in Alice Springs where he made the time to run a microbat workshop on very short notice. If you missed it, fear not – Dennis comes through this way a bit so we might try to organise another session later in the year and give everyone a bit more warning.

It was a great evening, and the dozen or so folks who attended all seemed to enjoy themselves. Certainly, everyone went away with a much greater understanding of these tiny mammals than when they arrived.

Something many might not have realised was that wherever mammals are found, bats typically make up around a quarter of all species. Here in Central Australia we get occasional visits from the Little Red Flying Fox, but otherwise all of our bat species are what we call microbats – *microchiroptera*. Around Alice Springs we have between 9 and 12 species depending on who you ask, how the weather has been, and the current state of the taxonomy.

Microbats are mainly insectivorous, eating everything from tiny mosquitoes and midges to quite hefty grasshoppers and locusts. They hunt and navigate using a process that many will be familiar with, known as echolocation. There is a lot more to this than simply sending out sounds and listening for them bouncing back off the surrounds. It all comes down to physics.

The following is an excerpt from the website of a company dealing with acoustic insulation;

How does sound decay with distance?

The way sound changes with distance from the source is dependent on the size and shape of the source and also the surrounding environment and prevailing air currents. It is relatively simple to calculate provided the source is small and outdoors, but indoor calculations (in a reverberant field) are rather more complex.

If the noise source is outdoors and its dimensions are small compared with the distance to the monitoring position (ideally a point source), then as the sound energy is radiated it will spread over an area which is proportional to the square of the distance.

This is an 'inverse square law' where the sound level will decline by 6dB for each doubling of distance. Line noise sources such as a long line of moving traffic will radiate noise in cylindrical pattern, so that the area covered by the sound energy spread is directly proportional to the distance and the sound will decline by 3dB per doubling of distance.

Close to a source (the near field) the change in SPL will not follow the above laws because the spread of energy is less, and smaller changes of sound level with distance should be expected.

In addition it is always necessary to take into account attenuation due to the absorption of sound by the air, which may be substantial at higher frequencies. For ultrasound, air absorption may well be the dominant factor in the reduction.

<http://www.rockwool.com/acoustics/faq#f1069>

So the attenuation of sounds is more rapid at higher frequencies; few bats call within the range of human hearing – 20kHz and some call up to 200kHz. Put simply, this means that sounds are so faint by the time they come back to the ears of the bat, it has to have extremely sensitive hearing to pick out any useful echoes at all. So bats have the most sensitive auditory senses of any mammals on earth. But hearing well is not enough by itself. The fast rate of decay of high frequency sounds means that to be useful for echolocation, these sounds have to be emitted at incredibly high volumes as well - ear-shatteringly loud. Bats can call so loud, that humans should be glad that most of them call well beyond our range of hearing.

Decibels are a difficult scale to grasp for some – 100 decibels is NOT twice as loud as 50 decibels. It is an exponential scale. Garden bird calls or quiet conversation come in at about 40 decibels. A car driving past at 120km/h is about 70 decibels and this can be painful for some people. *70 decibels is 8 times louder than 40 decibels.* A passenger jet taking off, when heard from 300m away is about 100 decibels. *100 decibels is 8 times louder than 70*

decibels. A lightning strike is about 120 decibels – *this is 32 times as loud as 70 decibels*. Is the maths making sense yet? If you take the ill-advised step of standing 25m from a passenger jet taking off, you will briefly hear 150 decibels before your eardrums rupture – a workplace safety officer's worst nightmare.



Lesser Long-eared Bat *Nyctophilus geoffroyi*. **Big ears – all the better to hear those echoes with.**

So, equipped with this knowledge about the intensity of sounds, it's amazing to think that the Lesser Bulldog Bat *Noctilio albiventris*, of Panama can emit calls at 137 decibels! Australian microbats are not quite as rowdy, but are still capable of calling at over 100 decibels when required. Not only this, but hey can make these calls at a rate of up to 200 per second.

The logical question following all this is; if bats have such sensitive hearing, and are calling so loudly, why aren't they deafening themselves?



Inland Freetail Bat *Mormopterus planiceps*, showing the bone structure in the wing, homologous with our own hand bones. All bats are placed in the order Chiroptera, literally – *hand wing*.

Evolution has equipped bats with super fast muscles within their ears that enable them to disengage the auditory bones; effectively switching their hearing on and off in perfect synchronicity with their calls. As an interesting aside, it was through the study of bat echolocation that early radar technology was developed. This deals with essentially the same problems that bat evolution solved millions of years ago.

All of this and more was gleaned from Dennis' talk. The highlight of the evening for many might have been the practical component. We retired to the yard where Dennis ran us through some bat survey techniques and set up a couple of harp traps. We stood in the garden outside the Land for Wildlife office and were able to track an Inland Freetail Bat in real time on the Anabat recorder as it flew overhead. The recorder has a speaker which drops the frequency to allow us to hear it, but it also gives a visual representation of the call on the screen, showing the actual frequency and speed of the call. It was impressive to see just how distinctive the calls of each species were. Over the next hour or so we were able to identify (well, Dennis was) about 6 species of bat which is more than half of the species present in Central Australia - a great result.

The harp traps do actually look very much like a harp. A large aluminium frame supports a network of taut, parallel, vertical filaments. The bats fly into these filaments and slide down into a canvas bag at the bottom where they go into 'roost' mode and nestle in to await identification and release.



We left the traps out over night and ended up catching nine bats from four different species. We caught a Lesser Long-eared Bat *Nyctophilus geoffroyi*, Inland Freetail Bat *Mormopterus planiceps*, Gould's Wattled Bat *Chalinolobus gouldii*, and a Chocolate Wattled Bat *Chalinolobus morio*.

Our warmest thanks to Dennis for sharing his knowledge, skills, and time so generously. We will try to organise another information session next time Dennis is available.

All pictures: Chris Watson

More Pie Dish Stories...

Last month's newsletter featured an article on the aptly named pie-dish beetle (*Helea* sp), found recently on a Land for Wildlife property.

Just as the size and shape of the kitchen utensils for which they're named are many and varied, so are the beetles themselves. On a recent Flora/Fauna survey in the Sandover region north east of Alice Springs, large numbers of a similar species were captured in pit traps.

At the time of the survey, conducted by Low Ecological Services, these insects were common in several habitat types, including Mulga/Gidgee woodlands and Mallee/Spinifex associations.



As can be seen from the pictures above, this species has much smaller flanges on its carapace than last month's example. It also has additional ridges running the length of its back. And it wasn't just biologists that were pleased the beetles were around (below)!



Pictures: Jesse Carpenter

Invertebrates are often some of the most colourful, approachable and amazing residents of a garden or bush block. If you have any photographs or stories you'd like to share about interesting insects or invertebrates you've found on your property, email them to us for inclusion in future newsletters.

Bloomin' Eucalypts

At last month's national Land for Wildlife conference, Alice Springs coordinators featured many photographs of the Centre's unique flora and fauna in their presentations. Many drew comments from southerners about the diversity we accept as a normal part of owning property in Alice Springs and central Australia.

One that drew particular comment was the suburb bloom of one of our desert mallees, the Red-bud Mallee, or *Eucalyptus pachyphylla*, shown below.



Above: The Red-bud Mallee – so called because of the red operculum, or cap, that covers the un-opened flowers.

One botanical devotee had even spent much of a central Australian holiday searching for this species, and was quite taken aback when told it was a common enough species, even if rather specialised in its habitats.

The specimen shown here was photographed north east of Alice Springs on the Sandover highway, where March saw communities of this mallee just beginning to blossom.

Red-bud Mallee is found mainly north of Alice Springs (perhaps why our southern colleague had trouble finding it!) on spinifex sand plains and low, stony rises. It grows in typical mallee fashion, with several trunks arising from a lignotuber below the ground.

At long unburnt sites, it may reach about 4m tall and will respond to fire by quickly re-shooting from beneath the ground.

Red-bud Mallee is closely related to two other spectacular desert species, *E. kingsmillii* and *E. youngiana*. These species occur close to the NT border in South and Western Australia but as yet, have not been recorded in the Territory.

The mallee photographed was growing in association with another common mallee of the spinifex sand-plains – the Blue Mallee (*E. gamophylla*). Some of you may be familiar with this mallee from sand dune deserts near Uluru.

The distinctive foliage of this species is unmistakable. Blue-grey in colour with a waxy coating, the opposite leaves occur in pairs, are joined at the base and clasp the stem.



Above: Blue Mallee (*E. gamophylla*), showing foliage and fruits.

Black House Spider



Local arachnid expert Robbie Henderson has been kind enough to identify this spider for us as the Black House Spider *Badumna insignis*. This is a common spider around Alice Springs.

It is a smallish spider which grows to a total legspan of about 3cms. I asked Robbie to identify this one for me due to its superficial similarity to a funnel-web spider. While the Black House Spider is venomous it is not considered dangerous, and is described as being generally timid and unlikely to bite.

They tend to stick to one little area and maintain a slightly messy looking little web in a corner of a building or among rough tree bark. The entire spider is covered with hairs, and the rainbow colours visible on the lower half of the abdomen are just a trick of the light – the flash from the camera refracting through the hairs. In natural light the spider is a uniform dark grey or black.

Websites Worth a Look

FOREST & BIRD

<http://www.forestandbird.org.nz/>

We thought we would include this website after our recent visit from Alan Fleming, a field officer with Forest & Bird. This is an interesting website and gives a good idea of the conservation challenges facing New Zealand, and the similarities and differences with our own.

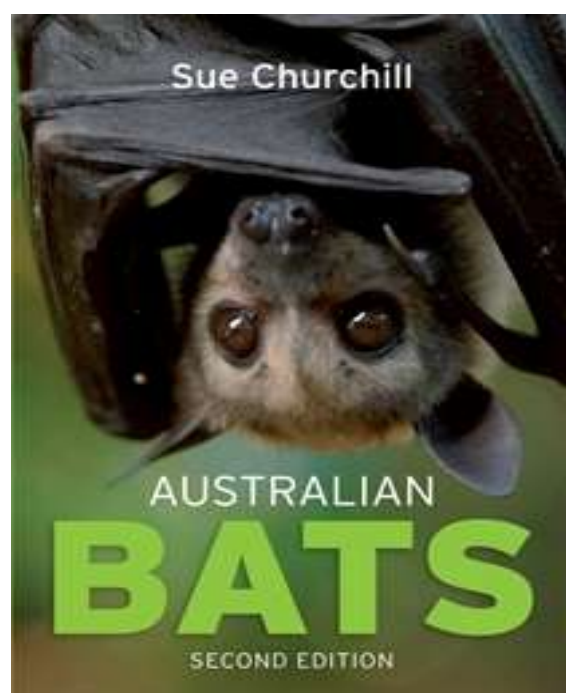
BIRDLIFE AUSTRALIA

<http://www.birdlife.org.au/>

This is the new website of Australia's peak bird conservation organisation, the newly named Birdlife Australia. This is the result of the recent merger of BOCA (Bird Observation & Conservation Australia – itself the parent organisation to Land for Wildlife) and Birds Australia (formerly the Royal Australian Ornithologists Union).

The new site is packed with information for people of all levels of knowledge, and has activities and events for bird enthusiasts of all ages.

Recommended Books



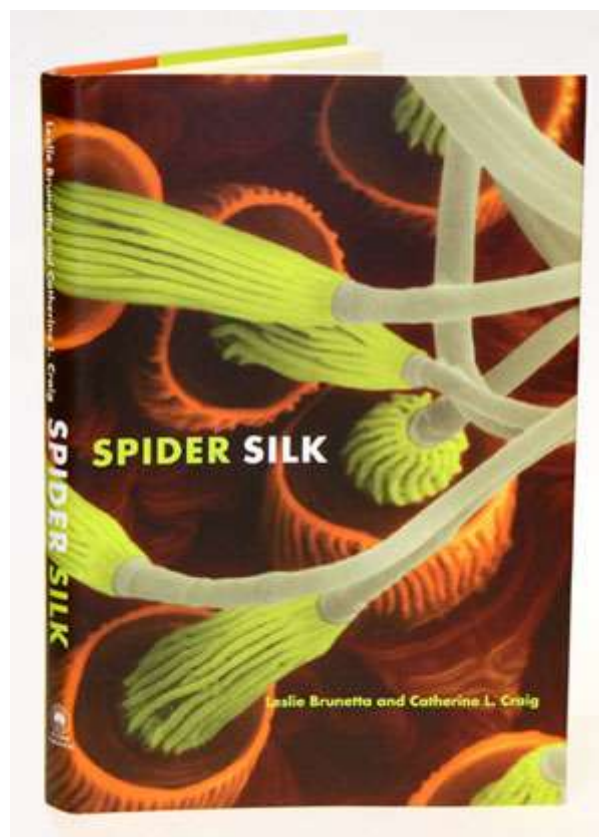
AUSTRALIAN BATS, 2nd edition

By Sue Churchill

This is the current field guide to all species of bats found in Australia. In addition to working as a guide to field identification, the book has extensive information about bat physiology, natural history and field survey techniques.

The field guide part of the book is well-illustrated with great close-up photographs of most species, sonograms of their calls, and extensive text describing their habits, distribution, diet and reproduction.

It is bound in paperback and small enough to fit in the glove box of the car or be carried comfortably in a backpack.



SPIDER SILK: Evolution and 400 million years of spinning, waiting, snagging, and mating.

By Leslie Brunetta and Catherine L. Craig.

It has been shown in numerous controlled studies that children are not afraid of spiders until they reach about the age of eight. This is the age at which the fears of parents and others around them finally rub off. From this point, despite the fact that it may be based on no personal experience of negative encounters with the creatures, the children will be wary of spiders.

For one reason or another, many people do share a deeply ingrained dread of spiders and other “creepy-crawlies”. But it is said that knowledge dispels fear. Spider Silk, studies

that most fascinating feat of spider abilities, the spinning of webs.

With the wealth of spider species available to study in even the smallest garden in Alice Springs, there is always a web to look at close at hand. This book can help you to understand the world of the spider, and how and why they weave those webs.

Letters

BUFFEL FREE ZONE – SHORT-TERM PAIN FOR LONG-TERM GAIN!

In 2000 when our family relocated from basic residential living in Alice Springs to Heenan Road, our main goal was to put some 'space' between our neighbours and our family of four young boys. Initially, our 5 acre property was quite desolate but with a few good seasons that followed we soon found ourselves surrounded by acres of dense healthy Buffel; up to a metre high in spots. Like many of our neighbours, we spend most of our spare time and many weekends mowing and slashing and dreaming of the day we could afford the luxury of a 'ride-on mower' like the ones we looked longingly at while pushing our old victa round and round the paddocks!

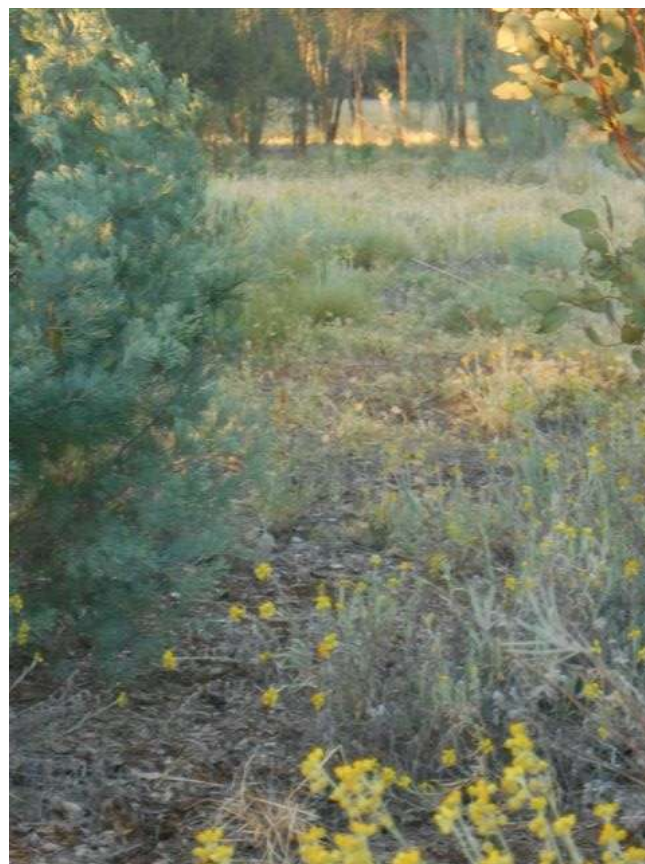
In 2003 a friend suggested I investigate Land for Wildlife, as their pilot program promoted and encouraged local landholders to manage their property for nature conservation with an emphasis on awareness of natural vegetation, local wildlife and sustainable management. Looking back, I was a bit nervous about my scheduled 2 hour appointment with Bill Low and even considered offloading our menagerie of domestic animals for the day rather than take a 'beating', particularly if I was about to become a 'Greenie" myself!

Fortunately, our property assessment went without a hitch and somewhere between, following Bill around our property (some areas I had never even stepped foot on) and listening attentively to his spiel on each and every 'alive and growing' specimen and the following few weeks, my appreciation of where I was living and my level of awareness of the local flora and fauna that surrounded me, was enlightening. You could say our 5 acres of 'Bush and Buffel' turned overnight in my mind into a 'vision' of sustainable land for Flora and Fauna conservation. Even in the early days this seemed a much better option than spending the rest of my spare time 'mowing & slashing' Buffel and consequently destroying any hope of native grasses, wildflowers and shrubs to rejuvenate.

So up went the green diamond (the Land for Wildlife sign) on the front fence and off I went into town with a new dream and focus to buy a weed sprayer and a few litres of weedkiller; much easier on the pocket than the 'ride-on

mower' I had previously pined for! I learned the 'window of opportunity' for spraying was after rainfall, so I dedicated as much time as I could afford, to spraying during these periods, particularly when the young plants were smaller, prior to seeding and in a rampant growing stage. Looking back, I certainly can not remember spending more than 2 hours at any one time on my new passion and I often had a few days break in between sessions while I waited for the sprayed grass to yellow and therefore spot the missed patches. Now days, after rain it is exciting to fill up the sprayer and set off hunting for the odd Buffel plant, not to mention the joy of keeping in close contact with every corner of our property, always learning and discovering some new flora or fauna has moved in to reward our efforts.

Right from an early stage, eradicating Buffel was extremely rewarding and never really felt like 'hard work'. Native grasses quickly filled in the blank spaces, wild flowers and native shrubs seemed to rush in to re-claim their favourite spots and local birds steadily increased their presence and variety; I personally believe this is due to the abundant food and shelter now on offer. A large family of Blue Wrens came to stay last year (perhaps 20-30) they enjoyed living here so much they raised a new generation of little ones before moving on just recently. Somehow, I just know they will return later in the year because everything they need for a happy life is here!



Land for Wildlife member Debbie Page, "Snakegully"
4495 Heenan Road

Thanks very much Debbie, we couldn't have said it better ourselves. (Just look at these pictures of natural regeneration on "Snakegully"!)

There have been many studies done on Buffel Grass *Cenchrus ciliaris*, over the years. In terms of the preferences that wildlife demonstrate for foraging and sheltering among Buffel Grass, some of the findings have been inconclusive. However, there is no doubt that it has been responsible for a change in fire regimes towards hotter and more frequent fires. There is also little doubt that when it is removed, the diversity of native plant life increases.

Have you got stories of success or frustration in the battle with the Buffel on your property? We'd love to hear your stories, and see your pictures of recovering undergrowth.

You may have noticed the new "BUFFEL FREE" counter on the contents page of the newsletter. We have done an inventory of all the Land for Wildlife properties that have achieved, or are working towards Buffel Free status. By counting the Buffel free metres as we go, we can get an accurate picture of how Land for Wildlife members contribute directly to biodiversity conservation and natural regeneration.



Calendar of Events



1-31 May

Jelly Baby Month

Organisation: The Juvenile Diabetes Research Foundation

Jelly Baby Month aims to raise funds for research into diabetes. Raised funds are put towards the most promising research into findings a cure for both type one and two diabetes.

National/State: National

Contact

Phone: 03 9696 3866

Website: www.jdrf.org.au/help-find-a-cure/jelly-baby-month

Address: PO Box 2038
SOUTH MELBOURNE VIC 3205



1-31 May

Kiss Goodbye to MS

Organisation: MS Australia

Wear red lipstick and help kiss goodbye to MS.

Throughout May 2012 you can get involved in Kiss Goodbye to MS events and activities taking place across the country. By taking part you will be helping support people with MS through funding vital research into the cause, cure and better treatments for the disease. Our vision is to create a world free of MS.

National/State: National

Contact

Phone: 02 9468 8338

Email: info@msra.org.au

Website: kissgoodbyetoms.org.au/



3 May

World Press Freedom Day

Organisation: United Nations

World Press Freedom Day is an opportunity to celebrate the principles of press freedom and to pay tribute to journalists who have lost their lives in the line of duty.

National/State: International

Contact

Website: www.un.org/en/events/pressfreedomday/



6-12 May

Heart Week

Organisation: Heart Foundation

Heart Week aims to raise community awareness of cardiovascular disease and the many ways to avoid developing heart disease.

National/State: National

Contact

Email: health@heartfoundation.org.au

Website:

www.heartfoundation.org.au/Pages/default.aspx



7-12 May

International Composting Awareness Week

Organisation: facilitated by the Centre for Organic & Resource Enterprises (CORE).

International Composting Awareness Week is a week of activities, events and publicity to improve awareness about the importance of this valuable organic resource and to promote compost use, knowledge and products.

National/State: National

Contact

Phone: 02 9922 1591

Email: info@compostweek.com.au

Website: www.compostweek.com.au/

Mothers Day

8 May

Mothers Day is the annual celebration of mothers and the hard work they do.



13 May

Mothers Day Classic

The Mothers Day Classic is a national walk or run that raises money for breast cancer research. Make a difference by simply walking, running or sponsoring a participant, to help raise vital funds for the National Breast Cancer Foundation.

National/State: National

Contact

Email: info@mothersdayclassic.com.au

Website: www.mothersdayclassic.org/

Address: Ground Floor,
215 Spring Street
MELBOURNE VIC 3000



14-15 May

World Migratory Bird Day

Organisation: United Nations

World Migratory Bird Day is a global awareness campaign highlighting the need for the protection of migratory birds and their habitats. Stay tuned for news about events around Alice Springs with the

Field Naturalist's Club and also events at the Alice Springs Sewage Ponds.

National/State: International

Contact

Website: www.worldmigratorybirdday.org/



17 May

International Day Against Homophobia

International Day Against Homophobia is an opportunity to rally together in an effort to help push for a world free of prejudice.

National/State: International

Contact

Website: www.homophobiaday.org/

International Day for Biological Diversity

22 May

Organisation: United Nations

The International Day for Biological Diversity is used to increase understanding and awareness of all biodiversity issues.

National/State: International

Contact

Website: www.un.org/en/events/biodiversityday/

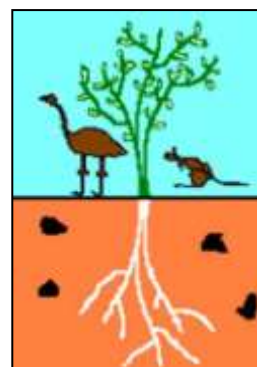
Take care,

Jesse, Chris & Bill
Land for Wildlife Coordinators

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