LAND FOR WILDLIFE
South East Queensland

Newsletter of the Land for Wildlife Program South East Queensland

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The floods of 2011

A landscape changing event

The flood events in January were devastating for thousands of people across South East Queensland with a range of impacts still unfolding. Many Land for Wildlife members and their properties were directly affected by the floods and we extend our thoughts and wishes to these people and their communities.

Land for Wildlife properties along the Lockyer Creek catchment at Murphy's Creek, Helidon and Gatton were affected during the destructive flash flooding that resulted from intense rainfall. Flood waters rose rapidly with a 8.5 metre rise in one hour recorded at Helidon. These flood waters were responsible for the tragedies in lives and property that we all witnessed either in person or on television.

As these flood waters moved down the catchment, and as Wivenhoe Dam filled to capacity, the Brisbane River began to flood affecting numerous Land for Wildlife properties in the mid and lower Brisbane River catchments around Pine Mountain, Chuwar, Karalee, Barellan Point, Kholo, Moggill, Anstead and Pullenvale. These flood waters spread out across floodplains depositing sediment and debris causing widespread damage to homes and businesses.

Properties along the Brisbane River at Pine Mountain, Moggill and Kholo sustained severe bank erosion and slumping from the force of the river. Properties at Barellan Point were particularly hard hit as this was the junction of the swollen Bremer River and the fast-flowing Brisbane River.

Along the length of the Lockyer Creek, Bremer and Brisbane Rivers, mature trees and infrastructure were washed over, and huge boulders were dislodged and moved from the force of the flowing water. All items were deposited downstream leaving authorities and landholders with the daunting task of moving some of this debris. Unfortunately, several revegetation works on Land for Wildlife properties were also drowned or washed away.

The junction of Murphy's Creek and Alice Creek before and after the January 2011 floods. The force of the flood scoured out the creek channels and deposited debris at the junction. Images courtesy of SEQ Catchments.

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editorial

It has been a difficult start to the year with seemingly fortnightly natural disasters occurring close to home and internationally. They have forced individuals, communities and entire nations to band-together and support those affected. I personally extend goodwill to those readers who have been impacted by the Queensland floods or by the disasters in other countries.

The roundtable discussion at our recent meeting of Land for Wildlife Officers was a sombre affair with sentiments expressed for Land for Wildlife members who have lost friends, homes, possessions and land to the floods. Land for Wildlife Officers want to provide tangible support to members who are left to fix landslips, erosion, debris accumulation and infrastructure damage; however, the Land for Wildlife program generally stops short of providing geomorphological advice, preferring instead to refer landholders to specialists.

SEQ Catchments staff are assessing properties that were flood-affected in the Lockyer Creek, Bremer, Logan and mid-upper Brisbane Rivers. Technical advice on stream management and stabilisation is offered during these visits with advanced issues referred onto a team of specialists. If your Land for Wildlife property was damaged in the floods and you would like to be added to the register for assessment and advice, please contact the SEQ Catchments flood hotline on 3816 9721.

Moving onto non-flood matters, if you live in the Council areas of Sunshine Coast, Moreton Bay, Brisbane, Redland, Logan, Ipswich or Gold Coast and you would like to undertake some revegetation work, you may be eligible for support through the Koala Nature Refuges Program. It is rare that non-competitive funds are available for conservation work so please take advantage of this opportunity. Funds may also be directed towards fencing, pool protection and other activities that may help Koalas. See pg. 9 for more information.

You should soon be receiving a new set of Land for Wildlife Notes in the post. These will replace the original set that you received when you joined Land for Wildlife. Many people have been involved in the writing, design and publication of these Notes and in particular I would like to thank Darryl Larsen and Nick Clancy who wrote and reviewed numerous versions. See the backpage for more information.

I would like to welcome back Rachel Booth as Land for Wildlife Officer for Logan and to thank Rebecca Condon for her time in this role.

Stay safe, and as always, I welcome any contributions that you may wish to share with the Land for Wildlife network.

Deborah Metters
Land for Wildlife
Regional Coordinator
SEQ Catchments

Landholder Registrations, Land for Wildlife SEQ - 01/03/2011

Registered Properties	Working Towards Registration	Total Area Retained	Total Area under Restoration
2, 785	648	51, 089 ha	3, 826 ha

Forward all Letters to the Editor, Fauna Vignettes and My Little Corner contributions to:

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SEQ Catchments
Healthy Land – Healthy Water

www.seqcatchments.com.au/LFW.html

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For all regions contact the Burnett Mary Regional Group, 4181 2999

fauna vignettes

The Odd One Out

It was Tuesday January 18th, when I saw my very first black kookaburra.

My wife and I were sitting on our back verandah watching the flood waters rise when we noticed two of the unusual characters sitting on one of our show-jumping poles. At first we thought they could just be crows but, ever the bird enthusiast, I ran and grabbed my camera to take a few happy snaps.

As can be seen in the photos I have provided, they were indeed photos worth taking.

A quick zoom in and careful scrutiny backed up by my wife and kids, led to the conclusion that these new members of my "Land for Wildlife" family were in fact, rare black kookaburras. After googling to ensure that there was such a thing, I became truly excited by my discovery.

As the weeks passed, I was lucky enough to see them a few more times on my property, and in turn I managed to get some fantastic pictures.

I learned that this fascinating discolouration was due to a condition known as hyper-melanism.

Though opposite to albinism, hyper-melanism is equally as detrimental to the kookaburra's way of life. This condition, though the cause of great intrigue amongst bird watchers, can be a hindrance to the kookaburra, as its inability to camouflage with its surroundings affects many of its habitual practices.

Being a rare condition, I am truly thrilled to be able to supply Land for Wildlife with pictures from my very own backyard.

As of late February, there are now three black Kookaburras at our place.

I hope you all enjoy these photographs as much as I did taking them.

Hans Tiltmann
Land for Wildlife member
Woodford, Moreton Bay

Reply from Greg Czechura, Queensland Museum

Hypermelanism pops up from time to time. Sometimes, we seem to be dealing with occasional examples, so this can be probably explained as a rare mutation. The fact that the birds usually don't seem to hang about would suggest that these mutations may be deleterious.

From time to time we get a run of melanistic (and albinistic) mutants from several species at about the same time. There is some suggestion that some sort of pathological/nutritional event is occurring but this is speculative. The truth is that we simply don't know. Although some avian vets have been interested in the phenomenon, it isn't frequent enough to allow a detailed study to be undertaken – it would have to done over a very long timeframe, probably several decades.

In conclusion, I can only add that some bird species seem to be very prone to this extreme melanism/albinism. These cases commonly involve kookaburras, magpies and all butcherbirds (except the Black Butcherbird from up north). Other less common examples include White Ibis, some parrots, some pigeons and doves. However, it is probably more widespread among bird groups although it remains rare.

fauna rescue

Rescuing Phoenix: hope among the flood wreckage

Article by Deborah Turnbull, Wildlife Carer, Wildcare

At about 8:30 am on January 13 some members of the public spotted the echidna stuck in the rock wall at Brighton. After several unsuccessful attempts to remove the echidna, they called the local vet from Brighton Vet Clinic. The vet clinic then called me. As a trained wildlife carer with an echidna permit, I was happy to help, but I asked for a vet to attend so the echidna could be sedated. This makes it easier to get them out and reduces stress on the animal.

Armed with a plastic rubbish bin and ice, and with a vet in tow, we made our way down to the beach...

We arrived shortly after 11:00 and quickly shaded the echidna and packed him in ice. Echidnas suffer greatly from heat stress which is why they are mostly nocturnal in the warmer northern states. Then the vet administered the drugs by injection. Then he administered a second lot. We underestimated his weight by a kilo or more! He was 4.5 kg.

A police officer who was keeping an eye on proceedings called in the local fire brigade.

They used their pneumatic spreader (jaws of life) to remove a few rocks from around the echidna and he was then easily removed.

The vets at Brighton Vet Clinic carried out an initial assessment. He was dehydrated but otherwise appeared uninjured. First thing the next morning Phoenix (as the echidna was now called) was taken to the Australia Zoo Wildlife Hospital for a more thorough assessment. He was administered fluids and was returned to me to recover. He was reassessed by the Australia Zoo Wildlife Hospital vets and given the all-clear. He was released at John Oxley Reserve on the evening of 23 January.

Prior to release, Phoenix was microchipped. All echidnas coming into care will be scanned in case it is Phoenix. We do not really know where he came from. John Oxley Reserve was our best guess based on where echidnas are known to live and where the flood waters passed through. This reserve is owned by Moreton Bay Regional Council and has an active bushcare group looking after it.

The reserve is also registered with the Land for Wildlife program.

We ask that if any echidnas are found sick or injured they are taken to Australia Zoo Wildlife Hospital. If deceased echidnas are found they can be taken to any vet to be scanned for a microchip. This information should be passed on to Australia Zoo Wildlife Hospital (07 5436 2097).

Help with echidna rescues can be found by ringing Australia Zoo Wildlife Hospital or Wildcare's 24 hr emergency hotline on 07 5527 2444.

For more information about becoming a wildlife carer, please contact Wildcare on 07 5527 2444 or visit www.wildcare.org.au.

Wildcare is looking for more carers as a result of the floods. New carers are always welcome and Wildcare has an extensive range of courses from basic to advanced. There are many roles such as staffing the emergency phoneline, rescues, fund-raising, education and of course caring for any native animal you prefer. There's something for everyone!

Rescuing Phoenix - (above) The local fire brigade using the jaws of life to remove rocks from around Phoenix. (right upper) Local Vet, Liam Flanagan, checking Phoenix. (right lower) Phoenix is free.

floods of 2011

A landscape changing event

Article by Deborah Metters
SEQ Catchments
continued from front page..

One Land for Wildlife property at Pine Mountain lost half a hectare of land due to the Brisbane River realigning itself by cutting-off a corner of an elbow and forming a new channel.

The Lockyer Creek catchment was the worst hit area from flash flooding causing a range of environmental damage such as:

- widespread loss of topsoil
- countless landslips
- vegetation removal, including mature trees
- streambank collapse
- scouring of streams and rivers down to bedrock
- deposition of huge amounts of debris
- river realignment.

These impacts are discussed further in factsheets produced by Healthy Waterways (shown below right) and are available for download from their website or are available in hard copy from your Land for Wildlife Officer.

Given that our landscape has changed extensively in the last century and that there are now less trees in the landscape and stream channels have become more incised and in some cases, concreted, water in streams responds more quickly to rainfall events. Removal of trees, especially on steep slopes, can lead to landslips when the soils become saturated. This is evident across the Lockyer catchment.

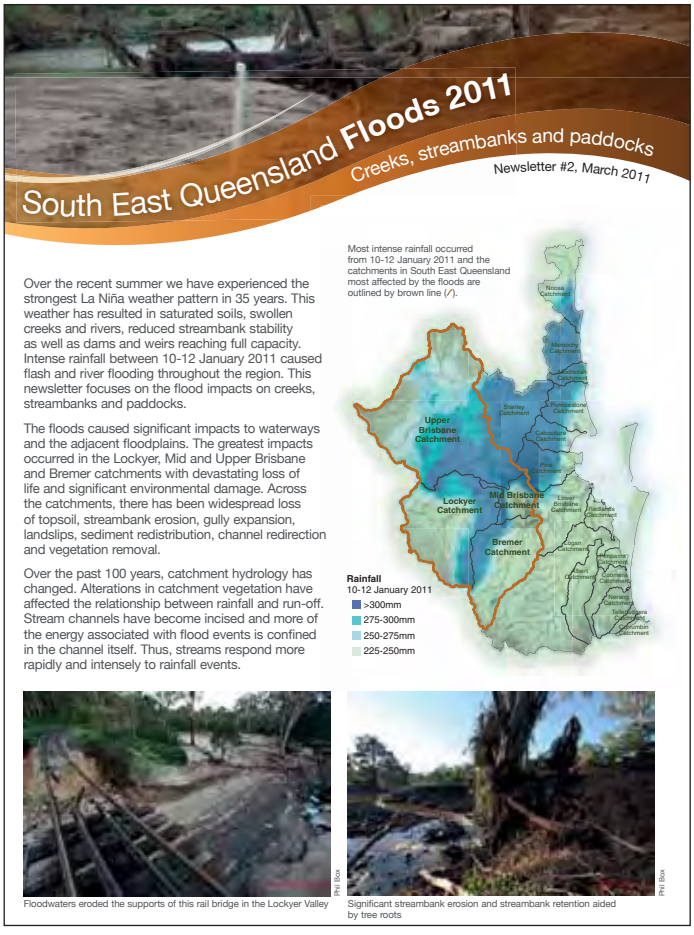
What has not been discussed much in the media is the impacts of floods on wildlife and our ecosystems. The marine wildlife of Moreton Bay is still coping with increased sediment, nutrients and toxicants. Riverine ecosystems and aquatic wildlife populations may take decades to re-stabilise and toxicants will be prevalent in the floodplains of creeks and rivers for some time.

Obviously lots of wildlife suffered from the floods. On a micro-scale, I have vivid images of seeing hundreds of ground-dwelling spiders running away from the creeping flood waters at Oxley. They pushed their egg-sacs and ran up legs of dogs, people, prams, anything that was standing on the water's edge.

The sobering news is that the 2011 floods were the 9th highest flood recorded since the 1840's. Other big flood events occurred in the 1840's, 1890's and then 1974. Climate change predictions indicate that the Southern Oscillation (El Niño / La Niña) weather patterns resulting in droughts and floods for Queensland will intensify over the coming century. This is not great news for those of us who love to live near rivers and on floodplains. I hope we will collectively gain knowledge from these flood events to help guide us during future La Niña periods.

A Land for Wildlife property at Pine Mountain on the Brisbane River suffered major bank slumping as a result of the floods. Photo by Andrew Bailey.

Bank scouring and slumping along the Brisbane River at Richardson Park, Ipswich. Photo by Grant Sorenson, Ipswich City Council.



pest profile

Myrtle Rust hits SEQ

Article by Deborah Metters
Land for Wildlife Regional Coordinator, SEQ Catchments
Information compiled from Myrtle Rust updates, Biosecurity Queensland, DAFF nd NSW DPI websites

In late December 2010, Myrtle Rust *(Uredo rangelii)* was detected on several plants at a retail nursery north of Brisbane. Myrtle Rust is a fungal disease that affects plants in the Myrtaceae family (gumtrees, bottlebrushes, tea-trees, lillipillies and other plants). It was first detected in Australia in April 2010 on the central coast of NSW and has now spread to Queensland. This fungal disease is native to South America and is also found in the United States of America. It is not known how it arrived in Australia, but its microscopic spores can be transported by wind currents, on clothing, plants or goods.

Since December last year, Myrtle Rust has spread across SEQ to other nurseries, bushland areas and, unfortunately, Land for Wildlife and Voluntary Conservation Agreement properties on the Sunshine Coast, Gold Coast and Moreton Bay regions. It has also been reported in Cairns.

Plants infected with Myrtle Rust initially have tiny raised spots or pustules on infected leaves, after a few days these turn a distinctive egg-yolk yellow colour. The disease affects new growth as well as fruits and flowers of susceptible plants.

No one really knows what the impact of Myrtle Rust will be on Australia's flora and ecosystems at this stage. Australia has 2253 native species of plants belonging to the Myrtaceae family. This is about 10% of Australian flora. Many of our Myrtaceacous plants are ecologically important and often dominate vegetation communities. Some species that have been infected to date are shown in the adjacent table.

When the disease was first found in Australia, a Myrtle Rust National Management Group was formed. This group recognised early that the disease would not be possible to eradicate as historically there has been little success of controlling diseases with air-borne spores. The group will instead focus on education and awareness activities, collation and analysis of information about the impacts and behaviour of the disease in ecosystems and working with industries and government to mitigate impacts.

to help limit the spread of Myrtle Rust, landholders are advised to:

- Not move any plant material suspected of being infected with Myrtle Rust.
- Report any signs of Myrtle Rust to Biosecurity Queensland on 13 25 23 or the Exotic Plant Pest Hotline on 1800 084 881.
- Be mindful of not spreading Myrtle Rust spores on your clothing, boots, gloves, tools and vehicles. If you have visited a bushland area that you think may be infected, either change your clothes, boots and gloves before going to another site, or clean/wipe down your clothing with water and detergent or wet wipes. Decontaminate all tools and personal effects with water and detergent or wet wipes before moving to other bushland sites.
- The Australian Pesticides and Veterinary Medicines Authority (APVMA) has issued a permit for the use of fungicides to help control Myrtle Rust on plants in or near locations where infections are present. For more information on fungicides allowed under this permit please visit the APVMA website and search for permit number PER12319. Only use chemicals as per permit specifications and always follow manufacturer's advice.
- Subscribe to receive Myrtle Rust updates. These are issued regularly and provide important up-to-date information - www.business.qld.gov.au/agriculture/plant-management/myrtle-rust/myrtle-rust-updates.html
- If you suspect that you have Myrtle Rust on your Land for Wildlife property, please contact your local Land for Wildlife Officer. This information will help us track how the disease is spreading in your local area and will also help us to plan Land for Wildlife activities.

These photographs of Myrtle Rust were taken on the Sunshine Coast. Images courtesy of Sunshine Coast Council.

Some of the species found to be infected with Myrtle Rust in SEQ

Common Name	Species
Lillipillies	*Acmena* species
Willow Myrtle	*Agonis flexuosa* (cultivars)
Midgen Berry	*Austromyrtus dulcis*
Lemon-scented Myrtle	*Backhousia citriodora*
Grey Myrtle	*Backhousia myrtifolia*
Weeping Bottlebrush	*Callistemon viminalis*
Willow Bottlebrush	*Callistemon salignus*
Geraldton Wax	*Chamelaucium uncinatum*
Brown Myrtle	*Choricarpia leptopetala*
Blue-leaved Stringybark	*Eucalyptus agglomerata*
Mountain Blue Gum	*Eucalyptus deanei*
Blackbutt	*Eucalyptus pilularis*
Scrub Ironwood	*Gossia acmenoides*
Scrub Python Tree	*Gossia bidwilli*
Angle-stemmed Myrtle	*Gossia gonoclada*
Scaly Myrtle	*Gossia hillii*
Thready-barked Myrtle	*Gossia inophloia* (cultivars)
Southern Velvet Myrtle	*Lenwebbia prominens*
Round-leaved Tea Tree	*Leptospermum rotundifolium*
	Lophomyrtus species
Broad-leaved Paperbark	*Melaleuca quinquenervia*
	Metrosideros collina
Silver Myrtle	*Rhodamnia argentea*
Smooth Scrub Turpentine	*Rhodamnia maideniana*
White Malletwood	*Rhodamnia whiteana*
Scrub Turpentine	*Rhodamnia rubescens*
Native Guava	*Rhodomyrtus psidioides*
Turpentine	*Syncarpia glomulifera*
Brush Cherry	*Syzygium australe*
Rose Apple	*Syzygium jambos*
Small-leaved Lillipilly	*Syzygium luehmannii*
Water Gum	*Tristania neriifolia*
Lamington Peach Myrtle	*Uromyrtus lamingtonensis*
Golden Penda	*Xanthostemon chrysanthus*

Die back of new growth on Native Guava *(Rhodomyrtus psidioides)* following Myrtle Rust infection. Mature growth is relatively unaffected at this stage. Photo by Alan Wynn.

Department of Employment, Economic Development and Innovation
Biosecurity Queensland

Myrtle rust

Have you seen this plant disease?

Call Biosecurity Queensland on **13 25 23** if you see this pest

Myrtle rust is a serious fungal disease and part of the eucalyptus/guava rust complex. This group of pathogens infect plants belonging to the Myrtaceae family including Australian natives like bottle brush (*Callistemon* spp.), tea tree (*Melaleuca* spp.) and eucalypts (*Eucalyptus* spp.). Myrtle rust was first detected in Queensland in December 2010.

Under Queensland legislation authorities must be notified of all plants suspected of being infected with myrtle rust.

What does myrtle rust look like?

First signs of infection are tiny raised pustules on infected leaves. After a few days these pustules turn an egg-yolk yellow colour.

Myrtle rust on thready barked myrtle (*Austromyrtus inophloia*) (Kevin Cooper, Department of Industry and Investment, New South Wales)

What plants can be infected with myrtle rust?

Myrtle rust only affects myrtaceous plants. Currently, there are more than 25 known host species susceptible to myrtle rust. These include willow myrtle (*Agonis*), turpentine (*Syncarpia*), bottlebrush (*Callistemon*), scrub turpentine (*Rhodamnia*), broad-leaved paperbark (*Melaleuca*), Austromyrtus 'Aurora' and 'Blushing Beauty'.

Myrtle rust on *Melaleuca linarifolia* (Angus Carnegie, Department of Industry and Investment, New South Wales)

PR11–5660

Myrtle rust on turpentine (*Syncarpia glomulifera*) (Angus Carnegie, Department of Industry and Investment, New South Wales)

Myrtle rust on willow myrtle (*Agonis flexuosa*) (Angus Carnegie, Department of Industry and Investment, New South Wales)

What do I do if I see myrtle rust?

Do not move any infected plant material to avoid spreading the disease, and report the location immediately to:

Biosecurity Queensland

13 25 23

Exotic Plant Pest Hotline

1800 084 881

Queensland Government

property profile

Van der Loos Koala Nature Refuge

Article by Merryl Van der Loos
Land for Wildlife member
Jimboomba, Logan City

In 1974 my husband and I started looking for land. My husband heard of a 12 acre property in Jimboomba and after work we drove out to have a look. As we drove up the driveway, the moon was up and it shone on a beautiful big blue gum, we fell in love with what we saw and still feel the same way now. For many years we grazed cattle until the last drought when there was no grass left and feed became too expensive to buy so we sold the last cows. I am glad we did as the native grasses, ferns and herbs are now in abundance, the regrowth is expansive.

I have planted extensive gardens in the house yard which are mainly native. There are rainforest sections and ponds and each year new varieties of wildlife make our property their home. This year we were amazed by the large variety of butterflies. When we first moved to our property we knew very little about plants or wildlife and friends used to give us exotic plants to plant, I am still trying to remove some of these today.

The last two years we have had kookaburras nesting in a white ants nest in an ironbark tree not far from our house. They are communal birds and the whole family feeds one young, when the baby is ready to take its first flight the whole group are there supporting and protecting.

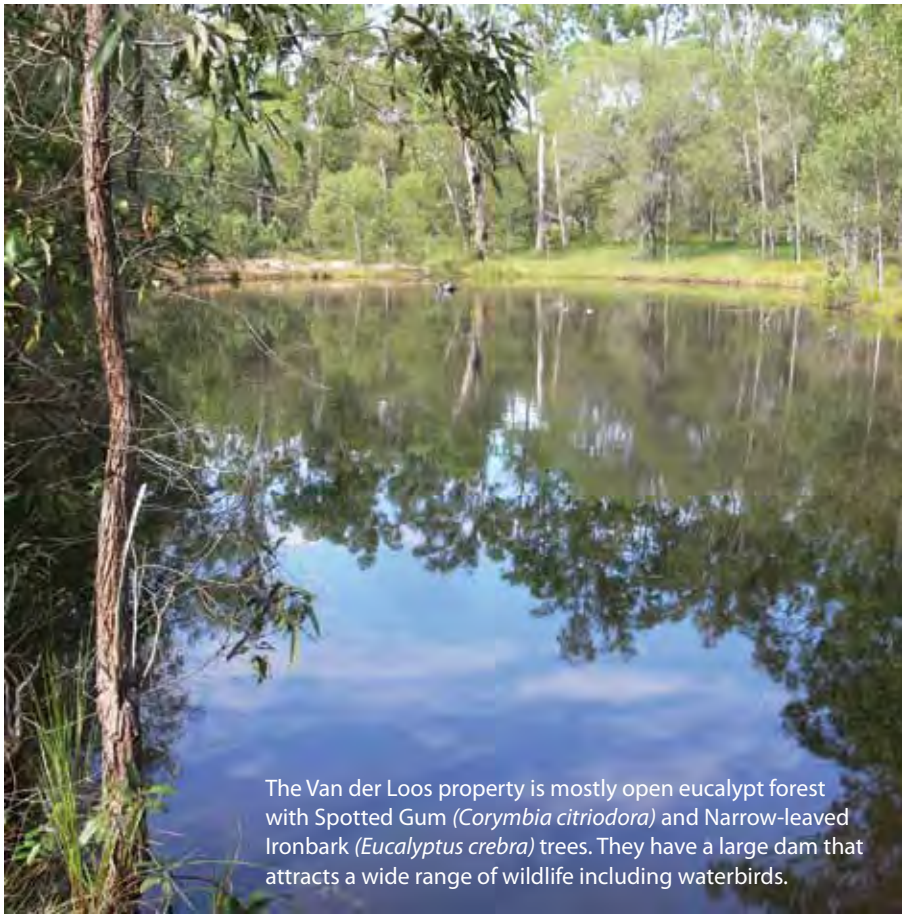
We joined the Land for Wildlife program in March 2010, we want to keep our land as is because one day we won't be able to manage the land any more and will probably have to sell. We don't ever want to see the land subdivided and developed and so we looked into the Department of Environment and Resource Management's (DERM) Koala Nature Refuges Program.

I contacted DERM and spoke with a Senior Nature Refuge Officer who has taken us through the entire process of becoming a Koala Nature Refuge.

The minister signed the contract on the 9th December 2010 and we received our certificate and contract soon after. We are very excited to know that the majority of our property is now protected forever! We have a 5 year revegetation plan in place with a contractor and all of our barbed-wire fencing is being replaced with a 4-strand plain wire fence. We are now waiting for our signs to arrive; it will be very exciting to put up a large sign that says 'Van der Loos Nature Refuge'.

All in all 2010 was an exciting year, we were motivated and our goals were achieved!

The second round of funding for the Koala Nature Refuges Program will be announced soon, see facing article for more information.



The Van der Loos property is mostly open eucalypt forest with Spotted Gum *(Corymbia citriodora)* and Narrow-leaved Ironbark *(Eucalyptus crebra)* trees. They have a large dam that attracts a wide range of wildlife including waterbirds.

koala funding

Conserving land for Koalas

Article by Samantha Ryan and Robbie Burns
Koala Nature Refuges Coordinators
Nature Refuges Branch, DERM

In addition to providing funds for Koala food trees, the Koala Nature Refuges Program provides a unique opportunity for landholders to install Koala-friendly fencing, pool features (such as floatation devices so that Koalas don't drown) and other measures.

Habitat loss is a major threat to Koalas in South East Queensland. To help, the Department of Environment and Resource Management (DERM) has established the Koala Nature Refuges Program. The program provides funding for landholders to revegetate and manage Koala habitat on their properties and permanently secures land for Koala conservation through nature refuge agreements.

The first round of funding will secure more than 2800 hectares for Koala conservation through the creation of 20 new nature refuges. More than $1.2 million will be provided for Koala conservation work, including the revegetation of more than 157 hectares of Koala food and shelter trees, weed removal, wildlife friendly fencing for stock exclusion, as well as many other innovative measures to enhance Koala habitat.

Land for Wildlife landholders have established 14 of the 20 new nature refuges, demonstrating their commitment to Koala habitat conservation and the significant role the Land for Wildlife program plays in promoting conservation issues.

These 20 nature refuges are located within the regions of Sunshine Coast Regional Council (seven), Moreton Bay Regional Council (five), Brisbane City Council (three), Redland City Council (two), Ipswich City Council (two) and Logan City Council (one).

A second round of funding for landholders interested in the Koala Nature Refuges Program will commence shortly. To be eligible for this funding:

- The proposed nature refuge area must be a minimum of two hectares in size.
- The application for funding must include a minimum of one hectare for revegetation of Koala habitat.
- The proposed nature refuge must fall within the South East Queensland Koala Protection Area (Sunshine Coast, Moreton Bay, Brisbane, Logan, Redland, Ipswich or Gold Coast council areas).
- The proposed nature refuge must be mapped as having high or medium suitability for rehabilitation (to find out a property's rehabilitation status visit the DERM website www.derm.qld.gov.au and search for 'Koala habitat property maps').
- The landholder must be willing to enter into a nature refuge agreement.

For more information, visit the DERM website www.derm.qld.gov.au, call a Nature Refuge Officer on (07) 3330 5359, or email koala.refuges@derm.qld.gov.au

Funding will soon be available for landholders to help Koalas through the second round of the Koala Nature Refuges Program. Contact a Nature Refuge Officer on 3330 5359 or your local Land for Wildlife Officer for more information.

The owners of Yanigubam Nature Refuge are committed to helping Koalas. They spend much of their free time caring for injured and orphaned native animals and are creating a wildlife haven on their small 2.2 hectare Land for Wildlife property at Oceanview.

Yanigubam Nature Refuge provides habitat for a number of native animals including the vulnerable Koala and Glossy Black Cockatoo which have both been sighted on the property. By planting over 1000 native Koala food trees, Henk and Anika Lehmann will be increasing the habitat for the local Koalas and many of the other native wildlife that can be seen on their property.

fauna profile

Something to crow about

Article by Nick Clancy
Land for Wildlife Officer
Sunshine Coast Council

All images are of Torresian Crows
Photographs by Mat and Cathy Gilfedder

Some years ago I lived at Mt Nebo, an area renowned for its spectacular birdlife. Right outside my upstairs bedroom was a prominent horizontal branch, a perfect perch of viewing possibilities for the incredible array of local birds. The bright colours and tuneful singing of the birds was as much a feature of the property as the panoramic views and remnant forest. The likes of Regent and Satin Bowerbirds, King Parrots, Noisy Pittas, Green Catbirds and Golden Whistlers were regular visitors in the bush garden. However just like an alarm clock every morning at the crack of dawn my bedside bird perch of possibility would erupt with a very loud and awakening 'ark, ark, ark, ark' closely followed by a throaty, drawn out 'faaaaaaaaaaaaaark'… Morning has broken the Torresian Crow has spoken.

Such unsavoury behaviour of crows is well known to both rural and urban dwellers. In urban areas crows suffer an image problem due to these noisy calls and their association with unhygienic items such as rubbish and dead animals. On golf courses they are cursed for their puzzling habit of stealing golf balls from the fairways. Indeed there are now urban businesses that specialise in providing 'crow deterrents' and solving your suburban 'crow problems'.

In rural areas the Corvid family (crows and ravens) have long had a bad reputation as an agricultural pest as they have developed a taste for crops such as soft fruits (e.g. grapes), root crops (e.g. potatoes and peanuts) and for helping themselves to grains (e.g. wheat and sorghum) in crops, stock feed and storage. Crows and ravens are also frequently implicated in causing stock losses, especially lambs. Although some research suggests that they generally only injure lambs that are already sick or dying.

So I guess its not too difficult to understand how the saying 'stone the crows' came about, but despite all the evidence to the contrary there is actually a lot to admire about these wily birds. Which is no-doubt easier for me to say now that I don't have that crow alarm clock anymore, (I've swapped it for the pre-dawn Fan-tailed Cuckoo clock!)

The Torresian Crow is omnivorous and eats a wide variety of foods, including carrion (dead animals) such as this fish shown above. Australia does not have any members of the vulture family, so crows and ravens fulfil this ecological niche.

Crows and ravens are as much a constant in the Australian landscape as wattles and gum trees. Five native species of Corvids occur in Australia, two of which are found in SEQ. The Torresian Crow (*Corvus orru*) is the more common species in coastal SEQ while the Australian Raven (*C. coronoides*) is generally more common west of the ranges.

The Torresian Crow utilises most natural habitats in SEQ as well as modified habitats such as farms, cities, parks and gardens. They form monogamous breeding pairs and maintain a permanent territory, generally remaining sedentary. Outside the breeding season (August to February) they will sometimes congregate in flocks.

The Torresian Crow is a generalist feeder and is a truly omnivorous species. The fact that it forages in so many different habitats and that it practices a range of feeding behaviours means that they tend to have a diverse diet and therefore can contribute to a broad range of ecological processes.

They can spend a considerable amount of time foraging and will feed on grains, seeds, fruit, vegetables and foliage, therefore playing a role in the dispersal of a diversity of seeds across a range of habitats.

Of all their feeding behaviours scavenging probably attracts the most attention from people in urban areas. Crows will take advantage of the easy pickings provided by humans in the form of food scraps where ever they occur, including garbage bins.

They are often seen feeding along the edges of roads which provide a plentiful source of road-kill carrion. Unlike many areas in the world Australia does not have any true members of the vulture family and therefore Corvids partially fulfil this important ecological niche by 'cleaning up' carrion and devouring dead animals.

In sheep grazing districts this behaviour contributes to a reduction of potentially problematic blow-fly breeding sites.

Torresian Crows also successfully hunt for their food by preying on invertebrates, bird nestlings, eggs and small lizards. However the majority of their diet consists of large insects such as caterpillars, grasshoppers and locusts, they also prey on small rats and mice. So contrary to popular belief, crows contribute to natural pest management in rural production areas. Their pest management role has recently expanded as they have learnt to take advantage of the bountiful introduced Cane Toad (*Rhinella marina*). Using their large beaks, Torresian Crows grab the toad by the back leg and flip it over onto its belly to expose the softer (and safer) underside.

Like any well-adapted species that inhabits the Australian continent, Corvids have also developed behaviour to deal with the hard times of drought and food scarcity. In times of plenty they cache food for future eating by burying it. This food caching behaviour has extended to stealing and burying domestic chook eggs!

Corvid species around the world have demonstrated similar intelligent and adaptive behaviours and have consequently attracted considerable attention from researchers. The results have revealed some remarkable findings that suggest that Corvids are far from being 'bird-brained'. Some researchers go so far as to say that their cognitive abilities are a match for many non-human primates. Indeed as the following examples demonstrate as far as intelligence in the bird world goes it seems that these birds have quite a bit to crow about.

Research has shown that the New Caledonian Crow (*C. moneduloides*) actively manipulates twigs and grass stems in order to gain access to a variety of foods. For example hooks crafted from twigs are used to remove grubs from holes in trees.

In a 2002 study an Oxford University researcher found that when a captive New Caledonian Crow was presented with the problem of how to reach inaccessible food, it simply bent a piece of straight wire into a hook and used it as a probe for extracting the food. Such problem solving, tool making and tool use behaviour is very rare in wild animals.

When posed with the problem of how to crack the shells of hard nuts, Carrion Crows (*C. corone*) in Japan have learnt to utilise the convenience of the wheels of passing vehicles to crack the shells of hard nuts for them. Furthermore, by placing the nuts on pedestrian crossings they can safely retrieve the kernels when the lights turn red and the cars have stopped.

There are even claims that Israeli Hooded Crows (*C. cornix*) are trying their hand at fishing. Having been observed dropping bait (in the form of bread crumbs) into the water and then catching small fish as they surface to feed on the floating crumbs.

With the exception of New Zealand and a few other small islands there are naturally occurring representatives of the Corvid family right around the globe. Throughout time some cultures have revered crows and ravens in their belief systems while others peoples have feared them as a symbol representing death and all things evil.

It's fair to say that in contemporary Australia crows and ravens don't poll too high in the popularity stakes. Personally, I think they deserve a little more respect for their intelligence, adaptability and resilience. Like them or despise them it doesn't really matter where you live in Australia we are stuck with them (and their calls); and if after reading the above you still can't stand the thought of sharing your property with crows, then I guess New Zealand isn't too far away (as the crow flies).

Torresian Crows are one of the few native animals that have worked out how to eat Cane Toads safely without ingesting their poison glands.

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http://www.wildlifeqld.com.au/Crows.html

ecosystem research

What makes a good remnant?

Article by Deborah Metters
Land for Wildlife Regional Coordinator, SEQ Catchments

This article summarises some of the findings from the first chapter in the book, *What Makes a Good Farm for Wildlife?* by David Lindenmayer (reviewed on facing page). The chapter entitled *What makes a good remnant?* discusses ecological features, threats and management actions that can be taken to improve biodiversity in remnant patches. I have chosen recommendations relevant to South East Queensland (SEQ) and have added some wildlife examples from SEQ.

To become a member of Land for Wildlife in SEQ, landholders need to have at least one hectare* of bushland in good condition that provides habitat for a range of wildlife. This area of bushland is referred to as 'Retained Habitat'. It may or may not be remnant. Remnant vegetation usually refers to vegetation that was present prior to European settlement. However, given that most of Eastern Australia has been modified to some extent, the term remnant now refers to patches of vegetation dominated by canopy species that would have been here prior to European settlement. Generally, and this is very dependent on rainfall, canopy species, soil and other conditions, a forest requires at least 30 years of regrowth after disturbance before it is considered remnant.

Regardless of whether the Retained Habitat on your property is remnant or not, the principles of looking after your Retained Habitat are the same as if looking after a patch of remnant vegetation. Remnant vegetation is critical for biodiversity in Australia and any patch of remnant vegetation, even if it is just one old-growth paddock tree, is better than none.

** In the council areas of Brisbane and Redland, the minimum size required is half a hectare.*

A 'good' remnant will typically have six features:

1. Large diameter living and dead trees
Old trees often have hollows which are important breeding and shelter sites for birds, gliders, micro-bats and other wildlife. Mature trees often support mistletoe which is an important source of food and shelter for many species of birds. Unfortunately clearing of remnant vegetation and mature old trees is still occurring in SEQ despite laws governing native vegetation removal. In 2007/08, 1356 hectares of remnant vegetation was cleared in SEQ. Much of this clearing was for development and infrastructure. Private landholders play a key role in protecting large living and dead trees in our landscape.

2. The presence of younger trees showing that natural regeneration is occurring
For patches of vegetation to persist well into the future, there needs to be natural regeneration occurring so that old trees are replaced when they die. Some species of wildlife, such as Brown and Buff-rumped Thornbills, prefer regenerating vegetation.

3. A well developed understorey
The understorey includes shrubs, wattles and regenerating canopy species. Many small birds, such as White-browed Scrubwrens are dependent on a dense understorey. Eastern Yellow Robins require lots of medium-sized stems whereas the Rufous Whistler requires lots of dead shrubs in the understorey.

4. A well developed ground cover layer with fallen timber, native grasses, leaf litter, surface rocks and surface crusts such as mosses and lichens.
Many species of Australian wildlife have evolved to use resources found on the ground. Fallen timber provides nesting and sheltering sites for small mammals, the Spotted-tailed Quoll, beetles, skinks and ground-foraging birds such as Logrunners and Eastern Whipbirds. Large fallen logs can also act as micro fire-breaks and may provide refuge for wildlife.

Native grasses offer seeds for granivorous birds such as finches and shelter sites for some lizards. Leaf litter is essential to countless invertebrates and the animals that prey upon them. Surface rocks are essential for many reptile species. Moss and lichen are used by some birds in construction of their nests.

5. Management strategies that reduce threats
Threats specific to the Retained Habitat on your property are shown on your Land for Wildlife property assessment form and would have been discussed during a visit from your Land for Wildlife Officer. Weeds, inappropriate fires, 'cleaning-up' (raking and slashing of ground cover layers), overgrazing, firewood collection, pest animals, clearing / fragmentation of habitat, bush rock removal and chemical / fertiliser overuse are some possible threats. They impact on the health of remnant vegetation and wildlife in different ways and require various strategies to reduce their threats.

6. Size and location
The bigger the patch of remnant vegetation, the better. Larger patches provide more ecological niches, more food resources, more shelter sites, less disturbance, less edges and less predation of native bird nests than smaller patches. However, some small patches of native vegetation (ie. areas less than two hectares) may offer excellent resources such as hollows and may be critical for some wildlife. Smaller patches are often more threatened than larger patches and should be managed with the aim of increasing their size and resilience.

In addition to size, the surrounding landscape plays a major role in determining what species utilise a remnant. If there is native vegetation close to the remnant, more species will be able to access and use the remnant, rather than if it is isolated.

I hope this article tempts you look at this book in more detail and allows you time to reflect upon the values and management of the Retained Habitat on your Land for Wildlife property. For further advice or support, please contact your Land for Wildlife Officer.

book reviews

What Makes a Good Farm for Wildlife?

by David Lindenmayer

This book brings together 15 years of research by a team of scientists from the Australian National University who have been studying Australia's temperate woodlands and associated plants, animals, dams, creeks, rocky outcrops, paddocks, farms and farmers. Their research demonstrates that it is possible, and advantageous, to conserve biodiversity on farms at the same time as maintaining productive agricultural and grazing enterprises.

Although the focus is on temperate woodlands, many of the principles in this book apply to the various subtropical ecosystems of South East Queensland.

I would suggest that many Land for Wildlife members are already implementing recommendations from this book. The easy-reading, non-technical style of this book sets it apart from other research compilations. Chapters are divided into sections answering the questions: 'What makes a good remnant / planting / paddock / waterway / rocky outcrop / farm for biodiversity?'

Much of the author's research looked at the affects of landscape and farm features on birds. Birds are excellent indicators of environmental health, are well-studied and easier to find than frogs, reptiles and other cryptic wildlife. The Eastern Yellow Robin, as an example, is a common resident in subtropical rainforests, wet sclerophyll forests and dry rainforest scrubs of SEQ. It is also a species of conservation concern in temperature woodlands. Research shows that the presence of Eastern Yellow Robins is directly proportional (positively) to the size of a patch of bushland and the number of medium-sized stems in the understorey. I assume they need medium-sized stems for perching in their typical sideways manner.

Examples are also provided of landholders who manage their farms for improved productivity and improved biodiversity. Farmers who are implementing measures for biodiversity will be in a stronger position to take advantage of carbon markets, stewardship payments and other financial incentives that will expand in the near future.

It is rare to say that I read an environmental 'text book' cover to cover, but this book I did, and I find myself referring back to it regularly. I wish there were more books that synthesise the decades of scientific research that has been done on Australian ecosystems into a useable format for everyone. I congratulate David Lindenmayer as lead author and the 13 other author's of this book. This is a must-have for Land for Wildlife members and supporters.

Published by CSIRO Publishing, 2011
Paperback, full colour, 176 pages
ISBN: 9780 643100 312
Price: $39.95
Available from CSIRO Publishing and all good bookshops.

Please refer to the adjacent article summarising some of this book's findings on 'What make a good remnant for wildlife?'

Book reviews by Deborah Metters
Land for Wildlife Regional Coordinator
SEQ Catchments

The Creek in Our Backyard: A practical guide for landholders

by Robert Whyte

This free booklet has just been released by the community group Save Our Waterways Now and provides an easy-to-read slice of inspiration to help you with any creek restoration works.

Creeks are wildlife corridors providing animals with water, food, breeding resources and cooler, protected micro-climates. With restoration effort and time, wildlife will return to even the most once-degraded creeks.

The different zones of a creek, from the stream bed to the upper banks, are illustrated with native species recommended for planting in each zone. In addition to revegetation and bank stabilisation species, this book discusses plants that attract butterflies, plants that simply smell lovely and plants that can provide us with bush foods.

This booklet will help you develop a plan to restore your creek by stepping you through the process of prioritising which weeds to control first and selecting the best control methods.

A booklet aimed at motivating landholders would not be complete without a few uplifting success stories. For example, due to the efforts of local landholders and the Queensland Frog Society, a section of Ithaca Creek was changed from a concrete spoon drain to a natural creek to support breeding frog populations.

Well done SOWN, a great booklet.

Published by Save Our Waterways Now (SOWN), 2011
Paperback, full colour, 38 pages
ISBN: 9780 646 55158 6
Available for free download from www.saveourwaterwaysnow.com.au or hardcopies available from your Land for Wildlife Officer

weed profile

Coral Creeper

Article by Cody Hochen
Land for Wildlife Officer
Brisbane City Council

The pink tubular flowers and glossy green leaves of Coral Creeper

On a recent visit to a Land for Wildlife member's property in Pinjarra Hills, I was asked by the owner to identify a plant that had escaped from the neighbour's garden and was running rampant onto his property. The owner expressed his deep concern about this creeping/scrambling shrubby plant about 50 cm in height with opposite glossy leaves and showy pink tubular flowers.

According to the owner, the garden escapee had spread from a 2 x 2 metre garden plot in the neighbour's property to a 30 x 30 metre infestation down slope within the core habitat of his property in a mere two years. The plant had formed a dense groundcover easily smothering and dominating the Kangaroo Grass and Many Flowered Mat Rush that was growing throughout the area. It was also disturbing to note that the plant was spreading rapidly towards a semi-permanent gully.

A cutting was identified as the Coral Creeper (*Barleria repens*) also called Red Barleria or Coral Bells. It is an emerging weed throughout Eastern Queensland, with recent outbreaks reported in bushland in the Kuraby Bushlands Reserve and Toohey Forest. First discovered in Queensland in 2006, Coral Creeper has also been classed as an emerging weed throughout the USA and Hawaii.

Coral Creeper is a member of the Acanthaceae family and is native to Africa. Its hardiness and bright, tubular showy flower has made species of *Barleria* an attractive ornamental plant. Like its invasive family members Porcupine Flower (*Barleria prionitis*) and Hophead Barleria (*Barleria lupilina*), this weed is a serious threat to biodiversity within bushland areas. They have the potential to cause economic and environmental damage by forming dense thickets that displace native vegetation and prevent regeneration of native plants.

Coral Creeper reproduces by seed and vegetatively. The seeds are released a few metres from the parent plant by an explosive seed head. It can also be spread when stem segments come in contact with soil and produce roots. Whole plants or small segments are dispersed in dumped garden waste and often spread by mowing and slashing. Their ability to quickly spread, adapt and grow in shade or full sun within urban bushland, riparian areas, coastal sand dunes and disturbed areas makes this weed a serious threat to most ecosystems.

Once established, Coral Creeper can be difficult to eradicate. For small infestations, manual control is an effective option. Care must be taken to remove all plants and segments. For larger infestations, contractors and Local Government Officers have reported success with herbicides. Starane* has proven to be successful on a number of infestations throughout Brisbane when used in a foliar spray application. Within Queensland, the Australian Pesticide and Veterinary Medicines Authority's (APVMA) Environmental Weeds Permit PER11463 (http://permits.apvma.gov.au/PER11463.PDF) outlines the use of herbicides for the control of environmental weeds in a non-crop situation. As with all weeds and particularly with this species it is vital to monitor and follow-up any new infestations.

If you have infestations of *Barleria repens* or any other *Barleria* spp., please contact your Land for Wildlife Extension Officer to gain advice on the most appropriate method of control.

Coral Creeper has escaped from a suburban garden and is invading bushland areas at Pinjarra Hills, Brisbane. Photos (top and bottom) by Cody Hochen.

References and useful resources

http://www.technigro.com.au/documents/WW%20Coral%20Creeper.pdf

Permit to allow minor use of an AGVET chemical product for the control of environmental weeds in non-crop areas. Permit PER11463. www.apvma.gov.au/permits.

http://www.theca.asn.au/newsletter/v5p1.pdf

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Starane* Registered trademark of Dow AgroSciences

letters to the editor

Land for Wildlife Owner Receives Award

Dr Don Sands (pictured above), a Land for Wildlife member in western Brisbane, recently was awarded the Australian Natural History Medallion (2010) for his contribution to biodiversity, conservation and education of invertebrates.

Don worked at CSIRO for 30 years, retiring in 1997. In that time he focused on ecological studies of insects, their food plants and interactions of both. Since retiring Don has been busier than ever. As an Honorary Scientist with CSIRO, Don has worked on several biological control studies with the US Department of Agriculture.

Don also has a keen interest in fire ecology and the impacts of fires on insect biodiversity.

With Christine Hosking, Don produced a 'fire code' advisory document for the Brisbane City Council in 2005. He is particularly interested in impacts on biodiversity of fire scale, seasons and frequency.

Don has been involved in many community groups and was a founding member of The Hut Environmental and Community Association (THECA), to which he gives regular presentations at their annual forums. He initiated work on the conservation of the Richmond Birdwing Butterfly and its host vine and co-authored a book on the ecology of the vine and butterfly (with Sue Scott). Don also formed the Richmond Birdwing Conservation Network to involve more people in planting the food plant, re-establishing corridors for the butterfly and growing good quality birdwing vines. More information about the birdwing network can be found at www.richmondbirdwing.org.au.

He has authored over 100 scientific papers and many more general articles, as well as being the editor of the Birdwing Network Newsletter.

Don is currently managing his Land for Wildlife property to maximise insect occurrence, especially butterflies and, like all Land for Wildlife property-owners, reducing the effects of numerous and vigorous weeds.

Greg Siepen
President, Richmond Birdwing Conservation Network

I photographed this Tiger Crane Fly (*Nephrotoma australasiae*) in my garden recently. I only had my video camera with me but the beautiful colours - especially of the wings are obvious. It would have been approximately 15 mm from head to abdomen tip. They are evidently common in our western suburbs although they and their beauty probably go unnoticed - hidden mostly among the foliage. This one was resting on the side of our water tank so I was lucky to have a simple background.

Judith Melksham
Land for Wildlife member
Mt Crosby, Brisbane

Dr Raven at the Queensland Museum confirmed that this spider is a Toowoomba Funnel-web (*Hadronyche infensa*). I found it under timber on my property. This species is well known to occur on the D'Aguilar Range but they are rarely seen because they are shy and spend most of their time in burrows or under logs. Male funnel-webs become active during the warmer months (Oct-May) and after light rain to search for females. Females are generally sedentary and stay in their burrows. There is a good factsheet produced by the Queensland Museum on funnel-webs available from their website.

Darren McPherson
Land for Wildlife member
Dundas, Somerset

Land for Wildlife Regional Coordination is proudly managed by SEQ Catchments with support from the Australian Government.

*The 3rd annual Glossy Black-Cockatoo birding day will be held on **22 May 2011**.*

If you want to count these birds from your property or region, please contact your local Land for Wildlife Officer or visit www.glossyblack.org.au

Introducing the new set of Land for Wildlife Notes

Well it has taken quite a while, but I think once you have seen the new Land for Wildlife note series you will agree it was worth the wait. Most of the technical notes in the current series were written more than 12 years ago and while they have been a valuable resource they were overdue for a rewrite and a new look.

The first thing that is apparent is just how good they look, with a style that is quite similar to the SEQ regional newsletter and lots of colour photographs to illustrate the main points. The second is that they are no longer 'technical' notes. A lot of effort has gone in to ensuring that they are easy to understand and while there are technical terms, they are well explained. Finally, and most importantly, they have been written with an emphasis on providing practical tips and information on how to better manage your land for wildlife

There are 28 new notes and a further five are being planned. The notes have been grouped into categories to make it easy to find information you need. They are General, Animals, Vegetation, Water, Soil, Environmental Weeds, Fire and References. To help you make a start on implementing the actions described in each note, they are written in a step-based approach or you will find there is a section on *What you can do*. If you would like to do some further reading there is a *References and further reading* section.

Some of the topics include:

- Wildlife Corridors
- Wildlife Friendly Fencing and Netting
- Nest Boxes
- Natural Regeneration
- Revegetation Practicalities
- The Value of Understorey Vegetation
- Healthy Dams
- Healthy Soil and Leaf Litter Layers
- Developing a Weed Management Plan

The authors, editors and designers of these notes should be congratulated. Authors include Nick Clancy, Darryl Larsen, Lexie Webster, Deborah Metters, Rick Galbraith and Samantha Lloyd. Editors include LisaYorkston, Stuart Mutzig, Josh Birse and Ed Surman. Material is derived from previous Land for Wildlife notes and other sources.

All Land for Wildlife members in South East Queensland will receive a copy of the notes either in hardcopy or CD format. If you require a hardcopy set please contact your local Land for Wildlife Officer. Additionally the notes will be available for download from the SEQ Catchments website at www.seqcatchments.com.au/LFW.html

Land for Wildlife South East Queensland is proudly delivered and locally coordinated by the following 11 Local Governments and the Burnett Mary Regional Group:

Brisbane City — Dedicated to a better Brisbane · City of Ipswich · Redland City Council · Lockyer Valley · Burnett Mary Regional Group · Gold Coast City Council · Logan City Council · Scenic Rim Regional Council · Somerset Regional Council · Regional Council · Moreton Bay Regional Council · Sunshine Coast Council