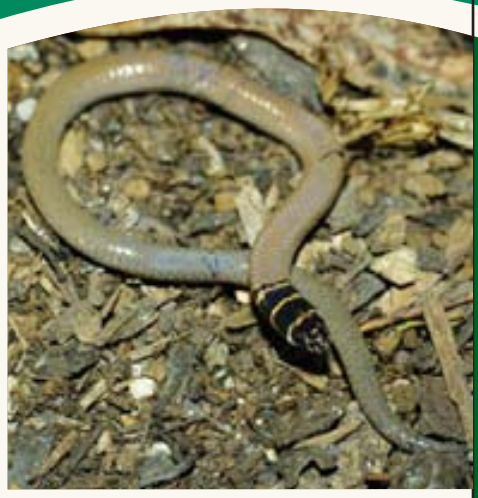
LAND FOR WILDLIFE
South East Queensland

Newsletter of the Land for Wildlife Program South East Queensland

OCTOBER 2010
Volume 4 Number 4
ISSN 1835-3851



Landholders help protect the threatened Collared Delma

The Collared Delma (*Delma torquata*) is a small legless lizard that is found in scattered populations across South East Queensland. It has been recorded from undisturbed open forests around western Brisbane (Upper Brookfield, Kenmore, Pullenvale, Anstead, Pinjarra Hills and Mount Crosby), in the Lockyer Valley and at the Bunya Mountains.

The Collared Delma is reddish-brown to bluish-grey in colour, reaching a length of only 15 cm with a weight of 2.5 grams. The distinguishing features are its glossy black head that is banded with 3-4 narrow yellow to orange stripes, its short, blunt snout and black marbling on its throat. Legless lizards appear snake-like but are actually closely related to geckoes.

Listed as vulnerable under both Queensland and Commonwealth legislation, the Collared Delma's scattered populations coincide with areas of high urban development placing this species under pressure. The Collared Delma also has a small home range, with some populations living within a 10 m x 10 m area. These factors combine to make populations of the Collared Delma particularly vulnerable.

Landholders can play a critical role in helping the survival of the Collared Delma by being aware of, and reducing, threats to this small animal. Some of the key threats are rock removal, Creeping Lantana, hot fires and fire ants. Moving rocks around on a property to line pathways may even threaten a population of Collared Delmas.

This is the third Collared Delma found by Land for Wildlife member, Mervyn Mason, on his property at Mount Crosby. These tiny legless lizards were found when Mervyn was moving a pile of aged soil, moving gravel around the pool and when gardening among mulch. Their small size and small home range makes these animals particularly vulnerable to disturbance. Their survival depends on landholders taking care when undertaken land management work and also leaving leaf litter, rocks and logs as habitat.

The Collared Delma occurs on rocky hillsides in open eucalypt forests with a sparse understorey of shrubs and a groundcover of patchy native grasses. A leaf litter layer of 30-100 mm thick is required. This delma also prefers habitats with large numbers of small, exposed rocks (less than 3 cm in size).

As with many other reptiles, the Collared Delma depends on leaf litter, rocks and logs in which to shelter. It feeds on insects, spiders and small cockroaches during the day. Leaving leaf litter, logs and rocks on your property, maintaining appropriate fire regimes (cool, patchy fires) and removing Creeping Lantana will help ensure the survival of this rare reptile.

Contents

2 Editorial & Contacts

Fauna
1 Collared Delma
3 Fauna Vignettes
- Gympie Gympie Tree and the Jezebel Nymph

4-5 Fireflies
6-7 Counting Glossy Black-Cockatoos

Flora
14-15 Some Bushfoods of SEQ

Practicalities
12 Removing Lantana Using Root Blade

Fauna Monitoring
8 Using Birds as Targets for Habitat Recovery and Monitoring
9-10 Bird Surveys on Brisbane's Land for Wildlife Properties

Property Profile
11 My Little Corner
- Spring in the Greenbank Wildlife Corridor

13 Book Reviews
16 Koala Nature Refuge funding and Kuta Nature Refuge

Published with the assistance of the Australian Government.

editorial

Last month I attended the Queensland Landcare Conference at Caloundra. It was a good conference, and for me, it highlighted the role of private landholders in nature conservation regardless of whether they are graziers in the Channel Country or peri-urban residents in SEQ.

Land for Wildlife Officers, Alan Wynn and Nick Clancy, from the Sunshine Coast Council gave talks on how the Land for Wildlife program has aided the recovery of threatened species and has helped build the capacity of local communities. It was heartening to hear such stories.

I was surprised at the number of talks about projects with impressive environmental and productivity outcomes that lacked reference to biodiversity. I concluded that the term biodiversity is still seen as 'green' and also, there are limited methods for measuring biodiversity.

Conference speakers showed optimism in the new political landscape and that regional Australia may receive more attention. I hope this attention will extend to an interest in measuring Queensland's biodiversity – its losses and its restoration, and how biodiversity is a measure of healthy ecosystems and healthy rural economies.

If you are not already a member, I would encourage you to make contact with your local landcare or catchment group. You can find out who your local landcare group is by calling the Queensland Water and Land Carers (QWaLC) on 3252 7154. Their website provides a list of most, but not all, groups so it is best to call.

I hope you enjoy this newsletter edition. As usual, there is a broad range of articles reflecting the high biodiversity of SEQ and the skills and interests within the Land for Wildlife network. Digital photography is certainly helping lift the visual appeal of this newsletter and I thank contributors for sharing your great wildlife snaps.

I would like to welcome Kaori van Baalen as the new Land for Wildlife Officer for the Lockyer Valley. Kaori has worked in the Lockyer for many years and has an appreciation of the range of different ecosystems that occur in this interesting region of SEQ.

Thanks to all contributors for your stories, and as always, I welcome any contributions that you may wish to share with the Land for Wildlife network. Enjoy.

Deborah Metters
Land for Wildlife
Regional Coordinator
SEQ Catchments

Landholder Registrations, Land for Wildlife SEQ - 01/09/2010

Registered Properties	Working Towards Registration	Total Area Retained	Total Area under Restoration
2712	616	50,421 ha	3,684 ha

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

The Editor
Land for Wildlife Newsletter
SEQ Catchments
PO Box 13204
George Street QLD 4003
07 3211 4404
dmetters@seqcatchments.com.au

Land for Wildlife South East Queensland is a quarterly publication distributed free of charge to members of the Land for Wildlife program in South East Queensland.

Print run - 4380

Back copies from 2007 - 2010 available for download from www.seqcatchments.com.au/LFW.html

Back copies from 1998 - 2006 available upon request to the Editor.

ISSN 1835-3851

Land for Wildlife is a voluntary program that encourages and assists landholders to provide habitat for wildlife on their properties.

SEQ Catchments
Healthy Land – Healthy Water

www.seqcatchments.com.au/LFW.html

Land for Wildlife Extension Officers South East Queensland

Brisbane City Council
All enquiries, 3403 6777
Fflur Collier
Jenny Staples
Greg Siepen
Peter Hayes
Susan Nolan

Gold Coast City Council
Darryl Larsen, 5582 8896
Lexie Webster, 5582 8344

Ipswich City Council
Peter Copping, 3810 6608
Mark Bell, 3810 6666
Andrew Bailey, 3810 6666

Lockyer Valley Regional Council
Kaori van Baalen, 5462 0376

Logan City Council
Rebecca Condon, 3412 5321
Nicole Walters, 3412 4859
Lyndall Rosevear, 3412 4860

Moreton Bay Regional Council
Amanda Sargeant, 3283 0291
Ed Surman, 3283 0289

Redland City Council
Melanie Harrison, 3820 1106

Scenic Rim Regional Council
Keith McCosh, 5540 5436

Somerset Region
Michelle Ledwith, 5422 0516

Sunshine Coast Council
Dave Burrows, 5485 1318
Josh Birse, 5475 7345
Nick Clancy, 5439 6433
Alan Wynn, 5439 6477

Toowoomba Regional Council
All enquiries, 4688 6611

Burnett Mary Region

Gympie, Fraser Coast, North & South Burnett, Bundaberg and Baffle Creek Regions

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

fauna vignettes

What's eating this stinging Gympie Gympie Tree?

I have been observing a mass of caterpillars on the Gympie Gympie Tree. They then turned into rows of chrysalis and finally the butterfly emerged. It amazes me that the caterpillars don't get ill eating the leaves, or even standing on them! I sent the images to the Queensland Museum and they replied with:

The butterfly in your photographs is a Jezebel Nymph (*Mynes geoffroyi*). Another common name for this species is White Nymph.

The situation you have described is a pretty good example of the life history of this butterfly. The immature stages are gregarious, forming the masses you mentioned and feeding on one of three larval food plants - the Gympie Gympie Tree (*Dendrocnides moroides*), Shiny-leaved Stinging Tree (*Dendrocnides photinophylla*) and Native Mulberry (*Pipturus argenteus*). They then develop uniformly so that the adults of any given cohort emerge simultaneously. There are probably several generations completed each year.

As you have observed the adults are quite stunning and there are two possible colour morphs (pale and dark). The male and female butterflies are also slightly different in appearance.

Below is the link to a website with some photographs and basic information http://lepidoptera.butterflyhouse.com.au/nymp/geoffr.html

Jane Thompson
Land for Wildlife member
Glasshouse Mountains

Caterpillars of the Jezebel Nymph can be very colourful.

Caterpillars of the Jezebel Nymph defoliate this stinging Gympie Gympie tree. The photo directly above shows the larvae starting to curl to form chrysalis.

Adult Jezebel Nymph butterflies display different patterns and colours on the outside and inside of their wings.

fauna profile

The Chemistry of Fireflies

Article by Lexie Webster
Land for Wildlife Extension Officer
Gold Coast City Council

Shown here is the male (left) and female (right) firefly. Photo courtesy of the Springbrook Research Centre.

Fireflies are actually beetles. This species, *Atyphella scintillans*, is found in moist forests in south-east Queensland and north-east New South Wales. Shown here are three male fireflies and one female. Photo © Queensland Museum, Bruce Cowell.

As I was about to head off from a Springbrook Land for Wildlife property late one afternoon last spring, I was most delighted to see a new group of guests arriving – fireflies! We'd been discussing them earlier in the afternoon so their arrival seemed quite timely. Their erratic, flashing flight was as entertaining as always and of course, evoked the usual suite of questions commonly raised whenever they make themselves present. The kids in the crew, well practiced in the art of firefly capture, managed to catch a couple allowing us a closer glimpse, however the majority of our questions remained unanswered. Determined to find some answers, I embarked on a mission to learn a little more about these captivating critters.

To begin with, fireflies are not 'flies' at all. In fact, they're beetles and there are 2000+ species found worldwide. The 25 species found in Australia all belong to the Lampyridae family, meaning "shining ones" in Greek. The first Australian lampyrid to be described was collected by Banks in 1770 during the voyage of the Endeavour.

Most species of fireflies are crepuscular, meaning they're active during twilight. They prefer moist environments such as rainforests and mangroves and in Australia, are found in tropical areas of New South Wales, Queensland and the Northern Territory.

Fireflies start their lives as a fertilized egg, deposited in damp soil during the summer months. After 3-4 weeks, resembling a serrated worm, they emerge as larvae. The larval stage typically lasts two years, during which they are carnivorous. Armed with tubular mandibles, the larvae paralyse their prey (their preference is snails) and inject digestive secretions into them. After the secretions have taken effect, the larvae suck out the liquefied contents. During the warmer months they live in damp areas in soil and leaf-litter. In winter they burrow into soil chambers or find cover under bark. In early spring of the 2nd year the larvae pupate and 1-3 weeks later, emerge as the adults we see flitting about in the evening sky.

Research has found that the fireflies on the Springbrook Plateau (species *Atyphella atra*) have a short adult life-span of only four nights.

It's not too difficult to identify a firefly when it's flashing about in the sky but identifying them when they're biding their time during daylight hours can be a little trickier. Characteristically, adult fireflies are elongate, flat and soft-bodied and in Australia, grow 3.5-11.5 mm long. Their wings are a leathery brown or black. To keep their vision focussed on the females below, males have large eyes and a large, flattened pronotum (upper thorax) that covers most or all of their head.

Depending on the species, females can either be larviform or look similar to their male counterparts. If the latter is the case, females often have transparent wings, so the light emitted from their abdomen can be seen from above. Unlike their larval form, most species of firefly do not feed as adults. Instead, they spend their brief adulthood, which lasts a few days to a few weeks, finding a mate. This is where their lightshow comes into play.

Believed to differ between each species, the flashing pattern emitted by fireflies alerts potential mates to each other's whereabouts. The often flightless females (their wings can be either highly reduced or non-existent) wait on the ground, perched on a rock or small plant as the males zip around in the air. When a female recognises the passing flashes as those of a male from her own species, and deems him a suitable mate, she blinks in response.

Often it is the males with the brightest flashes and who last the longest that attract the females' attention. The duration of aerial flashing recorded at the Springbrook Research Centre is about 30-45 minutes. Fireflies are most active in the hour after sunset and more so on dark nights with a new moon.

When in flight, the males' head retracts under the pronotum, which acts as a visor, directing his vision on the ground below. When the male sees an answering flash of

Male (left) and female (right) fireflies. Photo courtesy of the Springbrook Research Centre.

Firefly larvae can live for up to two years in leaf-litter and damp soil eating a variety of prey, especially snails. In contrast, the adult firefly beetle lives for only about four days. Photo courtesy of the Springbrook Research Centre.

Fireflies captured on film using slow shutter speeds in the forests of Germany. Photo from MailOnline News.

light, he meets the female on the ground. Before mating he touches her antennae with his own - by 'smelling' the female, he can ensure he's happy with his choice of partner.

So how does this light come to be? Known as bioluminescence, the light emanates from an organ called a photophore, located on the lower abdomen. The middle layer of this photic organ is comprised of light producing cells called photocytes. Photocytes essentially contain nerves, air tubes and three substances; luciferin, luciferase and ATP. These substances undergo a two step chemical reaction to produce the heat-less light that gives these beetles their name. It is thought that the beetles are able to regulate the pattern of light they emit by controlling the amount of oxygen they take in through the air tubes. By doing so, they can create species-specific light patterns.

In some tropical countries such as Malaysia and Thailand, fireflies are regularly seen synchronising their flashes. Whilst the reason behind such behaviour is unknown, there are several theories to explain the phenomena. One theory is that the periods of complete darkness between synchronised flashes better allows the males to see the fainter flashes of the responding females. Another theory is that the combined effort sends a stronger signal, attracting females from quite a distance to their resident tree.

Whilst not all firefly species flash as adults (in other countries there are diurnal species which rely on pheromones to meet their mate instead), all glow as larvae. The pale green glow is emitted from 'windows' at the back of the body and serves not as a tool of attraction, as seen in the adults, but as a warning to predators. Fireflies produce defensive steroids which are toxic and their bioluminescence alerts predators to this, acting as an important survival mechanism.

Like all insects, fireflies play an important role in their habitat's ecology by recycling nutrients and monitoring numbers of prey species. However, urbanisation results in the loss of crucial habitat, including soil and leaf litter, required by fireflies to complete their lifecycle. Compounding the issue is the associated increase in light level that urbanisation brings. The increased light decreases the fireflies' ability to communicate and find mates, and dims the larvae's warning bioluminescence, making them more prone to predation.

Fireflies prefer well-protected damp areas so to help mitigate the threat that urbanisation imposes on fireflies and other native fauna, maintain a healthy understorey and leaf litter, particularly near wet areas such as creeks and dams.

References and further reading

www.animals.howstuffworks.com/insects/firefly-info

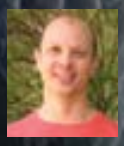
www.newworldencyclopedia.org/entry/Firefly

www.wisegeek.com/what-are-fireflies

www.dailyapple.blogspot.com/2009/07/apple-394-fireflies.html

fauna conservation

Counting the Glossy Black-Cockatoo



Article by Dr Guy Castley
Senior Research Fellow
The Griffith School of Environment
Gold Coast campus, Griffith University

The Glossy Black-Cockatoo feeds exclusively on she-oak cones, holding these in its left foot to shred the outer husk to reach the kernels.

Did you know that the Glossy Black-Cockatoo can be found from Victoria all the way to central Queensland, and that an isolated population exists on Kangaroo Island in South Australia? If you did you'd also probably know that across this range there are three subspecies that can be differentiated from one another, but that by far the most widespread is the eastern subspecies, *Calyptorhynchus lathami lathami*. This particular subspecies can be found in NSW as well as the south eastern corner of Queensland, and is listed as 'vulnerable' in conservation legislation in both states.

A number of factors contribute to the conservation plight of the species, not the least of which is ongoing habitat loss and transformation. Within Australia habitat loss affects a great many faunal species. However, when a particular species relies on hollow-bearing trees for nesting, and the occurrence of she-oak trees (*Allocasuarina* and *Casuarina* species) for feeding, then the continued loss of these resources is likely to have a compounding negative effect on the species. Unfortunately for the Glossy Black-Cockatoo, this is precisely the situation that the species finds itself in.

The Glossy Black-Cockatoo is an obligate hollow nesting species meaning that it depends on hollows to breed. The loss of habitat coupled with increasing numbers of competing species such as Sulphur-crested Cockatoos, Galahs and others has resulted in fewer available nesting hollows. The Glossy Black-Cockatoo is also a very fussy eater and will only eat kernels from within certain she-oak species.

Despite these specialist requirements, the Glossy Black-Cockatoo manages to persist in areas where development continues. This is quite evident in South East Queensland (SEQ) and northern NSW where despite changes in legislation to limit further removal of native vegetation, vegetation clearing still occurs, particularly when vegetation is not deemed to be of any conservation value.

It is precisely these areas that are under threat from clearing, and are deemed to have little conservation value, that can be vital for Glossy Black-Cockatoos. The she-oaks that the cockatoos depend upon are a pioneer species and often occur in disturbed or regrowth areas. The Glossy Black-Cockatoo is also at risk through ongoing urban development as expanding urban footprints fragment and reduce existing key habitats. For Glossy Black-Cockatoo conservation efforts to be successful further information is required about their distribution and abundance in these changing environments.

For the past few years the Glossy Black Conservancy, a consortium of like-minded conservationists comprising council staff, industry partners, environmental consultants, tourism operators, birding groups and academics, has been championing the cause of the Glossy Black-Cockatoo. The Conservancy is a not-for-profit group that aims to raise the awareness and conservation profile of the species throughout SEQ and northern NSW. This can be achieved through an array of active on-ground projects, and also through the provision of guidelines and recommendations to State and Local Government agencies. One such initiative to raise the awareness of the species and gather further baseline population level data about the species is the Glossy Black-Cockatoo Birding Day that will be held on 31 October this year.

The inaugural birding day event was held last year on the Gold Coast and was coordinated by Dr Guy Castley from Griffith University where 77 volunteer observers reported seeing or hearing 51 Glossy Black-Cockatoos from a survey area of 62 km^2. So successful was this event that the Conservancy decided to adopt the event and expand this into neighbouring areas to cover the larger area of interest.

The results from these surveys will provide a valuable resource for conservation practitioners to monitor trends in both the

> *"Areas that are under threat from clearing, and are deemed to have little conservation value, can be vital for Glossy Black-Cockatoos."*

The Glossy Black-Cockatoo Birding Day uses historical records, shown here for the southern Gold Coast, to identify potential survey sites.

The Glossy Black-Cockatoo Birding Day Regional Coordinators

Byron Shire - NSW	Scott Hetherington	scott.hetherington@byron.nsw.gov.au	02 6626 7324
Tweed Shire – NSW	Tanya Fountain	tfountain@tweed.nsw.gov.au	02 6670 2787
Scenic Rim - SEQ	Tracey Larkin	tracey@mtbarneylodge.com.au	07 5544 3233
Redland City - SEQ	Lisa Bailey	lisa.bailey@redland.qld.gov.au	07 3820 1105
Brisbane City - SEQ	Robyn Jones	robyn.jones@brisbane.qld.gov.au	07 3403 6606
Logan City - SEQ	Lyndall Rosevear / Rod Bloss	lyndallrosevear@logan.qld.gov.au	07 3412 4860
Moreton Bay - SEQ	Andrew Evans	andrew.evans@moretonbay.qld.gov.au	07 3283 0227
Sunshine Coast - SEQ	Conor Jenkins / Eric Anderson	conor.jenkins@sunshinecoast.qld.gov.au	07 5499 5142
Gold Coast - SEQ and General Enquiries	Guy Castley	g.castley@griffith.edu.au	07 5552 8918

The Glossy Black-Cockatoo Birding Day

31 October 2010

Please get involved by contacting your regional coordinator shown above.

distribution and abundance of the species. Historical records and observations from regional databases (such as the Bird Atlas data, council records, Wildnet, etc.), have been used in pinpointing potential survey areas for the birding day. However, these historical records may not accurately reflect the current situation. It is these trends in the population that are important in setting conservation priorities and actions.

The ongoing annual surveys throughout the region will provide important baseline information. The survey will also provide valuable information about population demographics for the species as it is relatively easy to differentiate between the sex and age of individuals in the field.

While many public parks and reserves act as refuges for Glossy Black-Cockatoo in urban, peri-urban and rural environments the cockatoos undoubtedly rely on the availability of resources on private land. Properties such as Land for Wildlife blocks where owners have retained much of the natural vegetation, or have undertaken habitat restoration efforts are particularly important.

How to get involved in the survey

Given the extent and coverage of the survey (Gympie through to Byron Shire) each Local Government area has a designated regional coordinator that will oversee the planning and operational aspects for the event in their region. Interested participants need only get in touch with their respective coordinators (see table above) to register their interest. Regional coordinators will then either assign a survey location (a 1 km^2 area), or alternatively observers may request a specific location, such as their own property if Glossy Black-Cockatoos are known to frequent the area.

Participants are encouraged to attend at least one workshop in their area to learn more about identification and how to sex and age birds in the field, as well as how to record these data for reporting purposes. Volunteer observers will then be asked to spend the day in the field on 31 October 2010 to undertake repeated surveys of the area (e.g. every hour) to determine when, where, and how long Glossy Black-Cockatoo were present in the area (if at all). Observers then complete their field datasheets and return these to the regional coordinator for compilation and analysis.

Participants will need to be able to distinguish the Glossy Black-Cockatoo from other similar species in the region (such as the Yellow-tailed Black-Cockatoo and the Red-tailed Black-Cockatoo), and secondly to be able to tell an adult from a juvenile bird, as well as a male from a female. Information to help with identification can be downloaded from the Conservancy website at www.glossyblack.org.au

While the lure of spending a great day birding is likely to attract many enthusiasts, there are also a selection of great prizes to be won for those who spend a full day out looking for glossy blacks. Prizes include passes to Currumbin Wildlife Sanctuary and Australia Zoo, memberships to the Bird Observers and Conservation Association and Birds Australia, as well as a copy of the book *Cockatoo* authored by Matt Cameron (who completed his PhD on Glossy Black-Cockatoos in northern NSW).

The female Glossy Black-Cockatoo is easily distinguished from the male by having yellow patches of feather on the head. Photo by Terri Saunders.

Despite the specific emphasis on this Birding Day in October which looks set to become an annual event, the Conservancy continues to seek information on Glossy Black-Cockatoo sightings at any other time. These sightings are invaluable in building a detailed picture of areas that are frequented by the cockatoo on a regular basis but also for identifying new areas.

The Conservancy is currently in the process of implementing an online reporting system but sighting reports can also be emailed directly to the Conservancy.

Should you wish to find out more about the Birding Day, how to submit a sighting report outside of this period, or to just find out a bit more about the species please visit the Glossy Black Conservancy website at www.glossyblack.org.au. We look forward to having you contribute to the conservation actions for this iconic cockatoo.

fauna monitoring

Using Birds as Targets for Habitat Recovery and Monitoring

Insectivorous birds, such as this Rose Robin, are good indicators of environmental health as they need complex habitats that provide insects for food and 'messy' structures for shelter. Photo by Amanda Johnston, Land for Wildlife member, Ransome.

Article by Keith McCosh
Land for Wildlife Officer
Scenic Rim Regional Council
and Birdwatcher

Birds are an excellent indicator of environmental health. They can be used to monitor the status of our environment and the success of revegetation projects. They can also be the specific targets of habitat and revegetation projects – an 'icon' or 'flagship' species for general environmental improvement.

If birds are to be conserved then every landowner needs to do their bit. National Parks and other reserves only cover about 10% (at best) of our landscapes, so a land stewardship obligation rests on the private sector that manages the other 90%.

Birds on Farms

Birds on Farms was a large survey of rural properties conducted by Birds Australia in the 1990's. Out of this review a number of relatively 'cheap' and easy initiatives were identified as being successful for bringing back the native birds on our farms.

The following features on farms were found to be good for bringing back the birds:

1. Local native vegetation should cover at least 30% of the total farm area.
2. Native vegetation cover should be in patches of at least 10 ha and linked by strips at least 50 metres wide.
3. Shrubs should cover at least 1/3 of the area within a patch of farm trees.
4. High-impact land uses should be excluded from at least 30% of the farm area.
5. Native pastures should be maintained and heavy grazing avoided.
6. Manage at least 10% of the farm area basically for wildlife.
7. A range of tree ages should be provided across the farm.
8. Fallen trees should be left on the ground to break down naturally.
9. Maintain native vegetation around water.

(Ref: Barrett, G. *Birds on Farms*, supplement to Wingspan, vol 10 No 4 December 2000.)

Further research by Earthwatch Institute in 2008 confirmed that planting trees on farms is indeed successful in bringing back the 'bush' birds. Over 70% of woodland bird species were present in revegetated sites. So plant them and birds will come.

Birds in Backyards

Birds in Backyards is an initiative of Birds Australia designed to focus on smaller blocks in more urban areas. Specific information on bird habitats is available on www.birdsinbackyards.net for the urban dweller keen to see more native birds. Bird friendly gardens are basically ones that provide some food and shelter for a range of different species. Small trees, shrubs and a variety of ground cover will go a long way to encouraging more birds.

Bird Surveys

Birds are a good group of wildlife to use for monitoring habitat improvement because:

- Birds are good indicators of environmental health as they live in almost every type of environment and they are high in the food chain and are thus sensitive to the health of the environment.
- Birds are perhaps more easily identified than other groups of animals by most property owners.
- Birds have widespread appeal so monitoring can often be performed by volunteers.

Birds Australia has been running a nation-wide bird survey for the past 10 years called the Atlas of Australian Birds, and this has refined a reliable methodology for monitoring bird numbers. Ongoing and regular surveys of select areas can be used to provide statistically reliable data on environmental improvement.

The recommended survey method is to survey a select site quarterly noting all bird species found within a 2 hectare (200 x 100 metre) survey area for 20 mins. Survey in the mornings when birds are active and they can be seen and heard. See www.birdsaustralia.com.au for more information on the Atlas and survey methods.

Landowners are encouraged to keep records of the wildlife found on their land. Perhaps if we all survey birds using the Atlas methodology then the data may be useful in the future for more meaningful environmental assessments. Monthly bird lists (of all the birds seen) are also valuable for a select area and even better if different habitat types are listed separately. Over time, patterns of seasonal change and habitat improvement can be detected.

For landholders who want to encourage a diversity of birds on their property, the basic rule is the more 'complex' the vegetation structure, the better. Messy not neat, shrubs not mowed grass, will bring in the birds.

Bird Surveys on Brisbane's Land for Wildlife properties

Article by Fflur Collier
Land for Wildlife Officer
Brisbane City Council

White-bellied Cuckoo-shrike
Photo by Amanda Johnston.

One of the aims of Brisbane City Council's Wildlife Conservation Partnerships Program (WCPP) is to monitor fauna on properties to determine how different species use different habitat areas and how this changes over time. Another aim is to increase property owner's awareness and knowledge of wildlife on their properties.

The Greater Brisbane Region is one of the most biodiverse in Australia when it comes to birds, with more than 370 native and introduced species recorded. To find these flighty feathered friends it often means getting up at the proverbial sparrow's call, and sometimes negotiating steep slopes and lantana thickets. Mostly however, it is a peaceful exercise with exciting discoveries.

In 2006, Council partnered with Birds Australia Southern Queensland branch and Birds Queensland, enabling willing and intrepid volunteers from these bird observing groups to conduct seasonal bird surveys on selected WCPP properties (including Land for Wildlife properties).

Four primary survey sites were selected for long-term monitoring over a ten year period across the Brisbane region. Between six and eight satellite sites were selected each year to be surveyed for one full year, usually smaller properties near the core sites. Surveys were conducted each year during summer, autumn, winter and spring. A habitat assessment form was completed for each site describing the habitat characteristics and vegetation structure. Two survey methods were used:

- The first method was a two hectare 20 minute search recording bird species and the number of individuals sighted.
- The second method was an area search, recording all species sighted for a minimum of one hour.

The first surveys commenced in Spring 2006 (September), and by Spring 2010 (September), data spanning a four year period will have been gathered from a total of 28 sites involving 42 properties.

The findings to date suggest that the properties surveyed provide important refuge for birds of a wide variety of species and families, with over 162 bird species recorded from all the surveys combined, as counted in Autumn 2009. The bird species observed have been from a variety of different feeding guilds (see Table page 10).

Species observed also represent a variety of habitat users including obligate tree hollow nesters (cockatoos, rosellas and lorikeets), ground-dwellers (Brown Quail and Noisy Pitta), waterbirds (herons, egrets, ducks) and those that need a healthy understorey (wrens and finches).

There were exciting survey sightings of 14 species listed as significant due to their decline including the Buff-rumped Thornbill, Painted Button-quail, Wompoo Fruit-dove, Regent Bowerbird, White-throated Treecreeper, Barking Owl, Brown Goshawk, Grey Goshawk and one sighting of a Glossy Black-Cockatoo.

Further analysis of the data is required, however the general trend from all sites shows that bird use fluctuates across the seasons on all sites, with a greater diversity of bird species recorded in autumn and spring. This is likely due to the presence of both summer and winter species during the milder seasons.

It also seems that the properties which had the highest bird species counted are those that have the largest areas of habitat, are well connected to surrounding quality habitat, have a variety of vegetation communities on site and have altitudinal variation (i.e. hilltops, slopes and gullies). All these features are typical of properties in the west of Brisbane, while in the east the properties tend to be smaller, flatter and have less variety in vegetation communities.

The average total species count for the six satellite sites surveyed for a full year in the east was 41 species, and the average habitat area was 3.5 ha. The highest count in the east was 68 species recorded at the core site at Gumdale, Grassdale Road and the lowest count of 31 was at Burbank.

The average total species count across the 11 sites surveyed for a full year in the west was 65 species and the average habitat area was 8.8 hectares. The site where the most bird species have been observed thus far was the core site at Moggill, Livesay Road with 114 bird species counted up to Spring 2009. While this property only had 5.5 hectares of bushland under Land for Wildlife, it was 23 hectares in total size and contained a diversity of vegetation communities and habitats, including dry eucalypt forest, Hoop Pine scrub, open grassed paddocks, permanent dams and a wide strip of bush adjacent to Brisbane River. The lowest count for satellite sites in the western region was 51 at Pullenvale.

The data collected from this survey project will provide good baseline data for further studies comparing bird species use over time in areas where habitat enhancement and restoration is being undertaken. The data will be included in Council's Fauna database and the Birds Australia Atlas database.

Article continued page 10.

Scarlet Honeyeater - nectarivore.

Bird Surveys on Brisbane's Land for Wildlife properties

Continued from page 9

The Spring 2010 surveys will take place from 9-10 October and the summer surveys will be in mid-January. If you are interested in being a volunteer surveyor please contact the coordinators Dez Wells (for west) at dez.wells@bigpond.com or Sandra Harding (for east) at www.birdsqueensland.org.au

Council would like to thank all the WCPP partners involved, and especially the many dedicated bird watching volunteers who make this project possible.

References

Czechura G (2008) *Birds of Brisbane - A Queensland Museum Wild Guide*. Queensland Museum.

Powerful Owl - carnivore.

Bird feeding guilds and examples of species counted in bird survey project to January 2010

Feeding type	Bird types	Bird species
Large and small nectarivores (nectar feeders)	honeyeaters and lorikeets	Scarlet Honeyeater Scaly-breasted Lorikeet
Granivores (grain feeders)	parrots, finches and pigeons	Pale-headed Rosella Double-barred Finch
Frugivores (fruit eaters)	doves and cuckoos	Olive-backed Oriole Rose-crowned fruit-dove Channel-billed Cuckoo
Insectivores	wrens, pardalotes and robins	Variegated Fairy-wren Willie-wagtail Pacific Baza
Carnivores (meat eaters)	butcherbirds, kingfishers and raptors	Forest Kingfisher Powerful Owl Brahminy Kite

Olive-backed Oriole - frugivore.

Black-faced Monarch - insectivore.

Pacific Baza - insectivore.

All photos by Amanda Johnston, Land for Wildlife member, Ransome.

my little corner

Spring in the Greenbank wildlife corridor

Have your reflections on your Land for Wildlife property printed in My Little Corner and receive a free *Suburban and Environmental Weeds of South-East Queensland DVD* valued at $64.90. Send a max. of 200 words and a min. of 3 good quality images to the Editor (details on pg 2).

Spring in this glorious forest is my favourite time of year. The wallabies have pouch young. The Crested Hawks (Pacific Bazas) are calling to each other as they fly over the creek. Yesterday (8th Sept) I heard the first Koel for the season, and I'm eagerly awaiting the arrival of the first kingfisher, usually around 22nd September.

The long-tailed Brown Cuckoo-doves have been nesting in a Staghorn just outside the kitchen window. The Carpet Python in the ceiling is swishing around over our living/ dining room - I wonder if it will have to battle a rival for territory this year as it did years ago, on our front verandah!

The Grey Shrike-thrushes are calling, along with the magpies and butcherbirds. Southern Yellow Robins are flitting from tree to tree about a metre off the ground.

The flying-foxes have been here every night for months feeding on the eucalypt blossom, but there's hardly any left now, until the next blooming. By October, we'll be hearing the big male Koala bellowing outside the bedroom window.

Recent rains have greened up everything and the *Pandorea* has just finished blooming. Soon all the *Lomandra longifolia* will produce their flower spikes and their heady perfume will permeate our trails through the forest. What a joy to be living in the midst of all this.

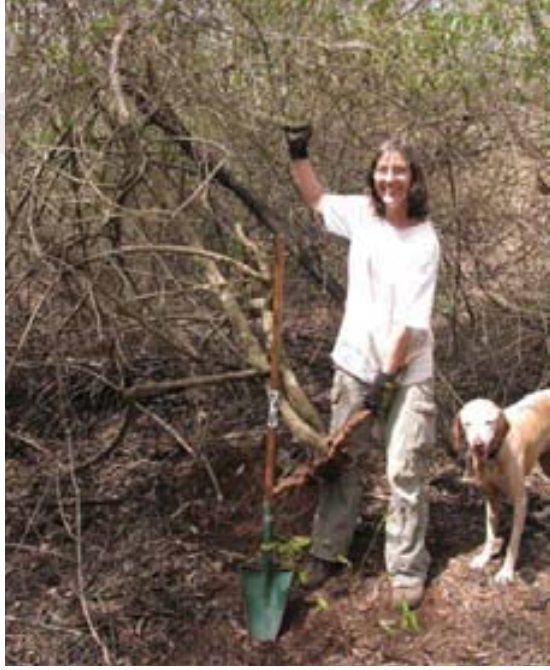
Annette Henderson
Land for Wildlife member
Greenbank, Logan City

Some wildlife in the Greenbank corridor - Green Tree Snake, Brown Cuckoo-doves and two male Carpet Pythons in a ritual battle.

Wonga Vine (*Pandorea pandorana*) in full bloom.

practicalities

Removing lantana the easy (chemical-free) way



Article by Sue McGruer
Land for Wildlife and
Voluntary Conservation Agreement member
Pullenvale, Brisbane

We would like to bring to everyone's attention an extremely sturdy and effective device for removing lantana. We have been removing lantana from our Pullenvale property very successfully using a product called the Root Blade or, as we like to call it, our lantana shovel.

Root Blade is a uniquely designed shovel made of specially toughened steel and reinforced along the edges and shoulders with extra welded lengths of steel. It has a sharpened concaved 'mouth' that cuts easily through plant roots. It is engineered with a curved bottom profile that provides increased mechanical advantage when levering the plant out of the ground.

In practice, it is a simple process of stamping on the root blade around the base of the plant to cut the tap root and then using the root blade to lever the bush up. On particularly large plants this may need to be repeated 2 or 3 times to get the plant completely free.

The roots can be cut by either stamping on the reinforced shoulders of the shovel with a foot as described above or can be used like a 'spear' and thrown into the root.

The lantana plant dies and can be left to mulch away naturally as there is no regrowth. For very large plants I sometimes use clippers to cut some of the branches first to allow easier access to base (trunk) of the plant. As Root Blade is very well designed, it is easy to stamp down with your boots and the sharp edge of the blade mouth does the rest of the work. If the mouth becomes blunt a quick touch-up with a round or curved file will restore its sharpness.

In fact the Root Blade is so useful and easy to use that we now have his-and-hers shovels so my husband and I can work together. It enables us to remove very large lantana without the use of herbicides that can harm surrounding native vegetation.

With the Root Blade you are cutting the tap root, which results in 100% success rate the first time as there is no regrowth. Unlike many herbicides this device can be used year round and in environmentally sensitive areas.

I'm only 5' 2" and can easily remove lantana much bigger than I am. It can also be used to remove small to medium sized privet shrubs (large leaf and small leaf privet) and other weed shrubs.

The Root Blade is designed and made by Euan McLean in Toowoomba. The cost is approximately $100 plus postage. I can honestly say it is the best $100 we have spent in a long time. We bought our first one in January 2006 and it is still going strong. Caring for the environment the healthy way, without needing to use herbicides and the added benefit of a mild workout - this is an essential and useful tool for all landowners.

If you would like to own your own Root Blade, Euan can be contacted by mail or email:

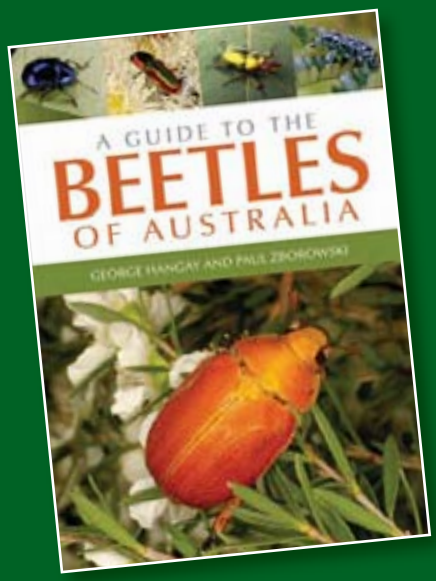
Ian's Ideas
PO Box 265
Drayton North 4350
naued@netspace.net.au

Root blade has extra welded lengths of steel along the sides to give it extra support and a concave 'mouth' that easily cuts through roots.

book reviews

A Guide to the Beetles of Australia

by George Hangay and Paul Zborowski



Beetles make up approximately 40% of the insect population and play a crucial role in our bushland's ecology. Despite this, I found *A Guide to the Beetles of Australia* very difficult to read. Not because there's anything wrong with the subject matter or its delivery, it's just that the photos are so distracting. Charged with the task of reviewing it though, I thought I'd better give the text a chance. Of course, once I focussed my attention a little, it wasn't difficult to stay interested.

The book should appeal to an audience with varying levels of beetle interest and understanding. If you're a beginner beetle nut then you might want to start with learning about what indeed makes a beetle a beetle. From there you can read more detailed information about beetle anatomy, reproduction and development, food and survival, and taxonomy.

If it's the particulars of specific families that you're interested in, you won't be disappointed either. Eighty per cent of the families occurring in Australia are covered in the book with information (where available) on their habitat, food preferences and role in nature. This information is accompanied by photos (about 400 in fact) that will have you wondering why you didn't study entomology. Intermittently spread throughout the pages are insights into some of the more quirky or interesting beetles. Armed with tales of such things as 'Why fireflies glow' and 'The dung beetle's meal', awkward gaps in conversation will soon be a thing of the past.

Beware though, just because the beautiful beetle is in the book, doesn't mean it's in your backyard. This book covers all of Australia and since approximately 20,000 beetle species have been identified across the country, there's a good chance that some of your backyard critters didn't make it to the glossy pages. Likewise, some of the featured beetle beauties aren't going to be found in your backyard.

The book offers an excellent glossary to assist with any unknown terms as well as an index, which lists all species and groups of beetles covered in the book under both their common and scientific names.

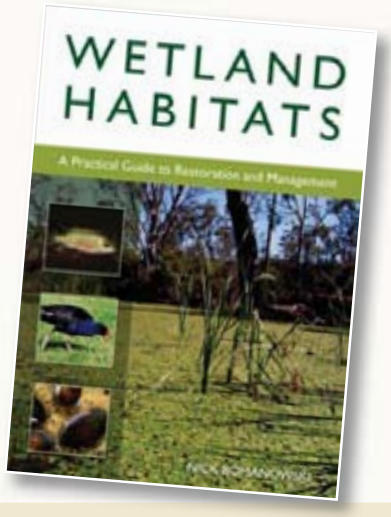
A Guide to the Beetles of Australia is bound to make a great addition to your reference collection whether you're interested in ecology, beetles or photography – enjoy!

Published by CSIRO Publishing, 2010
Paperback, full colour, 248 pages
ISBN: 9780 643094 871
Price: $44.95
Available from CSIRO Publishing and all good bookshops.

Review by Lexie Webster
Land for Wildlife Officer
Gold Coast City Council

Wetland Habitats: A Practical Guide to Restoration and Management

by Nick Romanowski



This is a practical, well written, and easy to use manual for wetland restoration and conservation of the diversity of animal species reliant on these habitats.

Covering all the recent work in this field, among other significant issues it discusses making the most of dams and created wetlands; reversing the effects of drainage, grazing, weirs, deteriorating water quality, and associated algal problems; captive breeding and reintroduction; and controlling weeds and vermin.

The author dispels the misconceptions about what we humans may think is 'good' or 'improved' wetland habitat and details what is evidently best for the needs of plants and animals. Insights include how a barren looking ditch can actually be extremely productive habitat for often unnoticed but vitally important invertebrates, why completely shading out a farm dam with dense trees may actually deter waterbirds, and how native species introduced outside their natural range can potentially be a greater threat to ecosystems than exotic species.

This book describes a range of potential problems encountered during reconstruction efforts and approaches to dealing with them. It explains how to set realistic targets for wetland restoration as well as longer-term goals for management.

A series of colour photographs illustrates the diversity of wetland habitats in Australia and their fascinating inhabitants accompanied by detailed descriptions of these creatures. An excellent guide to further reading and to the effective location, use and interpretation of information from the internet is also included.

With the standout message that before we can make decisions about wetlands we need to learn as much as we can about the specific ecosystem, this book is essential reading for anyone involved in restoring and managing wetland habitats, or interested in learning more about these wonderfully complex places.

Publishing by Landlinks Press, 2010
Paperback, full colour, 216 pages
ISBN: 978 0643096 462
Price: $49.95
Available from CSIRO Publishing and all good bookshops.

Review by Fflur Collier
Land for Wildlife Officer
Brisbane City Council

flora profile

Some Bushfoods of SEQ

Article by Colleen and Geoff Keena
Glamorgan Vale

Photos (clockwise): Native Mint, Native Mulberry, Native Violet, Macadamias and Finger Limes.

There are so many bushfoods that either occur or grow well in SEQ that it is difficult to describe them without a way of organising them. This article categorises bushfoods according to the part of the plant that is consumed. Plants are often described in terms of plants with which we are familiar, e.g. Native Mint, Native Mulberry. While these common names can be helpful, they rarely do justice to the unique flavour of the Australian species to which these names are applied. It is important to note that plants must be accurately identified. Caution must be taken with unfamiliar foods as although the following foods are usually considered safe, adverse reactions in particular individuals cannot be ruled out.

Bush Leaf

If we could only grow one plant, it would be Lemon Myrtle (*Backhousia citriodora*). As the leaves are the part of the plant that is used, these are available all year. We use the leaves to make a cold drink, hot drink, syrup for desserts and for savoury dishes such as Lemon Myrtle vinegar. Our friend Jude Duggan from the Gold Coast especially enjoys Aniseed Myrtle which she uses for a fragrant, refreshing tea. Although now called *Syzygium anisatum*, labels may still have *Backhousia anisata*. We also enjoy Native Mint (*Mentha australis*). We keep this in pots so the peppermint-flavoured leaves are near the house.

Bush Flowers

The second plant we would always grow is the Native Hibiscus (*Hibiscus heterophyllus*). The petals of this plant, when combined with lemon juice, sugar and boiling water make a drink, syrup or jam. It is related to the introduced Rosella (*Hibiscus sabdariffa*) and the flavour is similar. Species with small flowers can be used as garnishes such as Native Violet (*Viola hederaceae*) and Native Bluebell (*Wahlenbergia species*).

Bush Vegetables

There are native vegetables such as yams (*Dioscorea* sp.) but we recommend these are only eaten if identified reliably.

The vegetable we find of most value is Native Spinach or Warrigal Greens (*Tetragonia tetragonioides*). This is our third must-have plant. It occurs in all Australian states and overseas. Leaves must be blanched before eating. We cover leaves with water, bring to the boil and tip out the water. The leaves can be used as a green vegetable. Our favourite use is to combine it with cheese in bread but we also use it in dips and pies. We grow this as a ground-cover annual with seedlings giving leaves year round. The plant is useful as ground-cover in an orchard and we use it to prevent damage to sloping ground in wet periods.

One of Jude's favourite vegetables is Purslane (*Portulaca oleracea*) raw or cooked. She particularly enjoys it with curried egg sandwiches as it adds a slightly acidic flavour. Her one year old grandson said 'yum' when first given Purslane straight from the garden. It should be noted that sources differ on whether Purslane is native.

Bush Seeds and Nuts

Nuts from trees such as the Macadamia and Bunya Pine are well known but take a long time to bear and are large. Our favourite seed-bearing plant is the Peanut Tree (*Sterculia quadrifida*). It grows quickly and seeds can be eaten raw or cooked. We also enjoy the seeds of *Wilkiea macrophylla* after they have been boiled for 15 minutes.

We have eaten two other types of seeds but have not prepared these ourselves. The first of these are the seeds of wattles (*Acacia* sp.). We grow two of the local species with edible seeds, *Acacia complanata*, a medium shrub and *Acacia concurrens*, a small to medium tree. Wattle seed can be used to flavour cream, meringue, drinks, mousses, shortbread, cakes and as a coffee substitute. Kurrajongs (*Brachychiton* sp.) produce the second type of seeds. Once harvested, seeds need to be removed from the pods and cleaned of their outer husk and fine hair. They are improved by light roasting and can add a delicious flavour to baked products or as a coffee substitute.

Bush Fruit

Where to start? We love so many that it is difficult to provide a short list. Our top two favourites would be local Lilly-pillies (*Syzygium australe*) and Davidson's Plum (*Davidsonia jerseyana*). Davidson's Plum is native to NSW and is listed as a threatened species, as is the local endangered Smooth Davidson's Plum (*Davidsonia johnsonii*) that is native to Tallebudgera Valley. We love to pick and eat the fruit straight from our hedge of *Syzygium australe*. Davidson's Plum are coated with fine hairs which must be removed. We usually eat these after cooking with copious amounts of sugar.

We grow and eat many other bush fruits. For those with limited space, the ground-cover Midyim (*Austromyrtus dulcis*) provides a small, pleasant fruit. Of the larger plants, we enjoy Native Sandpaper Figs, particularly *Ficus opposita*, either raw or cooked. We enjoy Native Mulberry (*Pipturus argenteus*) but need to ensure we have male and female trees.

We love Native Citrus, especially Finger Lime (*Citrus australasica*) and we grow Native Tamarinds, such as the local *Diploglottis australis*, as well as other species to extend the fruiting season. We grow local species of *Acronychia* such as *A. oblongifolia* and the tropical *A. acidula*. Other fruiting trees in our garden include *Planchonella* species such as Black Apple (*P. australis*) and Flinders Plum (*P. eerwah*).

The Brown Pine (*Podocarpus elatus*) grows into a stately tree but both male and female trees are needed for fruit. We plant *Citrus*, *Ficus* species and *Syzygium* species in full sun but the other plants mentioned are planted in sheltered, frost-free positions. When grown in the open, the plants will be much smaller than under a canopy, e.g. *Syzygium luehmannii* can reach 30 metres as a forest tree but will only be a 5-10 m shrub in cultivation.

The plants listed in the table are only a small number of the bush food plants that we have grown and eaten but they include our favourites. We believe in multi-functional plants. We rarely grow plants that have only one function. As well as providing ground-cover or shade or shelter, the plants mentioned can provide sustenance not only to the person growing the plant but also to the wildlife that share our edible plants.

References

www.hibiscus.org/culinaryexisting.php

Cherikoff, V (1989) *The Bushfood Handbook*. Ti Tree Press, NSW.

Lecture by Ross A. McKenzie www.qnc.org.au/CT_White/HTML/McKenzie%202002.htm

Robins, J (1996) *Wild Lime Cooking from the Bush Food Garden*. Allen & Unwin, N.S.W.

Groundcover, Grasses & Vines		
Austromyrtus dulcis	Midyim	Fruit is edible. One of the best fruits
Carissa ovata	Currant Bush	Sweet fruit (must be ripe and black)
Commelina diffusa	Wandering Jew	Young shoot is edible. Acceptable boiled vegetable
Elatostema reticulatum	Rainforest Spinach	Leaf, stem is edible. Grow in shade
Mentha australis	Native mint	Leaves. 1-2 sprigs for tea; add to dip
Rubus species	Native raspberries	Fruit. Fruit good raw or in jam
Tetragonia tetragonioides	Warrigal Greens	Leaves - blanch and discard water
Viola hederacea	Native Violet	Flowers. Attractive creeper. Use as garnish
Wahlenbergia sp.	Bluebell	Flowers. Colourful garnish for salads
Eremophila debilis	Amulla	Fruit. Pinkish red when ripe; slightly bitter
Tufty Plants		
Alpinia caerulea	Native Ginger	All parts, raw, cooked. Fruit is pleasantly acid
Lomandra hystrix & L.longifolia	Longleaf matrush	Leaf base, flowers
Small Shrubs 1-5 metres		
Acacia complanata	Flat stemmed Wattle	Seeds - parched, cleaned, milled
Backhousia myrtifolia	Native Cinnamon	Leaves - add to tea
Brachychiton bidwillii	Little Kurrajong	Seeds (remove irritant hairs)
Citrus australasica	Finger Lime	Fruit - pulp has acidic, tangy flavour
Eupomatia laurina	Native Guava	Fruit - pulp is edible. Shaded position to grow
Hibiscus heterophyllus	Native Hibiscus	Petals. Tasty jam, syrup, cordial
Melastoma affine	Blue Tongue	Fruit - sweet purple pulp
Psychotria loniceroides	Hairy Psychotria	Fruits - ripe only. Reasonable flavour
Atractocarpus chartacea	Narrow-leaved Gardenia	Fruit - red-orange fleshy fruit
Syzygium australe	Scrub Cherry	Fruit - crisp, fleshy fruit. Jam
Small to Medium Trees		
Acacia concurrens	Black Wattle	Seeds parched, cleaned, milled
Acmena smithii	Blue Lilly Pilly	Fruit
Acronychia oblongifolia	White Aspen	Fruit is edible but acidic
Alectryon tomentosus	Red-jacket	Fruit. Pleasant jacket around seed
Backhousia citriodora	Lemon Myrtle	Leaves. Cooking. Calming hot or cold drink
Brachychiton populneus	Kurrajong	Seeds (remove irritant hairs). Raw; roasted to flavour breads
Ficus coronata	Creek Sandpaper Fig	Peeled ripe fruit. Tasty soft fruit
Ficus fraseri	Shiny Sandpaper Fig	Fruit - tasty soft fruit
Ficus opposita	Sandpaper Fig	Fruit - tasty raw or stewed
Pipturus argenteus	Native Mulberry	Fruit. Need male and female trees
Podocarpus elatus	Illawarra Plum/Brown Pine	Completely ripe fruit. Need male and female tree
Syzygium australe	Scrub Cherry	Fruit - crisp, fleshy fruit. Stewed or jam
Wilkiea macrophylla	Large-leaved Wilkiea	Seeds. Boil for 15 minutes
Large Trees		
Acmena ingens	Red Apple	Fruit. Juice of stewed fruit is tasty
Araucaria bidwillii	Bunya Pine	Nuts - raw; remove end and roast; boiled
Brachychiton acerifolius	Flame Tree	Seeds (remove irritant hairs). Roasted seeds flavour breads
Citrus australis	Native Lime	Fruit. Drinks; marmalade
Diploglottis australis	Native Tamarind	Fruit. Pulp makes drinks, jam
Elaeocarpus grandis	Blue Quandong	Fruit. Fast growing; eat fresh
Macadamia integrifolia	Queensland Nut Tree	Seeds. Raw but improved by baking
Planchonella australis	Black Apple	Large juicy fruit - keep until ripe. Makes a jelly
Planchonella eerwah	Black Plum	Fruit. Large, fleshy; endangered
Sterculia quadrifida	Peanut Tree	Seeds. Delicious, nutty. Raw or roasted
Syzygium coryanthum	Sour Cherry	Fruit. Crisp, juicy, acid - pleasant; jelly
Syyzygium leuhmannii	Riberry	Fruit. Good for jam; bright pink leaves
Syzygium oleosum	Blue Lillypilly	Fruit. Good fresh or for jam, jelly

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

Photo above: Christine Hosking (left) receives a certificate from the Acting Minister for Climate Change and Sustainability, Annastacia Palaszczuk.

Funding for Koala Conservation in SEQ

Located in the leafy west Brisbane suburb of Brookfield, Kuta Koala Nature Refuge is one of the first of its kind to be formalised through the Department of Environment and Resource Management's (DERM) Koala Nature Refuges Program. Christine Hosking and her family have owned and managed the four hectare property since 2003, seeing, hearing and identifying tell-tale traces of the vulnerable Koala on site frequently throughout this time.

"Since purchasing this property in 2003, I have been aware that Koalas inhabit the area. I have delightedly heard them bellowing during breeding season at my place and know that Koalas are regular visitors to other nearby properties that also adjoin Mount Coot-tha Forest. When I heard about the Koala Nature Refuges Program, it was a natural progression to respond to and join this important initiative so that the Koala habitat on my place will forever be protected" – Christine Hosking.

In addition to Koalas, the nature refuge also protects habitat for the vulnerable Tusked Frog (*Adelotus brevis*), vulnerable Powerful Owl (*Ninox strenua*) and the near threatened Grey Goshawk (*Accipiter novaehollandiae*).

Kuta Koala Nature Refuge, which is also a Land for Wildlife property, adjoins Mount Coot-tha Forest at its rear boundary, providing important connectivity to additional remnant bushland identified as Koala habitat. In fact, the nature refuge was named in acknowledgement of this adjoining forest – 'Coot-tha' or 'Kuta' was taken from the Traditional Owners' name for the area which means 'honey' or 'the place of wild honey'.

The Hosking family were successful in their application for funding through the Koala Nature Refuges Program, with works to enhance Koala habitat on the property to commence shortly. Funded works include weed treatment, revegetation of Koala habitat trees destroyed during the severe 2008 storm season, as well as the installation of pool devices to mitigate the threat of wildlife drowning.

Further rounds of funding for Koala Nature Refuges will be announced in due course.

To be eligible for funding the proposed nature refuge area must be:

- A minimum of 2 hectares in size,
- Located within the SEQ Koala Protection Area (that is, in the councils of Sunshine Coast, Moreton Bay, Brisbane, Logan, Redlands, Ipswich or Gold Coast), and
- Mapped as high or medium value rehabilitation status.

To find out your property's rehabilitation status visit the DERM website at www.derm.qld.gov.au and enter 'Koala habitat property maps' in the search field or email koala.refuges@derm.qld.gov.au or phone 07 3330 5359. Alternatively, you can contact your local Land for Wildlife Officer who will also have access to Koala habitat maps.

Article by Robbie Burns
Senior Nature Refuge Officer
Department of Environment and Resource Management

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

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 · Redland Shire Council · Moreton Bay Regional Council · Sunshine Coast Council