LAND FOR WILDLIFE
South East Queensland

Newsletter of the Land for Wildlife Program South East Queensland

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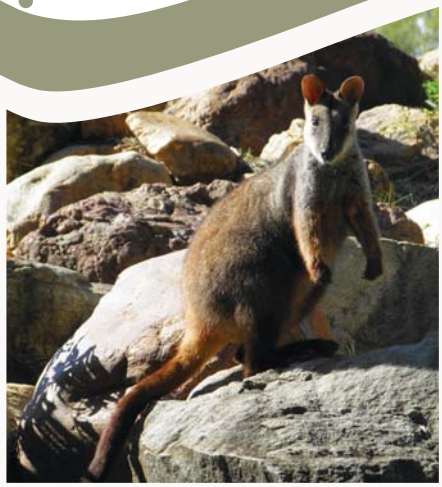

Brush-tailed Rock-wallabies survive in rocky outcrops with large tumbled boulders, ledges and caves. Half of all known Brush-tailed Rock-wallaby populations are found on private land. Photographs by Stephani Grove.

Brush-tailed Rock-wallabies

Listed as Vulnerable under Queensland legislation, the Brush-tailed Rock-wallaby (*Petrogale penicillata*) is a highly agile species with a prominent tail that enables extreme flexibility and balance when hopping through rocky areas.

Rocky outcrops with large tumbled boulders, ledges and caves play a vital role in the biology and conservation of rock-wallabies, as they provide refuge from foxes and provide habitat for rock-wallabies to shelter and breed. Large fig trees in rocky areas are an important food source, while also providing protection from predation. Female rock-wallabies give birth to a single pouch young each year when conditions are favourable.

The Brush-tailed Rock-wallaby's distribution has reduced throughout its range from Yarraman in Queensland through to the upper Snowy River in Victoria due to many historical and current reasons. Despite this, it remains the most widespread rock-wallaby species in eastern Australia.

The threats associated with the decline in rock-wallaby numbers include habitat degradation (that has led to an increase in isolation), small population size, low migration rates, drought, fire, predation by foxes and competition with goats.

Historically, this species was the target of extensive hunting for skins and because it was deemed an agricultural pest. In one year in the early 1900s over 500,000 million bounties and over 90,000 skins were paid by a single company. It is hard today to comprehend an environment with this number of rock-wallabies in it.

More recently, extensive surveys have been conducted throughout the Brush-tailed Rock-wallaby's range and have produced some interesting results. A survey in the late 1990s found Brush-tailed Rock-wallabies at 131 sites in Queensland. Half of these were on private land. This clearly shows the role of landholders, including some Land for Wildlife members who are lucky to have rock-wallabies, can play in the conservation and survival of this species.

Brush-tailed Rock-wallabies are also the faunal emblem, and a significant symbol, of the City of Ipswich.

Reference

Curtis LK et. al. (2012) *Queensland's Threatened Animals*. CSIRO Publishing.
(See book review on page 13)

Article by Stephani Grove and Deborah Metters

CONTENTS

Published by SEQ Catchments, through funding from the Australian Government's Caring for our Country

editorial

"Let's fire up the hearts and minds of people to the joy and beauty of nature."

"It doesn't matter about your family of origin, we all need to look after country."

"Never lose sight of what nature needs."

"Sustainability is a question of physics, not philosophy. The Earth is full."

"Well-being and happiness is the purpose of the economy."

These statements of inspiration captured my heart and mind at the recent Talking Wildlife conference in Brisbane, organised to celebrate the 50th anniversary of Wildlife Queensland (previously known as the Wildlife Preservation Society of Qld). Quotes were respectively spoken by Don Henry (CEO Australian Conservation Foundation), Ron Archer (Djungan Elder), Aila Keto (Australian Rainforest Conservation Society) and the last two are by author, Paul Gilding.

The speakers at this conference were impressive and points discussed will influence my contributions to this newsletter for some time. The need for role models and positive stories with the conservation industry cannot be understated. We all need hope in the midst of gloomy messages about the declining health of our ecosystems. I hope that this newsletter gives readers some hope and a sense of connection to others who equally care for, and actively manage, our amazing wildlife and their habitats.

This edition contains three stories, including a cracker of one about cheeky ducks, from Land for Wildlife members who have made the move from the city to enjoy the beauty of nature and have taken to their roles as custodians of their new lands with gusto. Well done.

Also in this edition are profiles of our often overlooked aquatic reptiles (turtles) and the strange-looking Eastern Tube-nosed Bat aptly named for its snorkel-like nostrils.

An article from Land for Wildlife member and respected bush regenerator, Spencer Shaw, may broaden our minds about what species should be heralded as good weeds, including Cobbler's Pegs. This is the first story I have ever read that paints a positive picture about this maligned plant.

A new online resource to help us identify weeds came to my attention just as this newsletter was about to go to print. I snuck in a short article about it on page 11 as it is a fantastic resource and I would encourage readers to visit the website.

Thanks to all contributors and, as always, I welcome all contributions from Land for Wildlife members. Enjoy!

Deborah Metters
Land for Wildlife
Regional Coordinator
SEQ Catchments

Landholder Registrations, Land for Wildlife SEQ - 20/9/2012

Registered Land for Wildlife Properties	Properties Working Towards Registration	Total Area of Retained Habitat	Total Area of Habitat under Restoration
2965	717	54,133 ha	4,472 ha

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

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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

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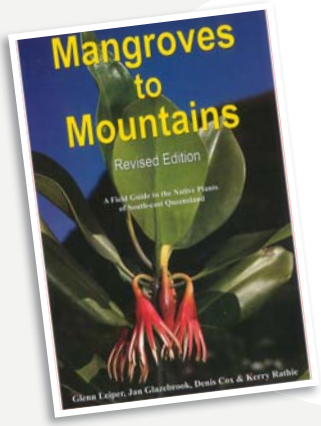
fauna vignettes



FREE BOOKS

SEQ Catchments is giving away free copies of *Mangroves to Mountains revised edition* RRP $50.00 to selected contributors of published *Fauna Vignettes* and *My Little Corner* articles in 2012. Limit of two free books per newsletter edition. Please send your article and/or photographs to the Editor (details pg. 2)

High-density Bowers

This is a bower site at our place. Have your ever heard of them (Satin Bowerbirds) maintaining more than one bower at a time?

Editorial reply... Multiple bowers are regularly built by some of the other bowerbird species and occasionally the Satin Bowerbird. I wonder if it is a dominant male, or a young male just learning to build bowers, or just a creative individual. Can any readers offer more clarification?

Jeff Rayner
Land for Wildlife member
Reesville, Sunshine Coast

Nesting Time

Although winter is well underway and making its presence felt here in the Lockyer Valley there are still birds nesting around the house. At the moment (July 2012) we have a pair of Galahs nesting in a hollow not far from the back steps, a pair of Torresian Crows feeding a fledgling and a pair of Black-shouldered Kites with eggs in their nest.

This is the male kite standing guard from the highest perch in the tree in which they've nested. The nest itself is quite well concealed amongst thick foliage.

Neil Schultz
Land for Wildlife member
Mount Tarampa, Somerset

Inter-species Relations

The Monarch (*Danaus plexippus*), pictured top, was originally restricted to southern Canada and the Americas north of the Amazon, but during the last century it extended its distribution south across the Pacific. It was first reported from Australia in February 1871, but it possibly reached Australia a few years earlier. The Blue Tiger (*Tirumala hamata*), pictured lower, occurs in the Torres Strait islands, northern and eastern mainland Australia, Lord Howe and Norfolk Islands, and New Zealand.

Whilst walking through the Great Sandy National Park (Cooloola section) in late March 2005, we observed *Danaus plexippus* and *Tirumala hamata* mating. The specimens were not collected as a photo of this event was a higher priority.

As the two specimens belong in different Genus, would the progeny have been fertile? If the progeny did develop, what would have been the larval foodplant? What would the adults of those progeny look like? There are so many unanswered questions that relate to this event.

Bob Miller
Land for Wildlife supporter

fauna profile

Eastern Tube-nosed Bat *(Nyctimene robinsoni)*

I'm not that fond of persimmon fruit, comes from a childhood of hitting rotting ones with the lawnmower I think. But as a tree I quite like them. I measure the arrival of winter by the change of colour in the leaves and as I write this the one in the front yard has just lost the last of them and the grass is dying under their yellow carpet (I don't believe in leaf raking). But it's getting huge and so I'm thinking I should prune that tree right back this winter, then I remember the wildlife that tree attracted when it was in fruit back in early Autumn. Particularly memorable was a bat…

Now I'm sure that a few of you when looking into the bulbous eyes of this bat will be thinking - oooh how cute, but the rest of us are thinking, there's a face that only a mother could love. Due to its unfortunate visage, it and other bats of the genus Nyctimene have been variously compared to creatures of myth and pop culture such as gremlins, gargoyles and even the Star Wars character Yoda. I suppose it is a small recompense that it has a beautiful name, pronounced nik'-tee-may'-nay rob'-in-sun-ee: it translates literally as Robinson's moonlight bat. They are related to the other megabats such as flying foxes, fruit bats and blossom bats, which are all in the same family-Pteropodidae, which means 'wing-foot'.

Their most striking feature, if you discount the bulging eyes and yellow spots, is their snorkel-like nostrils. It has been suggested that this feature is an adaptation to allow them to feed on mushy fruits but this is not supported by behavioural studies. Perhaps it allows for a kind of directional sense of smell (stereo-olfaction?). The random pattern of bright yellow spots across its wings, ears and nostrils together with the dark stripe down its back, mean that it is perfectly camouflaged when roosting. It wraps its wings around its body closely resembling a large dead leaf. Roosting is generally close (less than 1 kilometre) to the feeding area with some studies finding that individuals simply roost in the previous evening's food tree. They usually roost alone in rainforest areas although groups of up to five have been observed in coastal rainforest.

Favoured foods are native rainforest fruits such as the Blue Quandong (*Elaeocarpus grandis*), lilly pilly (*Syzygium* spp) and native figs (*Ficus* spp). A variety of exotic fruits such as guava, carambola and soursop are also favoured, particularly by pregnant and lactating females which require higher protein levels in their diet. They have also been reported to feed on nectar from Banksia blossoms but their short tongues mean that it is likely that this must be abundant before it is a viable food resource.

What alerted me to the presence of this bat was a distinctive bleat-like whistle and the wing flapping and leaf rustling sounds that often advertises the larger flying foxes but obviously not as loud.

So the persimmon will get trimmed a little less radically than what I had planned and the cherry guava has been granted a stay of execution for now (though it will have to go as it is an environmental weed). And I look forward to meeting this interesting bat again next year.

For more information on bats visit:

All About Bats of Southern Queensland, www.allaboutbats.org.au

Australian Bat Society, http://ausbats.org.au

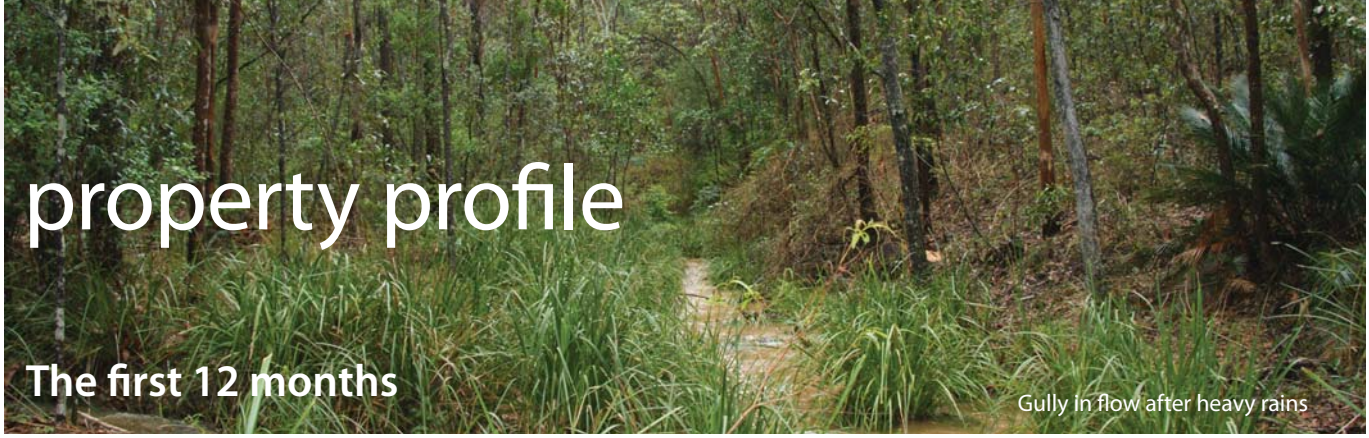
Bat Rescue Inc., www.batrescue.org.au

Bat Conservation & Rescue Qld, www.bats.org.au

Image above. You can see why they called the Family Pteropodidae – the name means 'wing–foot'. Eastern Tube-nosed Bats are highly manoeuvrable flyers and can hover with ease. Photograph by Michael Pennay.

Image below. I was able to get quite close to this bat before I distracted it from its meal of persimmon. Photograph by Alan Wynn.

Article by Alan Wynn
Land for Wildlife Officer
Sunshine Coast Council



property profile

The first 12 months

Gully in flow after heavy rains

After more than 13 years of living within the 5 km radius of the Brisbane CBD, we decided that it was time for some peace and quiet in the bush to listen to the birds and cicadas, rather than the noise of cars and doof music from yet another party.

We landed at Upper Brookfield on a 14 acre block of bush, otherwise known in real estate parlance as "6.5 hectares of completely unusable land" – unless you want to live amongst the birds and trees. The land also scrambles its way down steep slopes but is rewarded with two beautiful gullies leading into a tributary of the Pullen-Pullen Creek which almost always has at least some amount of water in it and when it flows, it really flows.

This lovely part of the Brisbane landscape, unfortunately, also contained large quantities of lantana (both the shrub and creeping variety) as well as a host of other weeds. The previous owners had done no weed management work at all.

Our first aim was to clear the *Lantana camara* within 12 months of moving to our new location (November 2010 to November 2011). This we (95%) achieved with two weeks to spare, other than a couple of almost unreachable locations and the sneaky bushes that always manage to hide when you are not looking.

We also dabbled with some Creeping Lantana control as well as getting rid of the Prickly Pears whenever we spot the very unpleasant spikey brutes.

Despite the weeds, it was clear that the land we had purchased still had very good native grass stock and of other native vegetation just waiting to spring into action once we had removed the lantana - just like peeling back the layers of an onion.

One of the first things we noticed was the number of Land for Wildlife signs all along the road to our property. We had initially dismissed it as little more than pretty signs.

In August 2011, we called Brisbane City Council to find out more, particularly as after some research we thought it would be a fantastic opportunity to protect our little patch of bush with a full covenant.

Within minutes, Land for Wildlife Officer, Cody Hochen, called us back to arrange a visit. After a comprehensive tour of the block, Cody had no hesitation in signing us as a registered Land for Wildlife partner and we put our sign up that very day.

Quite shortly after that inspection, Cody asked us whether we would like to borrow an infrared fauna monitoring camera. We, of course said yes and set it up in different locations with the anticipation of seeing what we had caught on film the night before. Even though we had already seen phascogales, wallabies, bandicoots and possums, there is a far greater sense of being there when you get the footage of a bandicoot actively shoving its long nose into the soil or seeing swamp wallabies with their big square jaws chewing the grass just down slope from the house, and most prized of all, the very clear backside of an echidna wobbling past. Cody told us this was the first echidna to be caught on camera. We have also taken footage of feral deer, leaves and grass moving, and a currawong that clearly felt it was a supermodel, but that's nature for you.

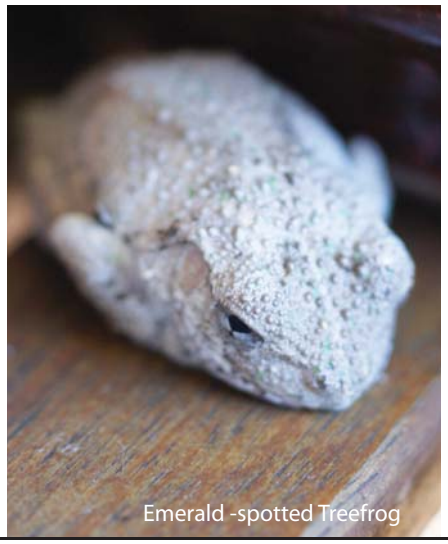
We would like to commend Cody for his regular contact, on-call technical advice and support since we became part of the program. It is fantastic to know that the work we are doing standing on the edge of sheer slopes, getting dirt in your eyes, scratches on your legs and lantana up your nose, is appreciated and is part of the broader picture of protection and rehabilitation of South East Queensland's native bushland.

We are lucky that our closest neighbour, who has been working on his block for much longer than us, has done a fantastic job on clearing the weeds and planting (despite the deer). It is much easier to be inspired when you know that you are creating one contiguous area of habitat.

For the next twelve months, we will invariably be doing maintenance weed work (aka you just cannot keep a good lantana down), planting a ridgetop butterfly garden and undertaking further fauna monitoring. We are also well and truly focussed on getting our higher covenant and ensuring an even stronger level of protection for this lovely habitat area.

Article and images by Alan and Francis Hayter, Land for Wildlife members, Upper Brookfield, Brisbane

Tommy Round-head Dragon



Emerald -spotted Treefrog

Long-nosed Bandicoot

fauna profile

Freshwater Turtles of South East Queensland

There are eight species of freshwater turtles native to South East Queensland (SEQ). Native turtles in our area can be classed either as long-necked turtles or short-necked turtles. The Red-eared Slider Turtle is the only non-native turtle that can be found in the wild in SEQ. It is an aggressive and prolific species that can displace native turtles and other wildlife (see page 8 for more information).

Snags (fallen logs and branches of trees) are especially important for turtles as they provide protection from predators and resting sites from which turtles can catch their prey. Snags can naturally occur, or can be deliberately created, in rivers, creeks, waterholes and dams. Exposed snags also provide basking sites and you can often see a number of turtles basking together on one snag. Basking occurs more frequently during the summer months when it is thought that it may assist with digestion and parasite control.

During floods, turtles, fish and other vertebrates may swim to the backwaters of the river where the current is not so fast. Barrages and weirs across rivers can damage turtles that are swept over them by flood waters. These structures also impede the movement of turtles after flood levels have receded. Floods may also significantly change turtle habitat as nesting banks can be washed away whilst new banks appear further downstream. Turtle nests may also be washed away in floods. Similarly, snags come and go during flood events; however, large snags tend to be stationary.

Turtles tend to nest in spring. All species in SEQ dig a nesting hole using their hind legs. Some turtle eggs may go into diapause once laid. This means that the eggs will not develop until conditions are favourable. Turtles generally nest in sandy substrates but Broad-shelled River Turtles have been observed digging into hard, compacted soils. Long-necked turtles may walk considerable distances from the water to suitable nesting sites.

A range of native predators such as goannas and rats will opportunistically feed on turtle eggs. Turtles also have to contend with feral animals such as foxes, dogs and pigs digging up their nests and eating their eggs as well as unrestricted cattle trampling their eggs. Turtles have also suffered population losses from human activities such as pollution, recreational fishing, draining waterholes and the construction of dams and weirs.

Identifying and recording turtles on your property can be achieved by carefully observing basking or swimming turtles. Turtle shells are sometimes washed ashore and these are also useful for identification.

There are two species of long-necked turtles and six species of short-necked turtles in SEQ, five of which are profiled here. The unprofiled short-necked turtle species is a poorly known snapping turtle that has been recorded from only a few Brisbane locations (refer to *Wildlife of Greater Brisbane* book for more detail).

Long-necked Turtles of SEQ

The Broad-shelled River Turtle (*Chelodina expansa*) has a brown to blackish-brown oval carapace to 350 mm. Its plastron is narrow and cream in colour. Its head and neck are grey in colour and are nearly as long as its carapace. Its head is flattened. It likes large bodies of water including rivers and permanent lakes and occurs throughout SEQ. Photograph courtesy of Queensland Museum.

Both species of long-necked turtle are carnivorous, feeding on invertebrates and fish. They are both ambush predators using their long necks to strike out quickly at passing food.

The Eastern Long-necked Turtle (*Chelodina longicollis*) is smaller with an oval carapace to 240 mm that is dark brown to black. Its plastron is creamy yellow and the sutures between adjoining scutes are darkly edged. The plastron is almost as wide as the carapace. Its head and neck are grey and are nearly as long as its carapace and it may have small barbels under its chin. It prefers swamps and lagoons rather than rivers or creeks and will also use dams. It occurs throughout SEQ but has become rare in the Brisbane urban area. This species will travel overland between water bodies mostly during wet weather. Photograph courtesy of Queensland Museum.

Short-necked Turtles of SEQ

The Brisbane River Turtle, shown top of facing page, is a form of the Macquarie River Turtle (*Emydura macquarii*) and occurs in the Pine and Brisbane Rivers and also in the Gold Coast catchments. It is the most common turtle in the Brisbane catchment and lives in creeks, overflows, dams and lagoons preferring densely vegetated areas with many snags. Its carapace can grow to 275 mm and is mid-light brown and smooth. Its plastron is narrow and pale. It has a light band extending from the corner of its mouth along its neck. It has small barbels on its chin and a smooth neck. Aquatic plants and insects make up its diet. Photograph by Todd Burrows.

The Saw-shelled Turtle (*Wollumbinia latisternum*), shown above, has a brown to dark brown carapace to 240 mm, the hind edge of which is serrated, except in older animals. The plastron is pale. This turtle has many tubercles on the back of its neck and two barbels under its chin. It prefers flowing streams, rivers and creeks but can also be found in farm dams and is found throughout SEQ. The Saw-shelled Turtle is omnivorous feeding on plants, invertebrates, frogs and carrion. It also eats Cane Toads. Photograph by Todd Burrows.

Krefft's Turtle (*Emydura macquarii krefftii*), shown above, was previously considered a full species but is now regarded as a subspecies of *Emydura macquarii*. Krefft's Turtle can have a carapace to 350 mm which is olive green, brown or black. It has a yellow stripe behind its eye which fades with age. Its plastron is usually off-white or cream. Krefft's Turtle prefers swamps, lagoons and lakes and will move between these. It is omnivorous eating fruits, plants, shrimps and crustaceans and is found north of the Pine River. Photograph courtesy of the Queensland Museum.

The White-throated or Southern Snapping Turtle (*Elseya albagula*), shown above, is large with a carapace up to 450 mm that is brown to black in colour. It has a thick neck and robust head with two distinctive barbels under its chin (as shown). Females are much larger than the males. Adult females have white patches on the side of the head whereas males are darker with much smaller whitish-grey markings. They occur in the Mary, Burnett and Dawson-Fitzroy catchments and are usually found in the main trunk of the rivers. They are primarily herbivorous and will congregate under fruiting trees that over-hang waterways to eat the fallen fruit. Photograph by Marilyn Connell.

The Mary River turtle (*Elusor macrurus*), shown above, is restricted to the freshwater reaches of the Mary River. They are river specialists that live mostly in the trunk (the main body of water) of the river. Mary River turtles are dark brown to black in colour from their head to their tail. It is one of the few Australian turtles where the males are larger than the females. Mature males can grow to 420 mm with females slightly smaller. The tail of the female is short and thick, whereas the male tail is very long and thick, up to 70% of their carapace length. They have short blunt tubercles on their necks and two to four barbels under their chin. The Mary River turtle is omnivorous eating primarily fruits and vegetation but will also eat mussels. Photograph courtesy of the Queensland Museum.

Article continues on page 8...

Turtle Glossary

Carapace - the upper half of a turtle's shell.
Plastron - the lower half of a turtle's shell.
Tubercles - fleshy protuberances on top of a turtle's neck.
Barbels - fleshy protuberances under a turtle's chin.
Scutes - horny shields on the carapace or plastron.

Freshwater Turtles of South East Queensland

Article continued from page 7...

You can help turtles by:

- ✓ Protecting creeks and rivers on your property through fencing out livestock and revegetating eroded banks.
- ✓ Keep snags in rivers, creeks and dams as these are important basking and feeding sites for turtles and other aquatic animals.
- ✓ Where appropriate, make your dams wildlife friendly (see Land for Wildlife Notes W2 and W3).
- ✓ Control feral animals.
- ✓ Identify turtle species by using keys available from www.maryriverturtle.com or www.mrccc.org.au websites.
- ✓ Record turtle sightings through the Atlas of Living Australia website at www.ala.org.au
- ✓ Monitor turtle nesting sites or join a community group that does this.
- ✓ Protect turtle nests from predators by placing a protective mesh (broad enough to allow the hatchling turtles to escape) over the nesting site.

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Cann J (2008) *A Wild Australia Guide to Freshwater Turtles*. Steve Parish Publishing.

Georges A & Thomson S (2010) Diversity of Australasian Freshwater Turtles with an annotated synonymy and keys to species. *Zootaxa* 2496: 1-37.

Mary River Turtle www.maryriverturtle.com

Mary River Catchment Coordinating Committee www.mrccc.org.au

Many thanks to Patrick Couper and Andrew Amey from the Queensland Museum, Marilyn Connell from Tiaro Landcare and Todd Burrows from Gold Coast City Council for their help with this article.

Article by Stephanie Reif
Land for Wildlife Officer
Sunshine Coast Council

pest profile

Red-eared Slider Turtle

The Red-eared Slider Turtle (*Trachemys scripta elegans*) is declared as a Class 1 Declared Pest under the *Lands Protection (Pest and Stock Route) Management Act 2002*. This legislation states that it is an offence to keep or sell them without a permit with fines up to $80,000.

The Red-eared Slider Turtle is native to Mississippi in the United States of America. It is believed to be first introduced into Australia in the 1960s and 1970s through illegal pet trading. It has since made its way into our environment through escaped or unwanted pet releases. Red-eared Slider Turtles have been found in urban and peri-urban areas in Queensland, New South Wales and the Australian Capital Territory with some discoveries in bushland areas in Victoria and Western Australia.

Red-eared Slider Turtles are a medium-sized freshwater turtle growing to 30 cm in length. They have a distinctive red stripe behind each eye. The carapace or upper shell is commonly dark green with attractive yellow markings. Male sliders are generally smaller than females and are recognised by their long claws.

This species is capable of living up to 30 years in the wild or longer (up to 45 to 70 years) in captivity. Sliders differ from native turtle species as they can retract their heads straight back into the shell whereas native Australian species withdraw their heads to the side.

Sliders can live in both fresh and brackish water, preferring still water bodies with muddy bottoms such as dams, waterholes and lagoons. Mating occurs during spring and autumn after which the female can lay up to 25 eggs with hatchlings appearing after 65 to 70 days. Females are capable of laying more than one clutch per year.

Sliders are adaptable feeders consuming aquatic plants and animals such as molluscs, insect larvae, small fish and crustaceans.

The Red-eared Slider Turtle is an aggressive species by nature and competes with native turtles for food, nesting and basking sites. It is listed amongst the top 100 invasive species worldwide, and as such, importation of the species has been banned in most countries.

Most Councils in SEQ conduct monitoring and control programs for feral animals, including the Red-eared Slider Turtle, in Council parks and reserves.

At the time of writing this article, there are thankfully no official reports of Red-eared Slider Turtles from Gold Coast, Ipswich, Lockyer Valley, Redland or Sunshine Coast Council regions.

One Red-eared Slider Turtle was handed in last year from the Burpengary area. The people that found it beside a road realised that it was not a native species and called Biosecurity Queensland. Moreton Bay Regional Council pest management officers surveyed the area around the where the turtle was found, but did not discover any other individuals.

Report any sightings of Red-eared Slider Turtles as soon as possible to Biosecurity Queensland on 13 25 23 and to your local Council.

property profile

The green behind the gold

Currumbin Valley is the "Green behind the Gold" that many talk about.

Currumbin Creek Road snakes its way through a beautiful sea of green that helps many day trippers unwind. It's a prescription that many health retreats offer on their menu and it is something well worth maintaining and nurturing for generations to come.

We took that daytrip six years ago and the two inner city Brisbanites fell in love with the natural beauty of the valley. Our 12 acre property is located near the Springbrook National Park (Mount Cougal section) and has its own waterfall in the midst of a rainforest. We simply knew that we had to bring the sparkle back to it.

When we bought the property it had weed infestations that we are still working to control such as coffee trees, Slash Pine, velcro plants (Silver-leaf Desmodium), lantana, bamboo, Camphor Laurel and Mickey Mouse (Ochna). We knew we had to get the property back into its former glory but where does one start?

That is when we turned to Land for Wildlife in order to learn how to manage the weeds. Together with SEQ Catchments, Gold Coast City Council and local bush regeneration contractors, we have learnt how to distinguish the good from the bad. We are also learning how to revegetate, and how to establish quick cover and structure in areas that were not regenerating naturally. These agencies have truly helped us speed up the process of restoration and have helped us developed management plans for the next decade. These plans have incorporated fast-growing pioneer species in our revegetation projects to ensure that conditions are suitable for the recruitment of a more diverse range of plant species. We are also encouraging regeneration on cleared areas of land between patches of rainforest in an attempt to reconnect the rainforest patches. We have planted 1000 trees via the Land for Wildlife program and have recently received a Caring for Our Country grant facilitated by SEQ Catchments. We look forward to seeing how our revegetation projects will change the landscape.

We have had our ups and downs with the process and have learnt that tree guards are a must in this area if you want to keep hungry wallabies from eating new plantings! Let's face it – we aren't the only ones that love this valley! We have also been involved in community workshops on other properties in the Currumbin Valley. These have helped us to apply knowledge from others to our property, and have given us direction in the overall management of such a delicate ecosystem.

We have had tremendous success in keeping weeds down to a minimum by utilising techniques learnt from Gold Coast City Council staff including the 'paint and scrape' method. Using this technique we don't disturb the ecosystem in such an abrupt way as opposed to putting a chainsaw into action!

In the 1950s, the property was a banana plantation and employed 'kanaks' to help clear and plant bananas. It has been said that the waterfall area, which flows into Currumbin Creek, was where they bathed after a long hard day of toiling. The property then became a coffee plantation and was finally cleared for cattle grazing. The past has created problems with taro being introduced by the kanaks as a food source and it still grows in areas of Currumbin Creek. We have been managing the waterfall area as a priority in order to eradicate plant species that use waterways to disperse their seeds.

In 2007 when Brisbane was in the middle of a drought, the annual rainfall in this area was 1791 mm. The area has a very high rainfall with the average annual rainfall for the last five years being 2247 mm. This rainfall makes everything grow quickly, including weeds!

Through the SEQ Catchments Water Quality Monitoring program, we have monitored the quality of the water in the creek on our property for the past five years. We have done this using high precision, easy to operate, water quality testing equipment developed by the company HORIBA. On many journeys to the waterfall area we have encountered many freshwater crayfish, and at different times of the year glow worms, fireflies, yellow-tailed black-cockatoos, brush turkeys, wallabies, noisy pittas, king parrots and snakes.

We have a management plan for the next ten years to get the property back to its former glory and the funding and support that we have encountered along the way has been an enormous help. We are looking forward to the day when we can say our job is done - but that is still a long way down the track!

Article by Nick and Lana Beloff
Land for Wildlife members
Currumbin Valley, Gold Coast

Left: Nick plants another rainforest tree.

Right: Lana monitors the water quality using equipment supplied by the SEQ Catchments Water Quality Monitoring team. Land for Wildlife members are encouraged to get involved with monitoring the water on their properties and can do so by either asking your local Land for Wildlife Officer, or contacting SEQ Catchments on 3211 4404.

weed profile

Is there such a thing as a good weed?

It's not an unnatural process for animals to move plants around the landscape and to expand their distribution. As long as plants have been producing tasty fruit that are good to eat or sticky / prickly fruit that get stuck to us, animals have been assisting with the spread of seed, in what can be argued to be some clever evolutionary dispersal methods. *Homo sapiens* have taken to moving plants like no other animal has in the evolution of life on Earth, and the humans of the last few hundred years have taken to moving plants and animals around the planet at an exponentially increasing and frankly scary rate!

Plants that have been introduced to Australia (by us) and that don't require human assistance to reproduce and spread are generally referred to as weeds. Weeds are by and large seen as bad plants. 'Weed' by definition refers to a plant in the wrong place; however, in my role as devil's advocate, I'd like to offer some food for thought with regards to these assumption.

In this article I'm going to discuss some weeds, even declared weeds, and some of the positive functions they may have with regards restoring natural areas. Is it possible for weeds to play a positive role in ecosystems? Well, let's start with me!

I was born over 16,500 km from the place I now call home (almost as far away as you can get from your place of origin on Earth). I was dragged kicking and screaming from the dreary industrial north of England to the clean, wild landscapes of South East Queensland (SEQ). In retrospect I was a somewhat ungrateful child!

After I had time to settle in, I quickly developed an appreciation and affinity for this wild and natural place that I called home. A few decades later, and having been a professional bush regenerator for over ten years, I now see the effects of the globalisation of our flora almost everywhere, particularly where we live.

"The fruits of Wild Tobacco had actively attracted birds and mammals that in exchange had bought in native seed."

I feel particularly fortunate in the career of a bush regenerator to be working on the front lines of restoration ecology. We work in a variety of ecosystems and with all sorts of weeds. The challenge is that what works to rehabilitate one ecosystem does not necessarily work in another, and a damaging weed in one system would be benign in another.

My first example is Broad-leaf Privet (*Ligustrum lucidum*). On the fertile basalt hills of the Blackall Range in SEQ this species was introduced as a windbreak hedge back in the early to mid 1900s. This is a Class 3 Declared Pest in Queensland which requires control by landholders if they are adjacent to a "significant environmental area". According to a fact sheet by the Department of Natural Resources and Water, Broad-leaf Privet is a weed that "destroys native fauna habitat and disrupts access to natural corridors".

However, these weeds are spread by wildlife (due to their food value). Broad-leaf Privet 'infested' road verges and fence lines are often the only corridors for rainforest fauna. Native rainforest seedlings can also recruit and grow under the shade of privet, as opposed the grass paddocks that fragment the landscape. I would suggest that in most cases, and with a degree of management, Broad-leaf Privet actually assists rainforest regeneration and could be seen as a relatively benign or even beneficial arrival. Broad-leaf Privet is out-competed by most native rainforest trees and this weed does not colonise mature rainforest, just edges, roadsides and neglected agricultural land. Secondly we have Wild Tobacco (*Solanum mauritianum*).

Silvereyes are one of many species of birds that like to eat Wild Tobacco fruit, and thus, disperse the seeds of this 'weed'. Wild Tobacco plays an important role as a rainforest pioneer species especially on neglected agricultural land. With management, Wild Tobacco can assist natural regeneration as the plants create a perfect shady micro-climate for the germination of native plant seeds that have been carried in by birds and flying foxes. When the short-lived Wild Tobacco plants die, or are actively managed, native rainforest plants take their place. Photograph by Deborah Metters.

Wild Tobacco has been present in Queensland since the late 1800s. Given that it can reproduce within a year, we are looking at a plant that has potentially undergone more than a hundred generations, adapting to and naturalising to local conditions. Its fruit are almost exclusively spread by native fauna, such as flying foxes, Satin Bowerbirds and Brown Cuckoo Doves. Again, it is only found on edges and on neglected agricultural land.

Wild Tobacco can dominate pioneer and early secondary rainforest regrowth, and if well managed they can provide useful habitat that will actively promote rainforest restoration. Wild Tobacco has an approximate lifespan of 2 to 20 years (sorry for the variability but depends on conditions), and during this time, they can be very useful for attracting birds and mammals that also bring in native seeds.

For example, 8 years ago we undertook a revegetation project in Witta on the Blackall Range and after 2- 3 years, maintenance of the site lapsed. Growth of revegetation was still good, however Wild Tobacco moved in and at its peak contributed up to 25% of the canopy of the site. Eight years on, the revegetation trees have out-competed all Wild Tobacco but we can still see where the dead Wild Tobacco plants are slowly

mouldering away. Under these dead Wild Tobacco plants, we have found numerous seedlings of native rainforest species that have been recruited from local remnant vegetation. The fruit of Wild Tobacco had actively attracted birds and mammals that in exchange had brought in native seed.

Thirdly, and perhaps one of the most annoying of weeds, is Cobbler's Pegs (*Bidens pilosa*). These guys are one often our least favourite weeds because of their ability to embed their seeds in our clothing. Although annoying, once revegetation is established to about 1-1.5 metres in height, Cobbler's Pegs can help provide soil stabilisation, structural improvement and groundcover habitat. Although they can dominate an open site, they can be rapidly out-competed by revegetation because they require sun on the soil to germinate, and shade dramatically reduces the ability of Cobbler's Pegs to grow or germinate.

The plant species discussed here are just three of the hundreds of naturalised 'weeds' in SEQ. Although these three species can potentially work within native ecosystems, let's not forget that some weeds actively degrade our ecosystems. The trick is discerning between these two broad categories and all of the grey areas between them!

The goal in my mind is to not get angry at weeds, but to look at what roles (good or bad) that they are undertaking within the many differing ecosystems that we manage. A better future for Australia's ecosystems will be through learning about the land we call home, understanding her unique native ecosystems and being aware that change happens, and that in this case, we are the cause of that change. I'd like to think that we have potential to redeem ourselves, as relatively recent arrivals, and become a positive force in the ecology of Australia.

Broad-leaf Privet can assist rainforest regeneration by allowing native rainforest seedlings to grow in the shade of privet trees. Privet will not colonise mature rainforest, but prefers to grow on neglected agricultural land, edges and roadsides.

The sticky seeds of Cobbler's Pegs are disliked by most landholders and bush regenerators; however, this plant can help stabilise soils and provide groundcover habitat for small animals in areas that are being restored.

Article by Spencer Shaw
Land for Wildlife member
Reesville, Sunshine Coast

Winning with Weeds

Aside from removal of habitat, weeds that negatively affect biodiversity are the next greatest threat to wildlife. The cost of managing weeds to our community is huge. Knowledge is a key tool in winning the weed war. Are they helpful or trouble?

Sun Tzu wrote the *Art of War* over 2000 years ago. The principle of 'Know thy Enemy' is a key message in this book. What does he like, what does he eat, and what adaptions can he make? We can apply this thinking and questioning to overcome weeds that threaten biodiversity.

To find information about a plant, we need to know what it is. Botanical names are often long and impossible to say however they are exact. A botanical name will be consistent around the globe and is unique to a particular plant.

If you don't know the name of the plant, there is a great new tool available online. The *Weeds of Australia Identification Tool* uses a lucid key, which is an easy system of identification. They key includes identification tips and logically works through the plant features eliminating the features that don't fit your specimen. A good specimen is a sprig of the plant. Your specimen will need to show the stem, leaves and their arrangement. The key relies on the plant's features so take notice of the bark, tendrils, hairs, prickles and thorns and any other features you see.

If you encounter terms that you don't know, again Google is your friend. Take advantage of your Land for Wildlife Officers and workshops to learn identification skills. Once you have identified your weed, you can click on the fact sheet tab and start researching your foe. Knowing when it flowers is very useful as the old farmer's saying of "One year's seed is seven years' weed", is often true. Knowing how it spreads is also essential.

Be smart. Know thy enemy, and its name is in the Key. Happy weeding.

http://www.business.qld.gov.au/industry/agriculture/land-management/health-pests-weeds-diseases/weeds-and-diseases/weed-identification-tool

Article by Ed Surman
Land for Wildlife Officer
Sunshine Coast Council

my little corner

Disapproving Wood Ducks

We were new to this area and to living on acreage, and we often heard a loud, drawn-out, mournful call and a persistent nattering coming from the tops of our tall eucalypts. When someone told us it could be wood ducks we were quite dismissive as all city- slickers know that ducks live on water, not in trees, and there was no sign of them on our small dam.

In fact we felt somewhat deprived. All our neighbours seemed to have ducks wandering around, but we didn't.

Then we put in a swimming pool and within weeks we were 'discovered'. The strange moaning and chattering materialised into a pair of Australian Wood Ducks (*Chenonetta jubata*), also known as Maned Ducks due to the short mane the males sport on their brown heads. They are also called Maned Geese because of goose-like features in their taxonomy and behaviour.

The internet advised us that wood ducks rarely swim but this pair took to our pool like ducks take to….well, the result was not pretty and it took days to clear the phosphates and green algae out of the water and scrub the duck poo off the pavers. We also read that they can be a pest, that they are stubborn (both understatements) and that harassment is ineffective in driving them away. We nearly crippled ourselves chasing and yelling.

The answer seemed to be to order a pool cover. This worked well; two days before installation the ducks disappeared but we were left with a bill (no pun intended) for over $700 for a now unnecessary cover.

Ducks have webbed feet so they can't actually 'give you the finger'. Their parting gesture was to lay two eggs on the pool deck in a show of defiance, just to make clear they were leaving at their own choosing. (Eggs not bad for breakfast – soft boiled with toast soldiers).

Apparently wood ducks do roost in trees and normally nest in a tree hollow which can be over 10 metres off the ground. The fluffy hatchlings simply flop down to the ground when ready. Many fall prey to goannas and other predators.

Several weeks later, 'our' pair has now returned. Strangely, so far they have shown no interest in the pool and its surrounds, instead focusing on us. We suspect sinister intentions! From before dawn to after dusk they patrol our lawn, which is OK, but they also come onto our verandah and do a plop every second step, which is provocative and far from OK. Even though they waddle around they cover an amazing lot of ground and they turn up anywhere and everywhere on cleared parts of our property, constantly watching us. They often stay down-slope from us and we see only their necks sticking up with rotating heads, just like little periscopes with beady eyes observing us

Months later: the ducks have been away again and have returned, but have now decided not to bother any more with the periscope surveillance method and instead have taken to direct intrusive observation. They now sit on a prop directly outside our kitchen window and watch our every move. If we do anything they think is untoward they crane their necks at us and make disapproving noises.

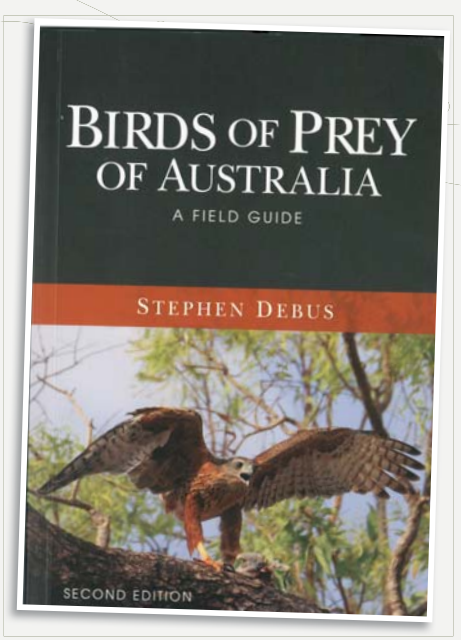
NB: There is a recognised condition called Anatidaephobia which is fear of being constantly watched by ducks. We haven't been diagnosed just yet, but we know that we are under intense scrutiny!

Kon Hepers
Land for Wildlife member
Verrierdale, Sunshine Coast

book reviews

Birds of Prey of Australia: A Field Guide (2nd edition)

By Stephen Debus



Published by CSIRO Publishing, 2012
Paperback, colour photos, 208 pages.
ISBN: 9780643104365
Price: $39.95
Available from CSIRO Publishing, online bookstores and all good bookshops.

Birdwatchers today are spoilt for choice. And that is just how we like it! We have access to excellent field guides, smart phone apps with bird calls and specialist books for certain bird groups such as owls, finches and shorebirds. The *Birds of Prey of Australia* is another must-have specialist book for Australian birdwatchers. It is affordable, easily transportable and I suspect will become the definitive field guide for the 24 species of Australian raptor.

Raptors are a notoriously difficult group of birds to identify. This book gives advice on what to look for when identifying raptors in the field such as wing shape, length and shape of tail, the way the wings are held when gliding or soaring, and flight behaviour.

This second edition is completely revised with 15 years of new data, new photographs and new drawings (the first edition was last printed in 2001). Each species has its own two-page description with 6-12 colour drawings of the birds in flight, perched, in different morphs, male, female, juvenile and adult. There are line drawings showing how the wings are held when soaring or gliding. This section is impressive.

Equally impressive are the 13 pages dedicated to the difficult to distinguish species. The author believes that many historical records of rare species such as the Red Goshawk and Grey Falcon may be erroneous. They would have been based on available knowledge of raptors at the time, but scientific research and digital photography in the last few decades has greatly aided the advance of raptor knowledge.

I can guarantee that the 'difficult to distinguish species' section, showing split-images for direct comparisons, will make some people roll their eyes and think that raptor identification is just too hard. To me, it throws down a challenge to pay more attention to flight patterns, wing tips, tail shape and other attributes apart from colour. The 20 pages dedicated to excellent colour photographs of each species in flight will also help readers meet this challenge.

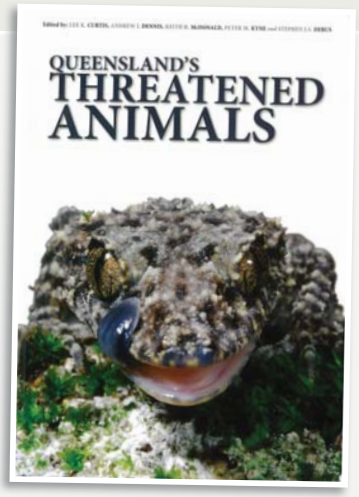
About one-third of this book details information about each species including their distribution, prey, hunting methods, behaviour, breeding, population estimates, threats and conservation. There is simply no room for such in depth information in a standard field guide, another benefit of this specialised book.

Readers can probably tell that I am delighted with this book and I would highly recommend it to anyone with an interest in Australian birds.

Review by Deborah Metters

Queensland's Threatened Animals

By Lee Curtis, Andrew Dennis, Keith McDonald, Peter Kyne and Stephen Debus



Published by CSIRO Publishing, 2012
Paperback, 472 pages.
ISBN: 9780643096141
Price: $120
Available from CSIRO Publishing, online bookstores and all good bookshops.

Review by Deborah Metters

I was a bit reluctant to review this book thinking that the price tag may be too high for many of our readers, but then I read the introduction and just one species profile, and realised what an amazing resource I held in my hands. This book is a commendable source of information that draws together knowledge from hundreds of contributors to focus on 226 animal species that are threatened in Queensland.

Threatened species legislation, the listing process and what all of this means to the animal can be complex for people who work in the industry, let alone those who don't. This book helps de-mystify what is meant by a 'threatened species' and the process involved to get a species added, or removed, from a list.

Some of the historical information about wildlife exploitation in Queensland is completely staggering and terribly sad. For example, from 1906 to 1936, three million possums and one million koalas were killed annually for the fur trade. Our landscapes must have looked so different and must have been comparatively filled with wildlife. This massive removal of wildlife, along with expansion of agricultural and forestry, did not go unnoticed. This book details the rise of naturalist groups, national park associations and eventually environmental legislation aimed to help curb this demise.

The work to help our threatened species continues today. Each species profiled in this book contains information about how people can get involved in recovery efforts for that species. This book covers 79 species that occur in South East Queensland and emphasises the role of landholders in the protection of our threatened species, many of which are found on private land.

Hopefully this book will inspire governments and the community to ensure that we do not add to the 19 animal species that have already gone extinct in Queensland since the mid-1800s.

Clockwise left to right: Leaf Cactus leaves (photo by Tony Mlynarik); new growth; spikey stems and ripe fruit. Photos by Alan Wynn.

weed profile

Leaf Cactus

Interest in this species was sparked when a specimen of a very spikey climber was shown to me on a recent property visit in Pullenvale on a tributary of Pullen Pullen Creek. A trip to the Queensland Herbarium confirmed the identity of the specimen in as Leaf Cactus (*Pereskia aculeata*). The importance of this discovery was shown by the placement of this specimen in a plant press, where it now resides at the Queensland Herbarium.

Originally from the West Indies and parts of South America, Leaf Cactus is, as its name suggests, a cactus that possesses leaves. As such, it is botanically interesting as it belongs to a very small group of cacti. Unfortunately, this is not its only claim to fame as it has also made its way into the top 28 invasive species of the National Alert List for Environmental Weeds.

Leaf Cactus was originally brought into Australia in the 1920s as an ornamental. It has since been found naturalised in bushland in the suburb of Sherwood with a few scattered populations in other parts of Brisbane. Luckily, so far, it does not appear to have spread widely, although this may be a case of under-reporting. It is easily dispersed by bird spread seed, and it can readily reproduce vegetatively from cuttings and leaves that can be transported by water as well as dumped garden waste.

Leaf Cactus can form very dense infestations that are impenetrable due to the extreme thorniness of the stems. The cactus is capable of climbing in excess of 15 metres and can kill large mature trees. It can also totally smother the shrub and ground layer resulting in a thorny impenetrable monoculture. It adapts well to tropical and subtropical climatic conditions and has a rapid growth rate. It is drought tolerant and grows best in light shade under a light tree canopy or along the margins of woodlands. It tolerates a wide range of soil types and favours well-drained nutrient rich ones. In both Queensland and New South Wales it occurs in riparian vegetation along river banks.

Mature stems are quite woody and have very obvious spines that can be up to 4 cm long. Mature branches have clustered leaves that are arranged alternatively. Young plants, which have not developed these obvious stem spines, could be dismissed as Madeira Vine as the leaves are single, alternate, fleshy and slightly purple underneath. There is however, a characteristic pair of small spines in each leaf axis. The upper leaf surface of the specimens found at Pullenvale is dark green, whereas in some literature, the upper leaf surface is described as light green. Leaf colouration appears to be dependant largely upon sun exposure.

Leaf Cactus produces white or pale yellow flowers that sometimes age to pink. They are 25-40 mm across and have a prominent white style in the centre that is surrounded by numerous long, yellow-tipped orange stamens. Flowering is generally from December through to April. The fruit produced is initially green ripening to yellow then to orange. They are 25-45 mm in diameter and often have spines and leafy projections on them. These fruit are popular with birds, which greatly aids the dispersal of this weed.

Leaf Cactus control is a long and difficult process, and inappropriate control methods may lead to its further spread, so always seek expert advice before starting. Any suspected specimens of Leaf Cactus should be immediately reported to the Department of Agriculture, Fisheries and Forestry, or to your local Council.

Update: Leaf Cactus Control at Coochin Creek

Leaf Cactus was first reported in the Land for Wildlife newsletter back in October 2009 regarding an infestation on a Land for Wildlife property at Coochin Creek. Treatment of Leaf Cactus at this site has been thorough as its complete eradication is the desired outcome. Key lessons:

- ✓ Do not under any circumstance cut the stem. Three years after inadvertently cutting the stem (before the plant was identified), there is still viable Leaf Cactus material in the trees where the cactus had climbed.
- ✓ Treat every individual stem with herbicide. Manually remove any plant fragments and burn or dispose of them securely.
- ✓ Prioritise! Control Leaf Cactus plants that can be moved by water first. Then target plants that will flower and fruit. Lastly, target all juvenile plants.
- ✓ Mark all areas that have had Leaf Cactus to allow for ongoing monitoring.
- ✓ Ask the owners of properties both upstream and downstream from the infestation about other Leaf Cactus outbreaks or source material.

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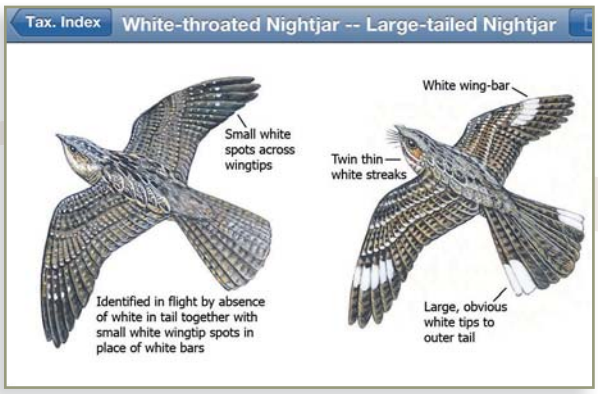
Article by Tony Mlynarik
Land for Wildlife Officer
Brisbane City Council

book review

Michael Morcombe's *Field Guide to Australian Birds* eguide or 'app'



Like many people I grew up with a bird list of feathered visitors to my backyard that was slowly compiled over many years, whilst always turning to a favourite bird book along the way. One particular favourite was Michael Morcombe's *Field Guide to Australian Birds* which was often dragged along on camping and road trips across the countryside. It's now available as an e-guide application or 'app' for iPhones, iPads, and the multitude of devices that run on Google Android.

One thing that was always difficult with the book version of the field guide was successfully interpreting the words on the page that were meant to represent the call of a bird (such as "karrek-karrak-karrack", "kek-kekkekekeke") with the actual sound. This often resulted in attempts to replicate the bird call via my own vocal chords that would only attract laughter and mockery! This is where the app comes into its own with most bird species featuring at least 3 audio recordings that can be played back straight away on the device. It's amazing how reliant you become on these audio tracks to confirm identification as this is often the essential piece of information that allows you to distinguish between three or more separate species flittering in the top of the canopy.

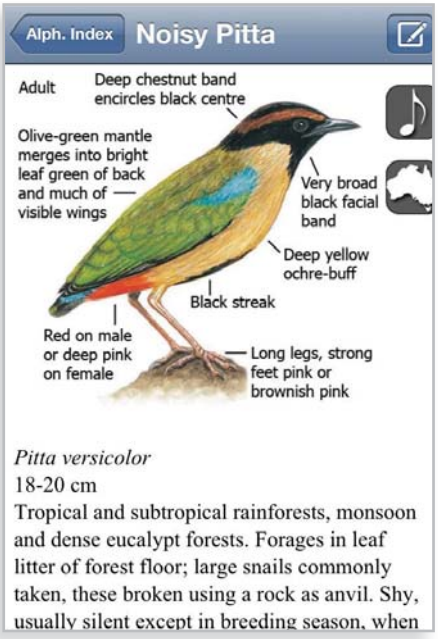
The app contains 1800 sound recordings for 600 of the species featured in the guide. Be warned however, playing of bird calls constantly whilst out in the bush is likely to be frowned upon just as it would be to have Justin Bieber blaring from speakers whilst walking down a trail. There is also concern as to the effects that playing calls can have on bird behaviour, especially species that ward off others from their territory through vocalisation.

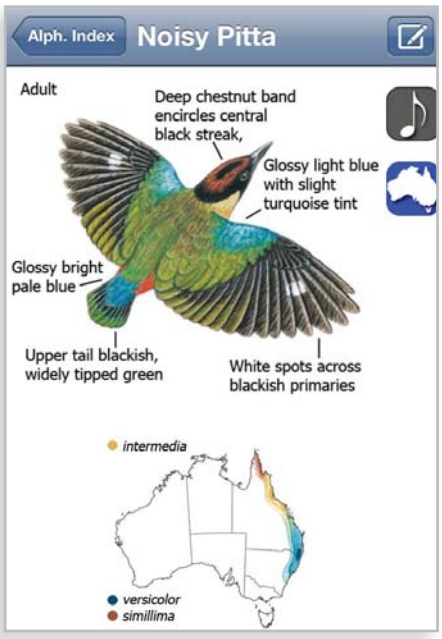
Drawings are an essential component of any good field guide, and despite being smaller on the screen of a mobile device, they are still clear and essential for correct identification. There are over 3000 drawings for a total of 800 species. The big advantage with the app when it comes to drawings is the ability to compare species without having to flick through a multitude of pages. The app contains a smart search that gives the ability to select birds for comparison by distinguishing features such as size, colour, physical attributes, and habitat. This makes it easy to limit your ID options, something that was always difficult when trawling through large sections of the book version. Nearly all the other features from the book have also made their way into the app with distribution maps along with text descriptions of habitat, breeding behaviour and measurements.

A simple record keeping tool allows you to keep track of your sightings at the push of a button, however the app unfortunately doesn't make the most of the GPS functionality available in most devices which would enable users to keep the latitude and longitude information alongside the record. Hopefully we see this as an update in future editions. There also seems to be some obvious attributes that have been missed in the smart search function and unfortunately there is no ability to search using a dichotomous key.

At $31.99 it is up there with the most expensive apps currently on the market, but when compared to the book based field guides it is a similar price for what is arguably a more comprehensive product especially when you include the fantastic coverage of bird calls. Add that with the additional convenience of being able to keep your bird list with you at all times, along with the entire field guide and call collection, the app version of Michael Morcombe's *Field Guide to Australian Birds* has got to be regarded as great value for money and an essential for your next bushwalk.

Tip: For those with multiple iPad/iPhone devices in the family, once the app has been purchased on one device it is free to add it to your other devices that use the same password for the appstore. This app is particularly beautiful when displayed on an iPad, but obviously the phone is the way to go when trampling up a rocky ridge.





Top: Comparing nightjars in flight.

Far left: Noisy Pitta basic profile.

Left: Noisy Pitta additional drawings and distribution map.

Review by Joel Bolzenius
Community Partnerships Manager, SEQ Catchments

LAND FOR WILDLIFE
VOLUNTARY WILDLIFE CONSERVATION

GIVEAWAY

SEQ Catchments is offering free copies of the *South East Queensland Ecological Restoration Framework* to Land for Wildlife members. Simply write, call or email the Editor (details on page 2) to reserve your copy. Offer is limited to 50 copies.

SEQ Ecological Restoration Framework

Many people in SEQ are planting trees and restoring land for conservation. Some restoration sites are ecological marvels whereby degraded and forgotten areas have been restored to self-sustaining, ecologically diverse and enjoyable places. Other restoration sites have yielded poor results and require further work.

Local governments in SEQ are often involved in restoration works either on Council reserves, as components of development approvals, or as advisors to private landholders (as per the Land for Wildlife program). A few years ago, local government officers in SEQ recognised that the SEQ region would benefit from a manual to guide the planning and implementation of ecologically successful restoration works. This sparked the development of the *South East Queensland Ecological Restoration Framework*, which was recently released.

The Framework was developed by environmental managers from local governments, SEQ Catchments and collaborations with industry experts and the state government. The Framework consists of three documents:

1. **Code of Practice** – a policy document providing a head of power for the subsequent Guidelines and Manual.
2. **Guidelines** – a decision making tool to guide users to the most appropriate course of action in their project. This links policy to current best practice examples shown in the Manual.
3. **Manual** – a technical but easy to use guide to all aspects of ecological restoration. This document is reflective of current best practice and provides the minimum acceptable solutions to ecological restoration.

The Manual guides the user through four restoration approaches, listed below, and provides case studies for each.

1. **Natural Regeneration** – applies to large and intact areas of native vegetation requiring little or no human intervention.
2. **Assisted Natural Regeneration** – applies to relatively healthy bushland areas with some threats such as weeds, grazing or slashing.

3. **Reconstruction** – applies to highly degraded sites with little native plant seed stored in the soil. Requires a high degree of intervention such as planting and drainage works.
4. **Fabrication** - applies to areas that have been irreversibly changed and it is not possible to restore the original native plant community.

The Framework has received accreditation from the SEQ Council of Mayors as the regional standard for undertaking restoration and will hopefully be used by governments, industry and the community in guiding ecological restoration in SEQ.

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