



LAND FOR WILDLIFE

Southeast Queensland

Newsletter of the Land for Wildlife Program Southeast Queensland

JANUARY 2007

NEWSLETTER

Native Geckos of SEQ

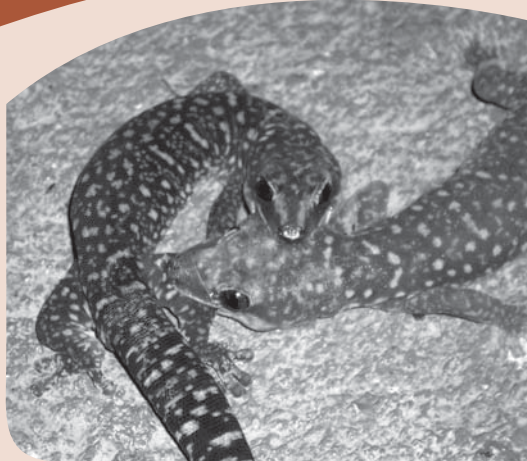
Summer is an amazing time in Southeast Queensland to see some of the diversity of native animals that also call SEQ home. Whether it's migratory birds, frogs, butterflies, snakes or spiders, now is the time to pay attention to the ecological web around us. An easy starting point for the traditionally difficult-to-find category of reptiles, are the geckos that you may be lucky enough to have around your home.

Geckos are one of the more 'cute and cuddly' reptiles. Geckos are lizards in the Gekkonidae Family of which there are 118 species in Australia, 8 are found in SEQ. The most common native geckos likely to be found in SEQ are the Southern Spotted Velvet Gecko (*Oedura tryoni*), Robust Velvet Gecko (*Oedura robusta*) and the House Gecko (*Gehyra dubia*).

The Southern Spotted Velvet Gecko is more common in wet forests, rocky outcrops and rainforest margins at high altitude places such as Mt. Glorious, Maleny, Montville and Springbrook. The Robust Velvet Gecko and House Gecko are more likely in open lowland forests and woodlands.

One of the notable features of most geckos is their ability to stick to seemingly any vertical surface with ease. I must admit that I used to think it was some kind of suction that enabled geckos to climb up polished glass windows, but I was wrong. Each foot of a gecko has about half-a-million very tiny hairs (called spatulae) that produce unbalanced electrical charges. These molecular forces operate independently of materials in the surrounding environment allowing geckos to stick to nearly any surface, even when wet, greasy or in a vacuum!

Geckos are opportunistic feeders that will eat almost any prey that they can



Southern Spotted Velvet Geckos engaged in either a territorial dispute between males or a mating ritual. Photo by Nick Clancy.

overpower. They will prey on insects and spiders, especially soft-bodied insects such as moths. They detect prey by sight, chasing down and capturing prey in their mouth. They may knock captured prey against a hard surface to stun or kill it before eating it whole. Grey streaks along the top of walls are often a tell-tale sign of geckos knocking out moths. Larger geckos found in northern Australia are known to eat small birds and mammals.

Geckos are natural predators of cockroaches and mosquitoes. Geckos will eat both light-attracted and odour-attracted mosquitoes. There is evidence that the introduced Asian House Gecko (*Hemidactylus frenatus*) is slightly more favoured as a mosquito-control agent in well lit areas, with Native Geckos being a more successful mosquito controller when the lights are off.

Anecdotal evidence suggests that native geckos may be more susceptible to insecticides (especially regular high-use surface sprays) than the Asian House Gecko. So avoid unnecessary insecticide use if you want insect-controlling native geckos around your home.

References

Dr. D.V. Canyon, School of Public Health & Tropical Medicine, James Cook University. News in Science, www.abc.net.au
Greg Czechura, Qld Museum, pers.comm.

Article by Deborah Metters.

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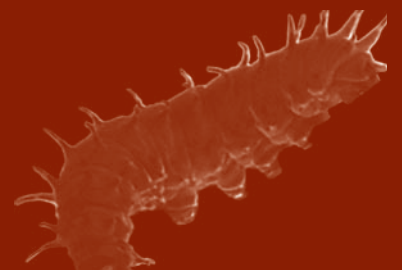
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editorial

Welcome to the summer edition Land for Wildlife newsletter for Southeast Queensland (SEQ). I hope you had a safe and adventurous holiday season - enjoying the changeable weather and bountiful wildlife of summer.

Lately I have been thinking that I really enjoy my job. I have been fortunate to attend workshops on the Richmond Birdwing Butterfly, Glossy Black Cockatoos and control of Cat's Claw Creeper. Each workshop reinforced the critical role of private landholders in nature conservation. Land for Wildlife is one program that encourages landholders to learn more about the assets on their property and provides practical tips for the protection of those assets.

Iconic species such as the Glossy Blacks, Birdwing and Koalas could not persist in SEQ without the protection of their habitat on private land. It would be highly unlikely that public reserves alone could support sustainable, genetically-robust populations of such species across the increasingly fragmented SEQ landscape.

Thank you for your contribution to the protection of our iconic species.

I hope you enjoy this newsletter. There are excellent articles on practical ways to revegetate your property, and tips for allowing wildlife to move along corridors without fences stopping them. I encourage you to use the reference table on pg. 15 to gain confidence at identifying animals that you may hear at night, but may never see. You will hopefully also feel confident at telling the difference between native and weedy introduced passionfruits. There are ecological articles on the Richmond Birdwing Butterfly, and sobering facts on the role of invertebrates in the food web.

There have been a few changes to Land for Wildlife Extension Officers across SEQ. Firstly, welcome to Jane Herbert who has joined the team at Brisbane City Council. Jane is a botanist from the UK who has previously worked at the Queensland Herbarium. Jane will be the main point of contact for new Land for Wildlife members. Richard Rawlings, who has done a fantastic job with Land for Wildlife

in Brisbane, will be working part-time and focusing on Voluntary Conservation Agreements (VCAs) and covenants. Sue Finlay will be working with Richard too. You may already know Sue from previous Land for Wildlife workshops, training events and plant give-aways.

I also wish to welcome Amanda Ozolins who is working with Stephanie Reif at Maroochy Shire Council. Amanda worked with environmental projects in the ACT, NSW and Samoa before working the past year at Maroochy on waterways and biodiversity. Amanda will be looking after new Land for Wildlife members, with Stephanie continuing as the contact for existing members and VCA landholders.

Finally, I wish to welcome Michael Banks who recently started working with Darryl Larsen at Gold Coast City Council. Michael has a background in private land restoration, working the last three years in Agnes Water/1770.

I believe that the private land conservation 'industry' is starting to receive more of its due recognition. These new positions in the larger SEQ Councils are evidence of this recognition. Conservation on private land is a cost-effective way for governments to deliver their environmental obligations. Land for Wildlife landholders offer investment agencies a 15:1 return on their investment dollars (according to landholder survey results). Land for Wildlife makes both environmental and economic sense.

I wish all our Land for Wildlife members a happy new year. I hope that 2007 brings you and your family and friends many rewards of birds nesting, butterflies displaying and plants regenerating as a result of your conservation efforts. Thank you for your commitment and inspiration!

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Landholder Registrations, Land for Wildlife SEQ - 19/12/2006

Registered Landholders	Working Towards Registration	Total Area Retained	Total Area under Restoration
1940	392	39,622 ha	2,759 ha

fauna profile

Richmond Birdwing Butterfly - their ecology (Part 1)

Article by Deborah Metters
Land for Wildlife Regional Coordinator
SEQ Catchments

An excellent workshop on the ecology and conservation of the Richmond Birdwing Butterfly and its host vines was held in late November last year. This article presents some information from the workshop, and also shares some knowledge of two committed Land for Wildlife landholders, Ray and Pam Seddon, who have spent the past 10 years studying and encouraging this butterfly on their property near Mt. Mellum, Beerwah.

This article will be divided into two parts – the first presenting the basic ecology of the Richmond Birdwing Butterfly. The second part (to be printed in the April Land for Wildlife newsletter) will look at the conservation and propagation of the Richmond Birdwing Vines (*Pararistolochia praevenosa* and *P. laheyana*) - food plants for the caterpillars.

The Richmond Birdwing Butterfly (*Ornithoptera richmondia*) is a 'flagship' species – it captures the attention and imagination of people who would not usually be interested in conservation or invertebrate ecology. Flagship species often inspire conservation activities that benefit not only the target species, but many other species and ecosystems. The adult Richmond Birdwing Butterfly is impressive. It is one of Australia's largest butterflies reaching up to 16 cm in size. The males have bright iridescent green and black wings with the females being black, white and yellow.

Like most rare or threatened species, the Richmond Birdwing Butterfly (listed as 'vulnerable') has specific ecological requirements and is therefore susceptible to small ecological changes. Generalist species may be more able to adapt and cope with such changes.

January is one of the best months to see the Richmond Birdwing Butterfly. They emerge from pupa and live for 3-4 weeks (males), 5-6 weeks (females). During this short life, a butterfly will find a mate and feed on nectar from various exotic and native plant species. Preferred native nectar trees include Native Frangipani (*Hymenocallis flavum*), *Callistemon*, *Syzygium*, *Eucalyptus* and *Grevillea* spp.

Richmond Birdwing Butterflies have excellent eyesight. The males are territorial and will chase away other 'rival' males. Ray and Pam have seen a male that was flying around their house, spot and chase away another male about 60 metres away.

Female butterflies will fly up to 30 kms to find suitable egg-laying vines. *Pararistolochia praevenosa* is the host vine and occurs in lowland sub-tropical rainforests <600 m in elevation. *Pararistolochia laheyana* is the host vine in high-altitude sub-tropical rainforests >600 metres in elevation.

Female butterflies use their eyesight (visual cues) to find the host vines and then will land to 'feel' if the vine is suitable for laying her eggs on. The eggs hatch 9-13 days later. Freshly emerged larvae (caterpillars) are tiny (only 2 mm long) and need to eat very soft young leaves. Once the caterpillars get older they will eat hard leaves, stems and even other pupa. Ray and Pam can actually hear the voracious caterpillars eating the vines that grow on their patio (see photo backpage) during the night. Over the 6 week lifespan, each caterpillar will eat 1 square metre of host vine leaf.

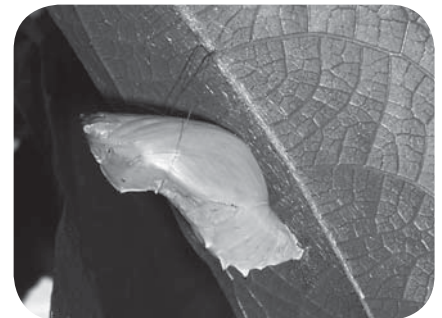
Unfortunately, the introduced Dutchman's Pipe vine (*Aristolochia elegans*) tricks the female butterfly into laying her eggs on the plant even though the leaves are poisonous to young Richmond Birdwing Butterfly larvae. Dutchman's Pipe should be removed from any bushland or suburban garden. If you find a population of Dutchman's Pipe and can not remove it, please report it to your local Land for Wildlife Extension Officer.

Once mature, a Richmond Birdwing Butterfly caterpillar will pupate – attaching itself to the underside of a leaf of the host vine, or that of a nearby plant. The Sandpaper Fig (*Ficus coronata*) is known to be a suitable plant to support Richmond Birdwing Butterfly pupa.

Most larvae that pupate after the last week in January enter a hibernation-type period, called diapause. The pupa will remain in this state until the butterfly emerges in spring, up to 275 days later. However, larvae that pupate in early summer can emerge into butterflies only 32 days later, without going into diapause. During times of drought, the emergence of adult butterflies occurs over a wider period of time making it more



A mature Richmond Birdwing Butterfly caterpillar looking for a suitable leaf to pupate on. Photo by Deborah Metters.



The bright green and yellow pupa of the Richmond Birdwing Butterfly attached at one end to the leaf and supported in a silk-like girdle at the other end (right). Photo by Nick Clancy.

difficult for adults to find a mate.

The Richmond Birdwing Recovery Network Inc. is a community organisation that aims to promote the recovery of the Richmond Birdwing Butterfly by protecting known habitats and propagating host vines. If you have host vines naturally occurring on your property, or have seen the butterflies, or wish to plant host vines, please inform your Land for Wildlife Extension Officer.

This case study at Mt. Mellum highlights what can be achieved by neighbours working together towards a common goal. The enthusiasm of one landholder, Arthur Power, needs credit. He kick-started community interest in the butterfly and wild host vines in the Mt. Mellum district - an interest which has since spread to ten properties. Finally, Don Sands needs to be acknowledged for his commitment to protecting this butterfly and its habitats by working with landholders and organising events like the November workshop.

References

- Richmond Birdwing Recovery Network, 22 November 2006 workshop abstracts.
- Sands, D., Scott, S. & Moffatt, R. (1997) *The Threatened Richmond Birdwing Butterfly: A Community Conservation Project*. *Memoirs of the Museum of Victoria*, 56(2): 449-453.

fire & biodiversity

Insects, Small Animals and Fire in Southeastern Queensland

Article by Don Sands
Honorary Research Fellow CSIRO, and
Christine Hosking
Land for Wildlife landholder

Fire moulded the survival and evolution of fauna and flora in Australia long before the arrival of humans. The impacts of fire on the environment were not uniform across the continent and they varied with climate and from one ecosystem to another. Fires were almost exclusively caused by lightning. Fires varied with season, frequencies, intensities and distribution.

There is convincing evidence from palaeoecological research and observations from early non-indigenous settlers that traditional Aboriginal land managers used landscape fires very differently and often far less, than current European practices. While fire is undoubtedly “part of Australia’s heritage”, not all Australian ecosystems are dependent on fire, need fire, or become healthier after fires. Some plant and animal species respond positively after fire, others are detrimentally affected and some are unable to tolerate any exposure to fire.

Inappropriate fire regimes

Certain species become threatened when the frequency of burning is unnaturally increased or decreased. With fire-adapted insects, most need many years after being burnt to reach stability as plants and other food sources build up their biomass and reach maturity. Times between fires vary with each insect but most of the common herbivore species may require more than 10 years after fires before the food and habitat is sufficient in an area to sustain breeding colonies.

Seasons for burning

Fires are particularly destructive to subtropical (SEQ) insects in winter and early spring because most insects are inactive and in suspended development during the cooler months. Tropical insects tend to be actively breeding or mobile during winter when low temperatures do not persist to decimate the over-wintering stages. Subtropical insect life history strategies are mostly different to tropical insects, with over-wintering ‘diapause’ as part of their immature

suspended development. Most are without wings in winter, currently the time most often chosen for fuel reduction burns.

Before European occupation, winter fires in the subtropics would rarely have been started by lightning and the late spring storms were usually the first for the season, accompanied by extinguishing rain. Fires are also most destructive to lizards in winter when they are inactive, and the greatest impact on small mammals is during spring and early summer, when offspring need food, (i.e. invertebrates) shelter, and they are too young to flee.

Mobility helps escape fires

A few mobile insects and many large mammals are able to escape being burnt and react positively after fires by migrating back into the areas to feed on re-sprouting vegetation. However, if their food sources are specialised or become depleted, their chances of recolonising are reduced. Plants as hosts for herbivorous insects only become suitable if allowed to reach the age required without being burnt. Adequate corridors are necessary and movement back into recovering areas may depend on several years of growth before insects can breed adequately.

Poorly mobile invertebrate species are most affected. At any time of the year wingless insects or those that have very small ‘closed’ breeding habitats are unable to escape or easily re-populate in fragmented landscapes unless they are species that shelter underground (e.g. ants). Local insects are especially at risk in smaller, fragmented landscapes. Insects do not always colonise plants or plant communities that appear to be favourable. Subtle symbiotic relationships with other organisms frequently limit the areas needed for breeding sites.

Small ground-dwelling vertebrates can also be placed under intense pressure because they must compete for food in an unburnt area and they are also in symbiotic relationships with their



A disused gold-mining test-site on Mt. Coot-tha. Such sites are used by micro-bats for night roosting. Micro-bats are repelled by smoke and forced to disperse, particularly in cases such as this when the hazard reduction burn continued for two weeks. In addition, their prey (moths) will be depleted. Photo by Christine Hosking.

established environment. One example is micro-bats. They are repelled by smoke, forced to disperse and have to find new roosting sites. Fire and smoke are particularly detrimental if a burnt area contains a maternity roosting site. Micro-bats also lose important food sources if invertebrates such as moths are burnt.

Leaf litter insects: the importance of senescing plants

Some small oecophorid moths are very prone to local extinctions when extensive patches are burnt. Their larvae feed on, and decompose dead eucalypt leaf litter on the ground and can take years to recolonise after fires. Therefore, their loss leads to decreases in recycled nutrients, increases in accumulating leaf litter, and increases in the “fuel load”.

Poorly mobile and wingless insects that live in senescing timber that is prone to burning, logs on the ground and leaf litter, require prolonged years of vegetation growth (>15 years) before they can move back into areas that have been completely burnt. Many other small animals depend for food on insects found in these micro-habitats. Some examples from SEQ are bandicoots, antechinus, planigales and ground-foraging birds such as Pheasant Coucals. Smaller mammals are also at greatly increased risk from predation by feral species such as foxes as they search for food and are exposed in the burnt areas.

Insects adapted to senescing plants are declining in the 'closed' protected areas of SEQ. Larvae of larger longicorn beetles and wood-boring moths (Cossids, Hepialid and Xylorictid moths) are important in food chains for vertebrates (e.g. Yellow-tailed Black Cockatoos) as they tunnel into old trunks and limbs of ageing shrubs and trees, especially *Acacias*. If the trees are not allowed to age more than 15 years, many of these insects can not breed. Some of the most important habitat trees for such wood-boring larvae are 'black wattles' which can live to 25-30 years, especially in deep gullies where they have avoided fire. A matrix of mixed ages of vegetation is essential to support a healthy diversity of invertebrates and other invertebrate-dependent fauna.

In SEQ wood-boring species occur most abundantly in moist eucalypt woodlands that have not been burnt for 30 years or more, where shrubs and trees have been allowed to age. Ageing trees with hollows and furrows also provide habitats for gliders, possums, micro-bats and hollow-dependent birds.



Leaf litter decomposing Oecophorid moths. Such moths require unburnt areas of leaf litter to breed and contribute to the food chain as prey for small reptiles, micro-bats and other small mammals. Photos by CSIRO Entomology.

Rainforest insects need protection from fires

Many insects have evolved a total dependence on plant communities that were never naturally burnt. Fires when deliberately lit during drought, or at times of the year when rainforests are abnormally dry, can have serious impacts on rainforest-dependent insects. Rainforest insects often feed only on one plant or group of plants and need a particular plant age, architecture and shade. They cannot survive or breed, even when coppicing plants regrow in some rainforests years after burning. If these rainforest species are destroyed, the food-source for numerous vertebrate species that depend on rainforest habitats is depleted.

Fuel reduction burns in SEQ need to consider the peculiarities of subtropical insects to avoid major impacts on the insects, the plants and vertebrate fauna that are dependent on them. This will become more urgent as prolonged drought, climate change and fragmentation greatly increases the impacts on biodiversity in urban and fringing bushland.

Small animals are the best indicators for environmental disturbance. Insects and their food plants are often the first organisms to disappear from natural bushland following increased and unseasonal fire frequencies. This then leads to reduced food and habitat for those species next in line in the food chain and so the impacts continue throughout the ecosystem.

Micro-mosaic patch burning (1-2 hectares)

Small patches should be excluded from burning to protect vital core interior habitats and to allow natural bushland succession. Micro-habitats such as logs, litter and senescing trees, and moist gullies that act as natural fire breaks must be identified and protected in pre-burn inspections. This is a safer and practical way of maximising survival of insects, small ground-dwelling mammals and reptiles. Such fire breaks are completely adequate for protecting life and property. Since European settlement we have seen the losses of vertebrates and plants but are mostly unaware of the on-going impacts on the "smaller animals", including the invertebrates, that make up 99% of all animals.



Longicorn beetles can be active during day or night or both. All longicorn beetles are active fliers and some may be attracted to lights at night. This species shown above has wood-boring larvae. Photo by Don Sands.



Longicorn beetle larvae are long, white grubs found in dead and dying wood. Photo by ForestrySA.



A Cossid moth. Larvae of several large Cossid moths may take up to 3 or more years as they tunnel into the bases of senescing trees. They are a major food source for animals and birds. Photo by Don Sands.

practicalities



Natural Regeneration versus Revegetation, Part 2

Article by Stephanie Reif
Land for Wildlife Extension Officer
Maroochy Shire Council

In the October 2006 Southeast Queensland Land for Wildlife newsletter we explored using natural regeneration to re-establish vegetation on a site. This edition we look at a situation where revegetation has been used in an area mostly cleared and with lantana thickets present. The case study that follows outlines the efforts of two property owners at Mapleton who have used mostly revegetation to re-establish habitat on their property.



Daryl and Craig standing next to some of the 22,000 native plants that they have planted on their property over the past 12 years - an inspirational effort!

Craig Hosmer and Daryl Reinke are an inspirational couple. Their property is located at the headwaters of the South Maroochy River catchment on Echidna Creek and in 13 years they have planted over 22,000 native trees, shrubs and understorey species!

Craig and Daryl now plant around 1,000 trees annually connecting the East and West branches of Echidna Creek over a ridge and to reduce the edge effects of separate plantings. Their older sections of revegetation (5 years plus) need very little maintenance and natural regeneration is also occurring to increase plant diversity and habitat complexity. They also host one or more walks a year with landcare, catchment care and Land for Wildlife groups to share their revegetation techniques and experiences.

Seed collected from fruiting trees are given to Barung Landcare and Florabunda Bushcare native nurseries. These tremendous efforts were recently recognised when Craig and Daryl received the Biodiversity Award from the Sunshine Coast Environment Council's 2006 Sunshine Coast Environment Awards.

It is hoped by giving these two examples that readers have a better understanding of revegetation and natural regeneration, including when to use these techniques on their properties. For further information or to discuss the situation on your property contact your Land for Wildlife Extension Officer.

Revegetation of upper Echidna Creek, Mapleton

by Craig Hosmer and Daryl Reinke

We moved to the Sunshine Coast in 1994, onto largely cleared land (15.83 ha) on the eastern escarpment of the Blackall Range. At that time, the land was used for grazing. Cattle roamed at will, as the old internal fencing had largely broken down. There was heavy lantana infestation, particularly in the gullies and on steeper slopes. The nature of the landform meant that there was no vehicle access from the eastern section of the property to the steeper western slopes.

We continued to agist cattle for a time, as we had been advised this would help to control the weeds, and focused our efforts on revegetating areas near our house. We went into a steep learning curve, finding out about local rainforest species and revegetation techniques through Barung Landcare. We initially avoided using poisons, but found that our very invasive weeds and grasses hindered tree growth and increased the maintenance period.

To our joy, we found we had a couple of patches where we could rely on natural regeneration, and over time we identified more than 50 species that had survived the clearing and grazing process. These include *Elaeocarpus obovatus*, *Cryptocarya obovata*, *C. triplinervis*, *C. laevigata*, *Gossia acmenoides*,

Rhysotoechia bifoliolata, *Dinosperma melanophloia* and *Macadamia ternifolia* along with pioneer species. However, we are too far from good seed sources to expect a high level of diversity in naturally regenerating species.

An early lesson came from observing the cattle. While they broke down some of the smaller lantana clumps in the winter months, they also created paths that increased the risk of erosion and slips. Any natural regeneration of trees occurred primarily in the older lantana thickets, or along sections of intact fence lines. Only *Acacia melanoxylon* regenerated successfully in the grassed areas.

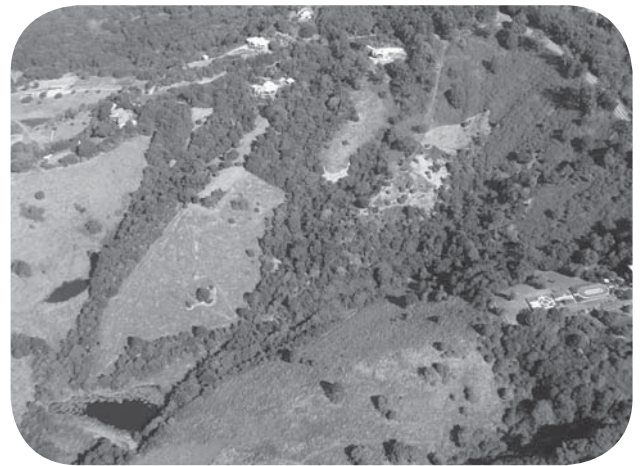
Our efforts sped up in 2001 with help from a Healthy Waterways grant aimed at determining the impact on water quality when riparian zones were revegetated. This grant established a connection with six downstream neighbours, added 18,000 trees to the valley landscape, and gave us the much-needed vehicle access to cross our creek.

At that time, we restricted cattle to two grassed paddocks, and excluded them from the gullies and steeper slopes. We then started working to widen and extend the narrow riparian strip established along our section of Echidna Creek, and link these areas with the revegetated areas near our house.

We now follow an annual rhythm that works well for us. For lantana infested



Participants at a rainforest revegetation workshop on Daryl and Craig's property in June 2006.



2006 aerial photo shows two gullies that Daryl and Craig have revegetated. Their property goes from the dam (lower left) up the two gullies to the road (upper right). The bare patches are areas that were revegetated in 2006. And yes they own most of the lantana up to the road!

areas, site preparation starts in winter when the ongoing maintenance workload is less. We limit clearing to the size we can reasonably expect to plant and maintain. We plant early in the wet season, using a mix that includes around 60% pioneers and fast growing species to achieve quick canopy closure. Our weed seed load is enormous, and intensive maintenance is needed, particularly in the first year. The workload declines in the second and third years. After that, we go on occasional 'vine-hunting' excursions as the wind and birds continue to carry in problem vines (Moth Vine, Corky Passion Vine and the dreaded glycine). We also prune for form and function – cutting back pioneers to give more light to slower growing, long-lived species.

We've learned to hire expert help when we need it and address the gullies first where better soil moisture gives faster growth. Then we move higher up the slopes. We carefully liberate any trees growing amongst the lantana and glycine. Growth of these trees accelerates dramatically, and we find some natural regeneration occurring around them.

Mostly the landform requires handwork, so the lantana is generally broken down with brush hooks and cane knives. Where possible, we cut and poison the main stem with a few drops of glyphosate at that stage. Then we wait for any regrowth, and either cut and poison again, or spray the foliage with glyphosate. Yellow raspberry is cut and poisoned, as is blackberry, with good success. We leave the sticks as soil cover to prevent erosion, and allow time for them to break down before planting.

A six-month delay between clearing and planting also gives opportunity for any seedlings to germinate. We usually find quite a few pioneers (*Homalanthus nutans*, *Macaranga tanarius*, *Mallotus philippensis*, *Olea paniculata*, *Guioa semiglaucula* and *Pipturus argenteus*), and stake them to avoid spraying in the final site preparation. Planting adds diversity and density, and hastens the restoration of something approaching a more advanced rainforest. Our typical planting usually includes 80-100 different species, depending on what is available at the time. If a key species is unavailable, we incorporate it next year in a neighbouring section (*Polyscias elegans* is a good example).

We've had many wonderful moments along the way; the first bird nest in a tree we had planted, the first sighting of a White-browed Scrub-wren trawling for insects in leaf litter in a revegetated site, finding a melomys nest in a shrub surrounded by Blady Grass, and realising that a wetland we haven't yet managed to rehabilitate nevertheless provides wonderful habitat for the vulnerable *Adelotus brevis* (Tusked Frog). A 2002 study recorded 90 species of birds. Species diversity is growing, as are absolute numbers. The Noisy Miners have moved on, and we now have greater numbers of other small birds.

Our advice – don't take on more than you can maintain, but don't set your sights too low either. We've surprised ourselves seeing how much we can achieve.

Successful Edge Species...

(Fast growing, dense plants that 'seal-off' edges reducing 'edge-effects'. Suitable 'edge' species will differ across SEQ.

- Myrsine variabilis* (Muttonwood)
- Pittosporum undulatum* (Sweet Pittosporum)
- Syzygium australe* (Brush Cherry)
- Diospyros australis* (Black Plum)
- Psychotria daphnoides* (Smooth Psychotria)
- Rhodamnia rubescens* (Scrub Turpentine)
- Gossia acmenoides* (Scrub Ironwood)

Lessons Learnt...

- Select sites strategically to maximise connections and minimise edges.
- Make sure the size of the site is within your ability to maintain for 3 years.
- Select species carefully for the specific location.
- Use a high ratio of pioneers and fast growers.
- Choose species to seal edges and keep weeds out.
- Prepare sites thoroughly, well in advance of planting.
- Plant in rows to facilitate maintenance.
- Plant closely (1.5 to 2 metre spacing) to achieve quick canopy closure with consequent reduced maintenance.
- Plant early in the wet season to maximise growth.
- Mulch well to retain soil moisture and control weeds.
- Time maintenance to prevent the next crop of weed seeds from maturing.

practicalities

Wildlife Friendly Fencing

Article by Gavin Hammermeister
Land for Wildlife Extension Officer
Redland Shire Council

Photos by Redland IndigiScapes Centre

Fences are one of the major obstacles to fauna movement. Fences erected across habitat areas and corridors create physical barriers to fauna movement and therefore have the potential to disrupt the feeding, migration, breeding, genetic exchanges and social patterns of fauna within that area.

A wildlife friendly fence is a fence that does not restrict the movement of native fauna between properties. Given the vast variety in animal size, shape and methods of mobility, a wildlife friendly fence needs to be defined relative to the areas particular fauna. Also, a fence that is friendly to one species may not be friendly to all.

Does your boundary really need a fence?

The privacy of your property can be enhanced through the use of vegetation. A combination of native trees, shrubs and ground covers can effectively screen areas while enhancing the amenity and habitat value of the area whilst allowing fauna movement.

If you do have a fence, make it easier for fauna to cross.

The movement of animals through existing fences can be improved by planting a variety of native trees and shrubs along the fence line which allows fauna access to the vegetation on the other side.

The placement of a pole on an angle against the inside of the fence allows for a quick escape route. Placing a pole between two trees on either side of the fence creates a natural bridge for wildlife. Sections of the fencing could also be removed and replanted to integrate the fence with native vegetation.

Design your fence to allow fauna to pass through.

- A 50 cm gap between ground level and the first rail or strand. Spacing above this level is at the owner's discretion.
- A series of 30 cm gaps between the rails or strands
- Box wire mesh (squares of no less than 15 cm) may be used provided that there is a 30 cm gap between the ground level and fence bottom, and provided the fence is not more than 1.2 metres in height. A capping rail along the top allows for easy movement.

Barbed wire or electric fences are not fauna friendly but if you do need to use barbed wire, modify the fences where they are likely to catch wildlife, such as

creek crossings and areas regularly used by gliders or fruitbats.

- Use plain wire for the top two strands of the fence.
- Cut sections of poly pipe lengthwise and cover the barbed wire.
- Fix an apron of bird netting over sections of fence.
- Grow tall grass along the fence to stop bats and birds trying to fly through. Grass also gives other wildlife plenty of cover to cross the fence.

Dogs.

The presence of a dog does not deter wildlife from entering a property. To assist dogs and native fauna co-existing, dogs should be confined to an area in the immediate vicinity of the house. A fence erected around the house provides room for dogs to exercise during the day, retains the dog near the house for added safety and security, and allows fauna to move freely through the remainder of the property.

The fencing used to contain dogs should be fauna proof and be free of overhanging vegetation with the bracing on the inside. The safest fauna proof fence is a solid, vertical, six foot high fence. This allows no fauna movement into the dog's territory. Most fencing other than this will still allow some fauna movement.



A simple hardwood post and 4 strand plain wire wildlife friendly fence.

Note the 30 cm gap between all strands from the ground to the top. This fence replaced an existing 4 strand barbed wire fence. The owner's property adjoins a national park.

Letters to the Editor

The Value of Birdbaths

Until recently, I thought birdbaths were installed more for ornamental purposes than as a source of water for birds to drink and bathe.

Our 28 acre property in the Wamuran Basin, a dairy prior to 1980, has a seasonal creek. During the recent droughts it has been dry. We built a birdbath out of odds and ends so the birds would have a permanent supply of water for bathing and drinking. Dense vegetation on two sides of it gave cover. The kitchen window overlooking the bath made an excellent birdhide.

We have been amazed at how our bird numbers and varieties have increased over the years due mostly to the many hundreds of local provenance native plants we have grown. From our kitchen, we see a constant stream of birds throughout the day. They include the Regent and Satin Bowerbirds, Eastern Yellow Robin, Eastern Whipbird, Noisy Pitta, Willy Wagtail, various pigeons, kookaburras and wattlebirds.

As well as being a constant source of enjoyment for us, our birdbaths have proved a lifeline for our birdlife.

M. Wallace

Land for Wildlife landholder

Ed. - Thanks for this letter. It has prompted us to develop an article on good hygiene for birdbaths and bird feeders in the April 2007 newsletter.

RSPCA Response on Toads

In your October issue, you mentioned that the RSPCA was looking at alternative humane methods to cull cane toads and that gassing could be an option. Unfortunately, preliminary research suggests that gassing toads with LPG gas is not humane and we cannot recommend it at this stage.

The RSPCA would dearly love to recommend an alternative humane method for culling toads. We recognise that people are reluctant to fill freezers with toads. However, to date, there are no obvious mass extermination methods that have proved effective and humane. If any come to light we will be the first organisation to press for their recommendation and widespread use.

M. Beatty

RSPCA Queensland



A before shot of an existing fence line to be replaced with wildlife friendly fencing. Note the box wire mesh extends all the way to ground level. Although koalas can climb over this, the existing wallaby population found it very difficult to access.



The after shot of the above box mesh fence line. It has been replaced with a galvanized pipe fence with a clearance of 75 cm from the ground level to the first pipe. The fence serves the dual purpose of being wildlife friendly while containing the owner's horses.

References

Redland Shire Council Fact Sheet – Fauna Friendly Fencing

WPSQ: Fauna Friendly Structures.

flora profile

Passionfruits - how to tell the weeds from the natives

Article by Darryl Larsen
Land for Wildlife Extension Officer
Gold Coast City Council

Around 500 species of the genus *Passiflora*, the passion fruits or passionflowers, are found world wide but only about six species are commonly found in Southeast Queensland. These include native species and introduced, naturalised species. One of the introduced passionfruit is grown commercially while the others are environmental weeds. How do you tell if passionfruit you find on your property are native species or environmental weeds?

All passionfruit species found in Southeast Queensland are tendril climbers. The fruit, which range from 1 to 7.5 cm in diameter, are typically green, maturing to dark purple or black in some species. Flowers are often showy, white or red-purple or a combination of these colours. Leaves are alternate, lobed and in some species small raised glands may be present on the leaf stalk. If the plants are behaving like invasive, destructive weeds, smothering native vegetation

then you can be fairly confident they are one of the introduced species and should be controlled. However, just to be sure, you can use leaf, flower and fruit characteristics for more precise identification.

Native passionfruit in Southeast Queensland

There are two native species - *Passiflora aurantia* var. *aurantia* which is found in moist open forest and *P. herbertiana* which is more common in rainforest. Neither of these species display the invasive smothering behaviour of the weedy passionfruit. Both native species have small paired glands on the leaf stalk right next to the leaf base. Some introduced passionfruit species also have glands at other positions on the leaf stalk but not right next to the leaf base.

Common introduced passionfruit in Southeast Queensland

Passiflora edulis the familiar, large, purple-fruited passionfruit we buy for our fruit salad is the only commercially grown species. The large leaves, to 20 cm, are deeply 3-lobed and finely toothed.

Passiflora edulis was introduced to Queensland prior to 1900 and has long been naturalised in coastal areas. Many people have this one in their gardens and will know that it can sometimes get away into the bush but does not seem to be as invasive as some of the other introduced species.

The two nasties most likely to be causing serious problems in native bushland are Corky Passionflower (*Passiflora suberosa*) and White Passionflower (*Passiflora subpeltata*). Neither of these will go down well in your fruit salad but birds and other animals are partial to the fruit and help to spread them around. Presumably these weeds were introduced as garden ornamentals as the fruit would be of no commercial interest.

A third local, weedy species also spread by birds is *Passiflora foetida* with the delightfully contrasting common names of 'love in a mist' and 'stinking passionfruit'. It doesn't seem to be quite as common, locally, as the other two weedy passionfruit.

Native passionfruit species of Southeast Queensland

<i>Passiflora aurantia</i> Native, Red or Blunt-leaved Passion Vine	
Flower	Red to salmon coloured, mainly in winter, 4-10 cm diameter
Leaf	Usually 3-lobed with rounded tips, up to 4 cm long. Two small raised glands on leaf stalk very close to leaf base
Fruit	Round, green with greyish pulp to 3 cm diameter - is described as edible but not appealing
Habitat	Moist eucalypt forest
<i>Passiflora herbertiana</i> Native Passion Vine	
Flower	White to cream to 7 cm
Leaf	3 broad, shallow lobes with pointed tips. Two small raised glands on leaf stalk very close to leaf base
Fruit	Green, to 4 cm with edible fruit
Habitat	Rainforest



Native Passionfruit (*Passiflora aurantica*). Photo by Glenn Leiper.



Native Passionfruit (*Passiflora herbertiana*). Photo by Glenn Leiper.

Introduced passionfruit species naturalised in the SEQ bushland

Passiflora suberosa Corky Passionflower

Flower	Small, white to greenish
Leaf	3-lobed with pointed tips. Small glands towards middle of leaf stalk.
Fruit	Purple-black, about 1.5 cm

Passiflora subpeltata White Passionflower

Flower	White, tinged with green about 5 cm across
Leaf	3-lobed with rounded tips. Small glands scattered along leaf stalk.
Fruit	Green, inedible, about 4 cm diameter

Passiflora foetida Stinking Passionflower, Love-in-a-mist

Flower	Purple-white to 5 cm.
Leaf	Broadly 3-lobed and hairy with rather pointed tips, to 10 cm long. No glands on leaf stalk. Leaves have unpleasant smell.
Fruit	Green initially and enclosed by a tangled mesh of fine sepals ('love in a mist'?) turning yellow-orange. While the pulp is described as edible there is not much of it.



Passiflora suberosa.
Photo by Darryl Larsen.



Passiflora suberosa glands occur away from the base of the leaf. Both native passionfruit species have glands right near the leaf base. Photo by Darryl Larsen.

Passiflora subpeltata.
Photo by Dept. Natural Resources and Water.



Passiflora foetida.
Photo by Forest & Kim Starr (USGS).

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Weeds Australia, www.weeds.org.au - distribution and identification of weedy *Passiflora* spp.

Mangroves to Mountains: a field guide to native plants of SE Qld and NE NSW. Logan River Branch SGAP (Qld region) Inc. 2002. Copyright Publishing, Brisbane.

fauna profile

Summer Migrants

Article by Janet Whish-Wilson
Land for Wildlife landholder, North Arm
and Deborah Metters
Land for Wildlife Regional Coordinator

Every spring / summer, as regular as clockwork, the northern migrant birds arrive in Southeast Queensland. Their distinctive loud calls dominate our sounds of summer.

From ancient times the migration of birds has been a source of wonder as part or whole populations, involving millions of birds, shift on a regular basis from one defined area to another and then back again. While the all important reasons are temperature, food and breeding the complete answer is more complex. Banding schemes record and study flight paths to further understand the biological wonders of these phenomenal creatures. Much knowledge is being accumulated about migratory species and also the nomadic movements of birds within our continent.

Here in Australia there are over 200 regular migrants – while some move from one part of Australia to another, others arrive here from half a world away after some staggering feats of endurance.

For example, a Bar-tailed Godwit was recently seen at Toorbul on the Pumicestone Passage, with a black leg band with markings C9 on it. This female bird was first caught, banded and had a satellite transmitter implanted in Alaska in July 2005. She was seen on Bribie Island in January 2006, then went back to Alaska, and is back again on Moreton Bay for summer. Unfortunately, satellite transmission only worked for one week. Bar-tailed Godwits have possibly the world's longest non-stop migratory flight of 11,000 kms from Alaska to Australia, taking about 5 days to fly direct without stopping – that's travelling at 90 kms/hr!

It is awesome to think that this 'rhythm of the seasons' still continues despite enormous development and drastic changes to the environment. In SEQ, we have some very interesting migrant bush birds which visit from the north but, unlike the migratory waders, they breed here over the spring and summer then depart in autumn to winter in Northern Australia and the islands of SE Asia.

The Common Koel is more often heard than seen as these birds often keep to dense leafy trees. It has a loud 'koo-eel' call which can be heard day and night.

*Photo by Geoffrey Dabb,
Canberra Ornithologists
Group.*



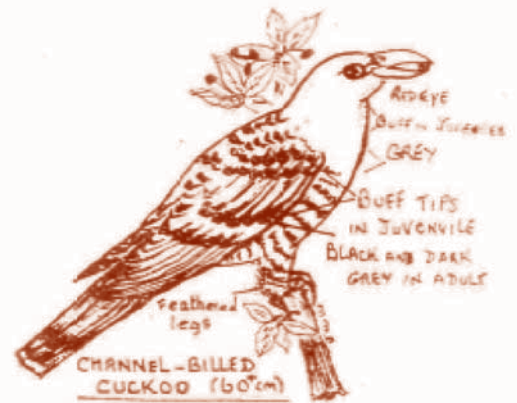
Arriving mid-September, the Common Koel and the Channel-billed Cuckoo are two migrants that possibly arouse the most interest because of their distinctive noisy calls. Both birds occur during spring and summer right down the east coast of Australia to southern NSW.

The male Koel announces his arrival with his far carrying repetitive call of "koowell". This is a territorial call to warn other males but also to attract females. When Koels get together they become very excited with flight chases and feverish noisy duets sung from the treetops. If suitable dense trees are near your place you could be in for some sleepless nights!

The Common Koel and the Channel-billed Cuckoo are both parasitic cuckoos that lay their eggs in other birds' nests. The Koel selects host nests of the Magpie-lark, miners and Figbirds. The Channel-billed Cuckoo chooses a host nest of larger species such as crows, ravens, Currawong, Magpie and some falcons.

A familiar sound is that of Channel-billed Cuckoos making their loud screeching call of "kork-ork-ork" as they fly out from tall trees. Often they are followed by a bevy of crows giving chase while adding their raucous calls to the din. Channel-bills follow tall treed areas near watercourses seeking native fruits, especially ripe figs. They also devour large insects like stick insects.

After cunning surveillance of a host's nest the prominent glossy black male Koel loudly attracts attention enticing the nesting bird to give chase which allows the camouflaged female to quietly sneak onto the nest, quickly deposit her egg, then remove one to keep the count the same. A Koel chick instinctively pushes other baby birds out of the nest so it can receive all food brought to the nest by its foster parents.



*Channel-billed Cuckoo.
Drawing by Janet Whish-Wilson*

Channel-billed Cuckoo chicks do not kick out the chicks of the host species, but still the host chicks do not survive as they are possibly starved to death by the dominance of the cuckoo.

Koel chicks rapidly grow to a huge size being constantly plied with food in response to its incessant plaintive calls. Adult Koels are fruit eaters but the young are fed insects by the foster parents.

After leaving the nest a Koel chick will follow the smaller foster parents who become quite frantic in their efforts to feed the demanding squawking juvenile. Eventually the chick is deserted by the weary adults and can sometimes be seen looking rather lonely sitting on a fence or branch. Is he thinking I now have to start calling like a Koel and change to a fruit diet? Some people think that the adult Koels return at this stage to train him. We don't know really, it remains one of Nature's intrigues.

In mid-March the adult Koels depart on their journey north to winter in Papua New Guinea and Indonesia. Apparently young Koels do not depart until two weeks later on the same journey travelling for the first time with only their innate knowledge to guide them. Truly one of the marvellous wonders of Nature.

book reviews

Rainforest Trees and Shrubs: A field guide to their identification.

by Gwen Harden, Bill McDonald and John Williams.

The long awaited update to the famous “red book” has hit the streets. With a spectacular glossy front cover, featuring fruit of the Peanut Tree, one can be forgiven for initially mistaking this volume for a coffee table picture book. But once inside, the familiar line drawings and flow of the key bring comfort that the “red book”, published in 1984, is now bigger and better.

The new “red and green” book is a key to the identification of over 800 species of rainforest tree and shrub from Victoria to Central Queensland using the characteristics of their leaves. One can usually find leaves in the rainforest as compared to flowers, so a key based on leaves rather than the usual botanical practice of using flowers is a boon to amateur naturalists who would like to know the name of the tree they just hugged.

So on into the world of domatia, stipules, oil-dots and other such leafy features. The detailed aspects of leaf structure need to be carefully observed to work this key. However, with a bit of practice, and a field lens, most species can be readily identified. The book contains detailed explanations on the various structures

found in a leaf to aid the beginner.

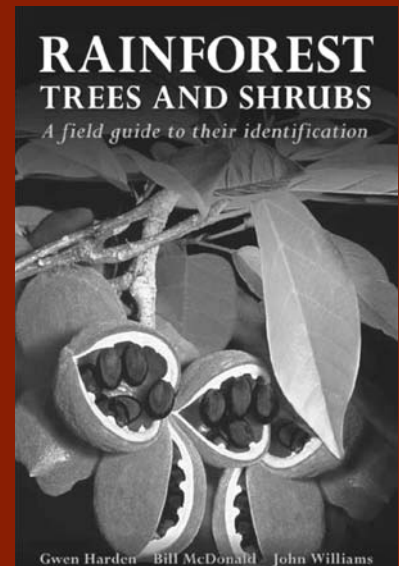
This new edition has been expanded to cover a wider area – further north into Central Queensland and further west to capture drier vine scrubs. Changes to names, of which there have been lots, and new species have also been incorporated, so everything is up to date for at least one week. There is even a new section on the many Mistletoe species found in or near rainforests.

Sadly, the new edition is dedicated to the late John Williams, who passed away in 2005, aged 73, before the upgrade was complete. Thanks John for a labour of love.

I can only agree with the testaments that accompany this book – my old red book is very dog-eared and begging to be retired. I only hope there are not too many species to wade through and discount each time I search the key. Only time will tell.

“Today I received the updated ‘red book’ I can guarantee it will end up with as many dirty finger prints as my earlier book.”

“The book is even better than anticipated. The previous edition has been my mainstay for identifying the rainforest plants in my garden and local area for many years.”



Typical line drawing showing key distinguishing features of a species.

Published by Gwen Harden Publishing, 2006. Available from the Publisher or from the Qld. Herbarium on 3896 9326. Soft cover, black & white, 264 pages ISBN: 9 7755 5305 RRP \$50.00

Discovering Australian Butterflies

by Vanessa Bugg.

The first thing you will notice about the front and back sections of this book are the great photographs of butterflies in their natural state (e.g. not pinned-down). You can tell that the author loves the aesthetics and diversity of the butterfly life-cycle.

The main section of this book is detailed descriptions (pinned-down photos, distribution, gender differences and larvae information) of 60 common Australian butterflies, most of which are found in SEQ.

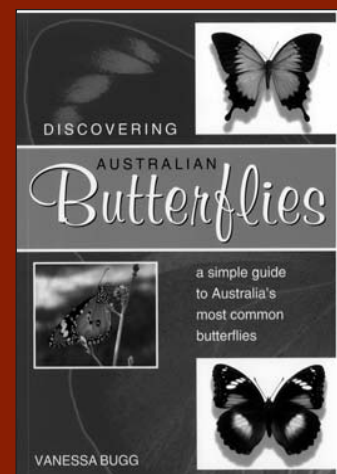
The author lives in the Noosa Hinterland and has recorded 85 species of butterfly on her property.

Good advice is provided about not using pesticides as they will kill butterfly larvae.

Many introduced plants (including weeds such as lantana) are larval food plants. This book identifies native host plants generally to a genus level (e.g. Acacias) and also the exotic host plants.

There is an excellent glossary at the beginning of the book and some interesting ecological notes about ant associations and butterfly trivia. The end of the book includes a section on how to rear butterflies and a useful 5 page observation chart. A value for money book for those interested in butterflies.

Book reviewed by Deborah Metters.



Published by Skyring Creek Books 2006. Soft cover, full colour, 118 pages ISBN: 0 9775 1370x RRP \$29.95. Available from the publishers on (07) 5485 5109 or info@australianbutterflies.com.au

practicalities

Coop-coop-coop-gobble-gobble-gobble...and Other Noises of the Night

Nick Clancy
Land for Wildlife Extension Officer
Caloundra City Council

Trying to mimic the calls of some animals is quite difficult and potentially quite embarrassing, especially if attempted in public. But transcribing calls into text (such as that of the Marbled Frogmouth in the title above) is an even greater challenge, and some would argue somewhat ineffective.

For the purposes of identification it's generally a lot easier to hear an animal calling in the bush at night than it is to see them. By learning to recognise nocturnal calls you can learn more about what wildlife is moving about on your property. If you've ever heard a strange bush noise of the night and not known what it was, the adjacent table should be a useful reference to better acquaint yourself with the calls of nocturnal animals that you might hear on your property.

Frogs

With the warmer nights of summer, male frogs advertise by calling for mates. There are too many species in SEQ to cover them in this article, but an excellent CD titled *Australian Frog Calls Subtropical East* (by Dave Stewart of Nature Sound) has all these calls. Identification can be done by elimination; by looking through your frog book at the distribution maps and then the habitat type, you can quickly short list which species are likely to occur on your property. See Tech Note 1 in your folder for a list of good frog identification books. Then work through the calls of these species until you hear the one calling at your place.



The Marbled Frogmouth has rich reddish-brown plumage marbled with black and white. It has a loud gobbling territorial call ending with a loud bill clap. An easy way to distinguish the Marbled Frogmouth from the more common and widespread Tawny Frogmouth is by its distinctive call. Photo by Glenn Threlfo.



Male Koalas (like this one above) make a distinctive low-pitched bellowing noise that can be heard up to 800 metres away. Such calls serve to advertise their presence to other males and to attract receptive females. Male Koalas call more often during spring and summer evenings. Female Koalas can also use a high-pitched call when threatened or in distress. Male Koalas are generally larger than females, have a flatter face and can have a brownish stained chest from their scent glands. Photo by M. Logan, ABC Science.

Mammals

Numerous mammals also vocalise at night with the male Koala grunting call being a distinctive night time noise of the open Eucalypt forests in our region. You may be surprised to learn that some of our gliders also make distinctive noises at night.

Birds

Like most birds, owls generally have more than one vocalisation. For example one call may be used as an alarm call; another may be a territorial call while another may be associated with breeding behaviour. Calls will also differ between the

sexes, and between adults and juveniles in many species. It is also worth keeping in mind that some diurnal (daytime) birds such as the Willie Wagtails, Common Koel and the Fan-tailed Cuckoo will sometimes also call at night.

Reptiles

Another common noise of the night in SEQ homes is that of the introduced Asian House Gecko. This gecko lives and breeds in and around buildings, often calling both day and night with a distinctive loud 'chuck-chuck-chuck' call.

Where possible the call that is considered the most likely to be heard or the most definitive in terms of assisting identification has been listed in the adjacent table. If you don't have access to the internet, a range of audio CD's and cassettes are available commercially (see references (left) and also Tech Note 1).

So next time someone asks you "Did you hear that? It's kind of like a turkey with a frog stuck in its throat?" you can confidently reply "No, that's the call of the rare Marbled Frogmouth."

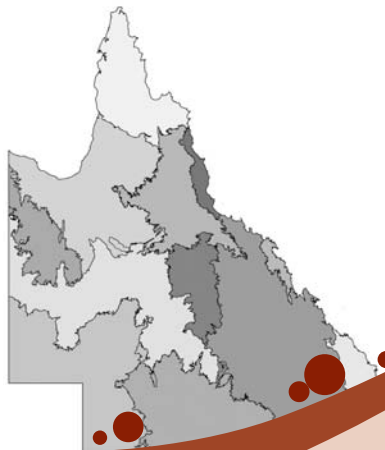
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- Strahan, R. (ed.) (1998) *The Mammals of Australia*. Australian Museum / Reed New Holland.
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- Stewart, D. *Australian Bird Calls: Subtropical East* (CD). Nature Sounds.
- Stewart, D. *Voices of Subtropical Rainforests* (CD). Nature Sounds.



Species	Habitat	Call *	Reference
Powerful Owl	Rare. Extensively vegetated areas	Low slow 'whooh-hooo'	www.owlpages.com/sounds.php www.birdsinbackyards.net/feature/top-40-bird-songs.cfm
Barking Owl	Uncommon. Open forests	Rapid dog like 'wook wook'	www.owlpages.com/sounds.php
Southern Boobook Owl	Widespread & common	Familiar 'boobook' or 'more pork'	www.owlpages.com/sounds.php www.birdsinbackyards.net/feature/top-40-bird-songs.cfm http://abc.net.au/archives/av/birds.htm
Sooty Owl	Rare. Tall wet forests	Descending whistle-like falling bomb	www.owlpages.com/sounds.php
Masked Owl	Forests & woodlands	Loud drawn out screech 'cush-cush-sh-sh'	www.owlpages.com/sounds.php
Barn Owl	Most habitats	Hoarse thin wavering screech 'skee-air!'	www.birdsinbackyards.net/feature/top-40-bird-songs.cfm
Eastern Grass Owl	Uncommon. Grasslands & low growing vegetation	Hissing scream & cricket like chirruping trill	www.owlpages.com/sounds.php
Tawny Frogmouth	Common. Most habitats	Resonant, low, pulsing 'oom-oom-oom-oom-oom'	www.birdsinbackyards.net/feature/top-40-bird-songs.cfm http://abc.net.au/archives/av/birds.htm
Marbled Frogmouth	Restricted to larger patches of rainforest generally below 700m	Rapid descending 'coop-coop-coop-gobble-gobble-gooble-tok'	http://threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10640 http://lamington.nrsm.uq.edu.au/Documents/Birds/marbledfrogmouth.htm
Australian Owlet Nightjar	Common. Most habitats with trees	High pitched grating 'chirr-chirr-chirr'	www.birdsinbackyards.net/feature/top-40-bird-songs.cfm
Spotted Nightjar	Common in drier habitats west of range	Rising 'caw-caw-cawising - tukka-tukka-tukka-tuk'	http://abc.net.au/archives/av/birds.htm
White-throated Nightjar	Common in a variety of habitats	Rising deep 'kooks' accelerate into a weird staccato laugh	http://www.abc.net.au/archives/sound/b094002.ram
Bush Thick-knee (Curlew)	Vulnerable. Generally in more open habitats	A far carrying eerie whistling call – repeated or chorus	http://abc.net.au/archives/av/birds.htm
Flying foxes	Three species in a variety of habitats	Can be heard 'squabbling' in Eucalypt blossoms at night	http://www.sydneybats.org.au/cms/# http://sres-associated.anu.edu.au/batatlas/at_foxes.html
Koala	Uncommon in Eucalypt forests & woodland	Males make a deep grunting bellow generally in warmer months	http://abc.net.au/archives/av/mammals.htm https://www.savethekoala.com/koalassocialise.html
Yellow-bellied Glider	Rare. Mature tall open Eucalypt forest	Loud, short high pitched shriek that subsides into a throaty rattle	http://www.wildlife.org.au/wildlife-gliders.php?page=w-gliders-yellowbellied.html
Sugar Glider	Forests, including regrowth	Loud yapping or 'yip yip yip'	http://www.wildlife.org.au/w-gliders2.html
Common Brush-tail Possum	Dry & wet forests and suburban gardens	A throaty 'ha-ha-ha' in breeding season	http://www.epa.qld.gov.au/nature_conservation/wildlife/native_animals/nocturnal_animals/mammals/common_brushtail_possum/
Dingo	Most habitats	Howling call	http://abc.net.au/archives/av/mammals.htm
European Fox	Most habitats	High pitched 'yap'	http://www.foxforest.com/upclose/voicescarry.shtml

* Most call descriptions from Pizzey & Knight, *Field Guide to the Birds of Australia* and Qld Museum, *Wildlife of Greater Brisbane*.



A flourishing Richmond Birdwing Vine (*Pararistolochia praevenosa*) on the patio of Ray and Pam Seddon's property. They have flagged 5 Richmond Birdwing Butterfly pupa currently attached to the vine with 2 mature caterpillars moving onto a nearby tree to pupate. This photo demonstrates that landholders can help conserve threatened species, even right on their front doorstep!

Photo by Deborah Metters.



Letter from the State

Greetings Southeast Queenslanders! February 2nd is World Wetlands Day. It marks the date of the signing of the Convention on Wetlands on 2 February 1971, in the Iranian city of Ramsar. Each year, government agencies, non-government organisations, and groups of citizens at all levels of the community have taken advantage of the opportunity to undertake actions aimed at raising public awareness of wetland values and the Ramsar Convention. This year the focus is on wetlands and fisheries in recognition of:

- The needs of the one billion people who rely on fish as their primary source of animal protein;
- The state of the world's fisheries where 75% of commercially important marine and inland water fish stocks are either currently overfished or being fished at their biological limit, and where the effects of unsustainable aquaculture practices on wetland ecosystems are of growing concern;

• The important role that inland and coastal wetlands play in supporting fish and fisheries, including large-scale, commercial fisheries, subsistence fishers, wild fisheries and farmed fish.

• The critical role that coastal wetlands play as spawning and nursery areas for many marine species.

It is well recognised that wetlands play an important role in maintaining biological diversity. They also perform vital functions such as water purification, nutrient retention, maintenance of water tables, storm protection, flood mitigation, shoreline stabilisation, erosion control, and groundwater recharge - all of which are important for Australia's unique natural resources and landscape. Wetlands also provide for social and cultural wellbeing and, if managed wisely, they can provide economic benefits.

The special values and functions of wetlands can only be maintained if ecological processes are allowed to continue to function. Unfortunately, wetlands are amongst the most threatened ecosystems worldwide due largely to destructive practices such as draining, infilling, pollution and overexploitation of their resources.

A number of Queensland's wetlands are nationally and internationally acknowledged for their significant

values. Five wetlands are listed under the international Ramsar Convention and 210 are nationally recognised as Important Wetlands in Australia.

Moreton Bay is listed as a Ramsar site as the bay supports numerous rare and endangered species, it plays a substantial role in the hydrological and ecological functioning of a major river basin and it regularly supports a substantial number of waterfowl. Moreton Bay is one of four main over-wintering locations for migratory waders along the east coast of Australia.

So keep an ear out for any wetland events happening in your area or contact your local council or environmental organisations for information on any forthcoming events.

As always, if you wish to receive the State Land for Wildlife newsletter, please contact me and I will add you to the state mailing list.

Lesley Hale

Land for Wildlife State Coordinator
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Land for Wildlife Southeast Queensland is proudly managed by SEQ Catchments (the accredited regional body for Natural Resource Management in South East Queensland) and proudly delivered by the following 14 Local Governments:



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