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South East Queensland

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Owlet-nightjars - Australia's smallest nocturnal bird

The Australian Owlet-nightjar is a tiny owl-like bird with characters of both nightjars and frogmouths. It feeds on the wing like a true nightjar and also on the ground like a frogmouth. It is widespread over most of Australia, though it is rarely seen. Their eyes do not reflect in the spotlight, so they are often overlooked even when one is looking for them.

They roost in hollows in dead or live trees, in nest boxes or even holes in cliff faces. They seem to know all the hollows in their area and if disturbed will fly straight to another hollow, if one is available of course. They like to sit at the entrance of the roost to preen and sunbathe when it is cool or if the hollow becomes too warm in summer to cool off. It will often give its churring call from this position.

An Owlet-nightjar weighs little more than a single slice of bread.

Australian Owlet-nightjars are mostly heard calling during the first few hours after sunset. As well as the musical churring call they give a "quar-rr-k-a-kak", a surprisingly loud and penetrating metallic screech for such a tiny creature. An adult is only about 20 cm from beak to tail and weighs 40-50 grams about the weight of a single slice of bread.

An old name for them was "Moth Owl" however we think they look like the tiny insectivorous bats that fly about just after dusk. Their flight has also been described as butterfly-like, but we have seen them fly very straight and fast. They feed on flying nocturnal insects.

When seen peering over the edge of the roost the Owlet-nightjar looks incredibly like a Sugar Glider with its large dark eyes

An Australian Owlet-nightjar using a nest box, and recently fledged (lower right). Photos by Rob Kernot.

and delicate stripes on its face. Up close it has prominent bristles surrounding its broad bill, the head has almost owl-like mobility and their feet are a pretty pink colour with very long toes. They do not have powerful feet and legs like an owl as they usually catch their food in their beak.

Owlet-nightjars do not like to leave their roost until after the last kookaburra has called. Their nest hollow is lined with eucalypt leaves plucked green. They are not fussy as to the height or size of the hollow, and have been known to use hollow fence posts. If the hollow is really big they will often place a heap of leaves in one corner and lay their 3 or 4 white rounded eggs there.

A friend who lives near Buderim had two Owlet-nightjars fledge in November 2008. The adults had laid their eggs in a glider nest box made by Hollow Log Homes. The eggs are incubated by both parents, for about 25 to 27 days. The young fledge around 22 to 28 days after hatching, by which time they resemble their parents.

Article by John and Lyla Hansen
Land for Wildlife members, Forest Glen

Reference & Further Reading

Hollands, D. (2008) *Owls, Frogmouths and Nightjars of Australia*. Bloomings Books.
See Book Review page 13.

Contents

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editorial

Recent wet stormy weather in South East Queensland has produced an array of wildlife activity demonstrating why this region is a biodiversity hotspot. This edition showcases some of the appreciated and not-so-appreciated animals that you may find on your property due to humid conditions.

Insects often fall more on the unappreciated side of wildlife guests. Despite making up 99% of the animal kingdom and their essential role in life on Earth, some invertebrates have an unfortunate reputation. I know people who will flight upon seeing a caterpillar or cockroach and I can get a chill down my spine from encounters with large spiders.

Since invertebrates can not regulate their own body temperatures, they have to rely on external heat sources for optimal activity and breeding conditions. This is why we see an abundance of invertebrate activity during summer. Summer is also an active time for many higher animals such as birds, frogs, reptiles and mammals because they prey on invertebrates.

This edition profiles a group of sometimes unwanted arachnid - the burrowing spider. Alan Wynn shares with us his admiration for these animals, their cryptic behaviour and their surprisingly fragile biology. In keeping with the spider theme, Alan coincidentally received a photograph from a local Land for Wildlife member of a huge huntsman spider. This spider turns out to be the largest huntsman in Australia - check out the image on the backpage.

One of the more appreciated and admired insects is the butterfly. An article by Dr Don Sands discusses the importance of ridgetops and hilltops in butterfly ecology. I recently accompanied Don to Smith's Rainforest, a Land for Wildlife property in western Brisbane, that contains an important ridgetop for butterflies. See property profile pg. 7.

An abundance of butterflies had gathered for their "hilltopping" behaviour whereby females can choose the most competitive male. It is a wonderful experience to be surrounded by such a diversity of colourful animals. However, it also sharpened my awareness of how small, but ecologically vital, areas are rarely afforded permanent protection. Programs like Land for Wildlife are one of the few mechanisms designed to encourage conservation of such areas with Land for Wildlife members proving to be invaluable assets in the fragmented landscape of SEQ.

The frontpage article by Land for Wildlife members on the cute Owlet-nightjar ties in nicely with the release of a beautiful book on Australian Owls (see book review). An article on Hygrophila shows the importance of early detection and control of weeds. Stephanie Reif has returned to work as a Land for Wildlife Officer on the Sunshine Coast and has contributed a great article explaining "gum" trees.

Two new articles - Fauna Vignettes and My Little Corner - have been introduced in 2009. Both features are designed for Land for Wildlife members to share their stories. Fauna Vignettes will showcase wildlife photographs from Land for Wildlife properties. My Little Corner offers a space for Land for Wildlife members to reflect on their property, without having to write a full property profile. During 2009, all published Fauna Vignette and My Little Corner articles will receive a free copy of the outstanding DVD *Suburban and Environmental Weeds of South-East Queensland* (profiled on page 13).

I welcome any comments or contributions that you may have.

Happy New Year and enjoy.

Deborah Metters

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Landholder Registrations, Land for Wildlife SEQ - 01/01/2009

Registered Properties	Working Towards Registration	Total Area Retained	Total Area under Restoration
2413	531	44, 414 ha	2,664 ha

fauna vignettes

Eating Clay and Navigating Fences - Koala adaptation in SEQ

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

Photographs by Heather Preston
Land for Wildlife member, Mt Cotton

This series of photos came from a Redland City Council Land for Wildlife member at Mt Cotton. They show a Koala eating some clay soil and then contorting itself to climb over a mesh wire fence.

According to John Callaghan, Koala Conservation Project Manager at Gold Coast City Council, Koalas are often reported to eat a small amount of soil, presumably for trace minerals. Eucalypt leaves are generally low in nutrients, especially in areas with poor soil and during drought. To compensate, Koalas eat dirt to obtain the required minerals. A container of fresh clay-soil is generally provided in enclosures for captive Koalas.

Jenny Davis, Redland City Council Wildlife Officer further suggests that the digestion of dirt may help Koalas breakdown eucalypt leaves and may help in the detoxification process of the compounds contained within eucalypt leaves. But how do Koalas know which soils have the correct trace minerals? Given that Koalas have an excellent sense of smell, maybe they detect the minerals by sniffing the soil prior to eating.

These photographs reinforce the importance of wildlife friendly fencing and responsible pet ownership. A couple of branches or planks of wood positioned along either side of the fence would help the Koala move quickly over the fence. Additionally, trees planted strategically along the fence line would provide additional options for movement. These photos show how vulnerable this Koala would be if it were to encounter unrestrained dogs. Land for Wildlife landholders play a vital role in providing safe havens and corridors for wildlife.

Fauna Vignettes
is a new feature designed for you - Land for Wildlife members - to send in images of wildlife from your property. In 2009, all contributors to Fauna Vignettes will receive a free *Suburban and Environmental Weeds of South-East Queensland* DVD valued at $64.90 (see review pg. 13). Send good quality images and explanations to the Editor (see pg 2).

fauna profile

Burrowing Spiders

Article by Alan Wynn
Land for Wildlife Extension Officer
Sunshine Coast Regional Council

I first discovered the entrance to a trapdoor burrow as a child visiting my grandparent's property on Mt Tamborine. Being only eight years old with an imagination fuelled by nature documentaries and news stories of Sydney Funnel Webs I was certain that if I even put my finger near the small moss covered lid an enormous black, hairy spider would leap out and sink its huge fangs into my tender pinky.

I now know that it is the home of a Golden Trapdoor Spider (*Euoplos* spp.) and like other trapdoors it is considered to be non-aggressive or even timid and when threatened will run away or huddle motionless with its legs drawn in. There are many different species of trapdoor spider in SEQ and, contrary to their name, many of them do not make doors at the entrance to their burrow. Other spiders in this group have burrow entrances that vary from the leaf-adorned, widely-flanged collar of the Brisbane Tube Spider to the cryptic entrance of the Brisbane Brush-footed Trapdoor with its twin doors hidden below the surface.

Trapdoor spiders (*Idiopodidae*, *Barychelidae* and *Dipluridae*) together with mouse spiders (*Actinopodidae*), funnel web spiders (*Hexathelidae*), wishbone spiders (*Nemesiidae*) and whistling spiders (*Theraphosidae*) all belong to a much larger grouping of primitive spiders called Mygalomorphs.

Most of the primitive spiders, especially the females, spend all or part of their lives in burrows or sheltered under rocks, rotting logs or in tree crevices. They can be very long-lived, with the females of some species not reaching sexual maturity for 5-7 years and having a lifespan of up to 20 years. The males tend to be much shorter-lived and will only live until they reach sexual maturity, when they either die at the end of the season, during courtship or after mating.

Courtship can be a dicey affair for male Mygalomorphs. In some species of trapdoor and mouse spiders, mating takes place in the burrow of the female and his success (and survival) depends on whether she has already mated and how long it has been since her last meal.

Wishbone spiders are named for the structure of their burrow which is mostly Y-shaped with one arm of the Y shorter than the other and not quite reaching the surface (the short arm is encircled in the above photo). In one genus (*Namea* spp) the short arm ends just below the surface and is thought to allow the spider to escape attacks down the main shaft by retreating into the short arm and breaking through the thin crust to the surface. Another genus of Wishbone Spider (*Aname* spp) the short arm ends well below the surface and is thought to allow the spider to survive flooding by trapping a bubble of air when the burrow floods. Wishbone spiders are also called False Funnel Webs but are able to be distinguished from true Funnel Webs by their hairy head. Photo by Alan Wynn.

Male Funnel Web Spiders are thought to find the female by following a scent trail of chemical attractants. The male coaxes the female to leave the burrow and then using special spurs on his second pair of legs he locks the female into the attack position while he reaches under her abdomen with his pedipalps to mate. After mating the male Funnel Web may be killed and eaten or may escape to mate with other females.

Mygalomorph spiders are dependent upon their burrows or other shelter for survival, because despite their large size they are really quite fragile. They are very prone to dehydration because they possess only two pairs of 'book lungs' on the underside of the abdomen and these must remain moist to function. For this reason most encounters with these spiders are with the males that roam about after rain at the end of summer looking for a mate. The modern spiders (Araneomorphs) have lost one pair of book lungs and possess a tracheal breathing system like insects and are therefore are not prone to desiccation. Some other features that make Mygalomorphs distinct from modern spiders are:

- Their large chelicerae (mouthparts), which have vertical hinged fangs that move in a downward stabbing motion (except for Mouse Spiders which have a diagonal, pincer like motion).
- Long, leg-like pedipalps found either side of chelicerae often giving the spider the appearance of having an extra pair of legs.
- Silk use is limited to lining burrows, trip lines and making egg sacs. Use of silk for dispersal of juveniles by 'ballooning' is rare.
- Some possess a specialised structure on their mouthparts called a 'rastellum' which is used to dig their burrows.

For spiders that spend most of their lives underground flooding is an ever present threat and there is a variety of burrow structures to help the spiders survive flooding events. These range from thick doors, silk plugs and specialised burrow structures such as long above ground tubes concealed against tree trunks, rocks and within grass tussocks. Some of these structures may help to restrict moisture loss in very dry environments or give protection from predators. Mygalomorph spiders are also very hairy and this may help prevent drowning by trapping a thin layer of air around the spider. For this reason a spider found on the bottom of the pool should not be assumed dead and will often recover if removed and placed in a safe place.

The main predators of burrow-dwelling spiders are centipedes and spider wasps (*Pompilidae*). Ichneumon wasps (*Ichneumonidae*) are parasitoid wasps that lay their eggs into living spiders using a specialised elongated ovipositor.

The Brisbane Brushfooted Trapdoor is able to climb very smooth surfaces (they share this ability with the whistling spiders). They are able to do this because the end of each leg has specialised tufts of hair. Photo by Robert Whyte, SOWN, visit http://www.saveourwaterwaysnow.com.au

This burrow may belong to a trapdoor or wolf spider. It is constructed from spider silk and grass leaves and was concealed within the grass tussock. The entrance was approximately 150 mm above the ground, presumably to avoid flooding. Photo by Deborah Metters.

Now just to confuse things a bit not all burrowing spiders are primitive spiders. Wolf spiders (*Lycosidae*) and some species of Shield Huntsman Spiders (*Neosparassus* spp) are modern spiders and also build burrows. Some wolf spiders build burrows with lids while others have a collar of silk and vegetation.

Like many people I used to be fearful of spiders (particularly large ones) and I think it is probably in part an instinctive behaviour. However, as I discovered more about their lives and habits, fear has turned to admiration and respect for these truly amazing creatures.

While not all burrowing spiders are dangerous to humans it is recommended that you do not touch, handle or deliberately provoke them or interfere with their burrows. Do I lift those little doors or poke my finger down their burrows? No way! And I always give my boots a good tap before I put them on.

Trapdoor Spider burrows are often found in creek banks and next to tree roots in rainforest, sometimes in great numbers. They can be so well camouflaged many people do not notice them. Undamaged trapdoor lids may show concentric annual rings from where the burrow has been widened to accommodate the growing spider. Photos by Alan Wynn (top) and Deborah Metters (lower).

A burrow of the Funnel Web Spider is often not obviously funnel shaped and may have 2-4 entrances that can be floppy or held open by strands of silk. They can be X or T shaped and are often found under rocks, rotten logs or in the crevices of tree trunks. They are mostly found in rainforest but may also be found, albeit rarely, in ex-rainforest pasture areas like Maleny or in lawns (where this photo was taken). Photo by Alan Wynn.

This female Funnel Web Spider was found under a rainforest log. It is raised in attack position and is sending a signal to stay clear. Photo by Deborah Metters.

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Ron Atkinson (pers comm).

Robert Raven's Soapbox - http://www.uq.edu.au/~xxrraven/index.html

The Australian Tarantula Association - http://www.theata.org/species.php

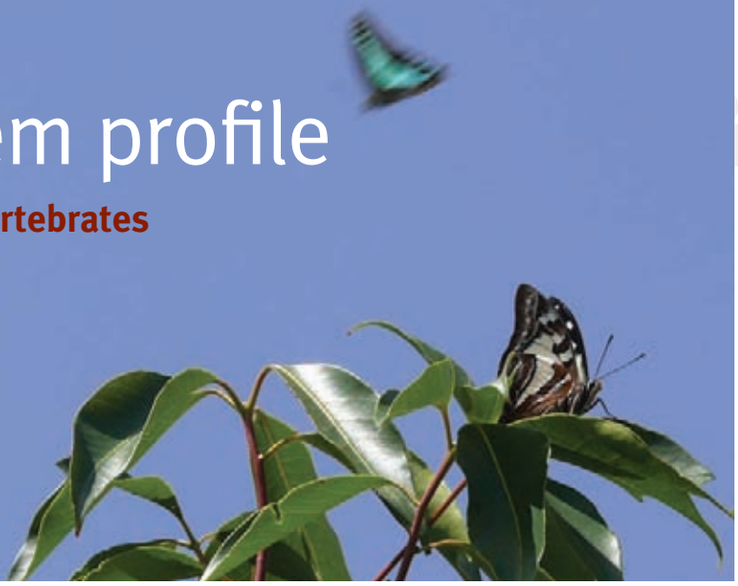
The Find-a-Spider Guide - http://www.usq.edu.au/spider/index.htm

Australian Museum Fact Sheets - http://www.amonline.net.au/factsheets/index.htm#spiders

ecosystem profile

Ridgetops and Invertebrates

Article by Dr Don Sands
Honorary Research Fellow CSIRO and Land for Wildlife member, Brisbane



Tailed Emperor and Blue Triangle butterflies hilltopping on Mt Coolum. Hundreds of butterflies were competing for premium perching sites and flight paths. Photo by Deborah Metters.

A number of different Orders of insects worldwide use hilltops and ridgetops as places to find a mate and to allow competition among males to ensure genetic diffusion for variation and strength. The most common Orders with species that exhibit this behaviour are:

- Moths and butterflies (*Lepidoptera*)
- Beetles (*Coleoptera*) particularly *Buprestidae, Cetonidae, Scarabidae*,
- Flies (*Diptera*) especially *Bombylidae, Tachinidae,*
- Wasps (*Hymenoptera*) including *Sphecidae, Braconidae, Ichneumonidae,*
- Dragonflies (*Orthoptera*) and
- Bugs (*Hemiptera*) especially some *Pentatomidae*.

Not all species belonging to each Order, Family or Genus are hilltoppers or ridgetoppers, nor is the behaviour constant for each species. Some species congregate on hilltops but not on ridgetops, and vice-versa. Species can be regarded as:

(i) non-hilltoppers,

(ii) facultative hilltoppers (species that sometimes use hilltops), and

(iii) obligatory hilltoppers (species that must and always use hilltops for finding a mate).

The Bronze Ant-blue (*Acrodipsas brisbanensis*), named after "acro" meaning "summit" and Brisbane, is an obligatory hilltopping species whose larvae are predatory in ants nests. This Genus specialises in tricking ants to be nice to them. About 5 species of *Acrodipsas* are found across SEQ. Photograph by Martin Purvis.

Each species will have a preferred site on the hilltops whether it be a cleared area of dirt, a rock or formation, a low shrub of certain species, a tree or branch of a certain height and often the summit of the tallest plant on top.

"Hilltops are especially valuable for insects that disperse widely over the landscape when searching for food or breeding sites"

Hilltopping species tend not to breed on hilltops even when their food plants are growing there. This is because females avoid harassment by males during their slow and careful selection of a food plant and the process of egg deposition. Abrupt hilltops are preferred over ridgetops by some species but both may be important for each particular species.

Hilltopping is one of the main ways that insects can find a place where:

(i) Males are mostly present at the right time of the year.

(ii) Where males find others to compete for particular plant, rock or ground features, to give them an advantage over others of their own species.

(iii) Where a female can maximise the chances of finding a male or choose the most competitive male for mating.

(iv) To reduce the time window available for mating before females become unacceptable to males and consequently lay only infertile eggs.

Tall trees or certain species of trees are also used by some species in the same way for finding mates, sometimes or always when on hilltops.

Hilltops and ridgetops are especially valuable as landscape features for insects that have short vision and those that disperse widely over the landscape when searching for food or breeding sites. Sometimes they will only disperse in landscapes if there is a chain of hilltops in view. Some species will use a particular hilltop even if many kilometres from their breeding sites.

Clearing of native vegetation, occupation by human structures, fire, displacement by exotic plants and weed invasions are the major threats to the integrity of hilltops used by insects. Most hilltopping species will only use hilltops when there is native vegetation. It usually takes over 5 years for a hilltop to be "back in use" by the suite of most insects and for several species it can take 10 years or more after disturbance or fire. They will avoid burnt, cleared or otherwise disturbed areas.

If weeds (especially non-native grasses) have invaded a hilltop the insects will sometimes patrol or rest at the edge on the remaining natives down the slopes.

Regular burning and other disturbance should be avoided if hilltops are to be protected for use by insects. Facilities such as towers and viewing sites should always be constructed off the summits, even just 10 metres down a slope is preferable than on the ridgeline. Roads built along ridgetops often disrupt patrolling and mating by some insects. Intact vegetation on a hilltop or ridgetop should not be deliberately burnt. Fire can be avoided from reaching the summit during controlled burns as burning is usually conducted downhill and may be prevented from travelling uphill.

New South Wales legislation allows for the biodiversity assessment of hilltops before disturbance is allowed. Hilltopping and fire management for invertebrate conservation are topics that require more work, public awareness and political will to ensure that these crucial species in our ecosystems continue to survive in the fragmented landscape of SEQ.

property profile

Smith's Rainforest - A rare patch of history and diversity

Photographs by Fflur Collier
Land for Wildlife Extension Officer
Brisbane City Council

Few Land for Wildlife partners in Brisbane share a history with the land as long and as rich as that of the Smith family who have owned and farmed their property at Upper Brookfield since 1914.

Just as their forebears were pioneers in working the land, Mrs Edith Smith and her son Mr John Smith, are also pioneers in recognising the importance of the unique natural assets on their land and the need to protect and conserve these values for future generations. They joined Land for Wildlife in 1998 were also registered for a Nature Refuge in 2000.

Their property, 28.03 hectares in total area, is also unique and has a diversity of habitats as it spans four tall hilltops, and ridgelines, has steep north and south facing slopes and a forested gully running down to a creek. The area of retained habitat covers 7.5 ha and includes a quality 5.1 ha remnant of complex Notophyll/ Microphyll closed forest dominated by Hoop Pine. This area, known as Smith's Rainforest, is the largest remnant of this forest type left in Brisbane and an important link in a corridor along Moggill and Wonga Creeks.

"Smith's Scrub is possibly the most important hilltop of dry rainforest in the D' Aguilar Range" - Dr Don Sands.

Prior to the 1920s, the forest was all selectively logged, and further areas of land were cleared for farming pawpaws, bananas and other small crops. Areas of the land are still used for crop production today, along with Hoop Pine farm forestry.

John has been working hard over the years to expand the forest area and has a further 1.2 hectares under restoration.

In 2000, rainforest rehabilitation work began with 500 plants along the Smiths Lane riparian area, some supplied by a community nursery through the Moggill Creek Catchment Group. In 2001, another 2000 plants were planted in the gully in the middle of the property with a grant from the SEQ Rainforest Recovery Program. 300 more have since have been planted above the first planting area. Extremely dry conditions over the last ten years and damage from feral deer has resulted in a 50% loss rate in all but the original riparian planting.

Smiths rainforest is home to 216 species of plants, some rare and endangered. The diversity of fauna species in this area is yet to be quantified by formal scientific surveys, but preliminary surveys have found a high diversity of birds, spiders and butterflies.

Since 1985, the Pullenvale Environmental Education Centre has been bringing local primary school students groups each year to visits the Smiths, to learn about local history and the environment, and Land for Wildlife has been an important metaphor for this learning.

Drought and weeds are an ongoing challenge but with assistance from Brisbane City Council through the Land for Wildlife program, John hopes to reafforest all the degraded and non-farmed area on their land which would increase the habitat areas by a further 6.3 ha.

The Smiths are advocates for sustainable land management within the community. John believes the highly visible revegetation work near the creek is a good example to encourage more local landholders to get involved in restoration work, and is pleased to see the Land for Wildlife program expanding to assist more people in the area. John was pleased to showcase his property at the Open Property Day last September.

Smiths rainforest is regarded as the last viable habitat for many butterfly species in Brisbane. The location of the forest near to and on the hill tops is critical for the "hilltopping" behaviour of many species which congregate on hilltops to be able to find a mate. Forty *Pararistolochia praevenosa* vines, the food plant of the vulnerable Richmond Birdwing Butterfly, were planted in 2007 near the forest, but unfortunately despite 6 months of handwatering, many have succumbed to the drought.

Wild deer ringbark the young trees by antler rubbing, and have knocked over others completely. Through Brisbane City Council's feral animal control program, several deer and one fox have been removed from the property. Trapping for wild dogs also continues.

Smiths Lane revegetation area. The steep slopes mean most weed removal can only be done using hand tools. Natural regeneration is limited on the steep land due to dry conditions and low seed bank. Photo by John Smith.

flora profile

Eucalypts, Corymbias and Angophoras in South East Queensland

Article and photographs by Stephanie Reif
Land for Wildlife Extension Officer
Sunshine Coast Regional Council

The Pink Bloodwood *Corymbia intermedia* (formerly *Eucalyptus intermedia*) has chunky persistent bark (right), urn shaped gumnuts (left) and flowers in summer (top).

Mention the word eucalypt and I am reminded of the big Queensland Blue Gum (*Eucalyptus tereticornis*) in our backyard as a kid. It housed our cubby and swing and I used to get pretty messy playing with the gum that oozed from where it was damaged.

Eucalypts are iconic plant species in Australia. There are over 800 eucalypt species with all but 13 species endemic to Australia. They are an integral part of many of our ecosystems from the hollows they provide to the nectar they produce. They have been planted all over the world as hardwood plantations and are very important in developing countries for firewood as they reshoot (coppice) when cut down. The Mountain Ash (*Eucalyptus regnans*) is the world's tallest flowering plant at more than 100 metres in height.

"Gum trees can refer to species in the genera Eucalyptus, Corymbia and Angophora"

In South East Queensland most eucalypts are single stemmed trees with the exception of a few mallees, for example the Plunkett Mallee (*Eucalyptus curtisii*) a small multi-stemmed tree to 8 metres. Mallees have multiple stems coming from the base of the plant.

The term eucalypt means gum trees to most and most people would assume that all gum trees are eucalypts – but it as simple as this? Well unfortunately no. Gum trees can refer to species in the genera *Eucalyptus*, *Corymbia* and *Angophora*.

Eucalypts and corymbias have alternate leaves and have a bud cap (operculum) which falls off when the flower opens. The 'flower' of eucalypts and corymbias is actually a lot of long stamens (the male reproductive part) with style and stigma (female reproductive parts) at the centre. They have no petals.

Angophoras have opposite leaves, do not have a bud cap and have very small petals. All have hard fruit and angophoras usually have a ribbed gum nut. There are 12 species of endemic angophoras in Australia, 4 of which occur in SEQ. Collectively, angophoras are known as 'apples'.

So what is the difference between eucalypts and corymbias? Well prior to 1995 they were all in the Genus *Eucalyptus*. However there is a lot of variation among eucalypts and a number of studies proposed that bloodwoods and ghost gums were more closely related to angophoras than other eucalypts and that this would warrant a separate genus. Others argue that angophoras and corymbias should all be eucalypts. There is still a lot of debate about this separation and for this reason you often see both names used, for example Pink Bloodwood may be named as *Corymbia intermedia* (*Eucalyptus intermedia*) or *Corymbia (Eucalyptus) intermedia.*

In general, *Corymbia* species are referred to as bloodwoods (about 100 species in Australia) with the 700 *Eucalyptus* species including gums, stringybarks, peppermints, boxes, mallees, ironbarks and ashes.

Also helpful for identifying eucalypts, corymbias and angophoras is knowing the different bark types. For example eucalypts have either persistent or smooth barks (that shed each year) and can be divided into the following bark types in South East Queensland:

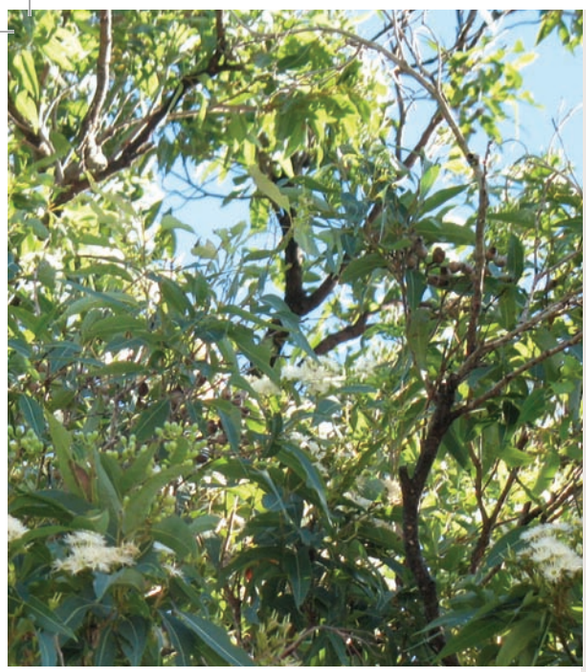
1. **Smooth-barked** – majority of trunk smooth and looses bark each year
2. **Fibrous-barked** – persistent bark over trunk fibrous, stringy or spongy
3. **Ironbark** - persistent bark over trunk, bark is hard and furrowed, dark grey or black
4. **Half-barks** – more than half the trunk has persistent bark, branches smooth barked.

Bark types of *Corymbia* in South East Queensland include:

- Bloodwoods which have persistent bark over the trunk in friable chunks for example Pink Bloodwood (*Corymbia intermedia*).
- Mostly smooth bark shed each year for example Spotted Gums (*Corymbia citriodora ssp variegata*).
- Half-barks such as Moreton Bay Ash (*Corymbia tessellaris*) with persistent tessellated bark at the base and smooth bark over the top of the tree.

Angophoras can have smooth or rough bark.

Other similar closely related species are the boxes e.g. Brush Box (*Lophostemon confertus*) with whorled leaves and



turpentines e.g. *Syncarpia glomulifera* with whorled leaves and fused fruits.

These guidelines are specific for South East Queensland and are a guide only, as with most simplifications there are always exceptions. Bear in mind juvenile leaves are often different to mature leaves and some species of eucalypts can form hybrids producing odd specimens.

A great guide for identifying eucalypts and allies in SEQ is the revised edition of *Mangroves to Mountains*. For the Brisbane area the *Eucalypts of Greater Brisbane* key produced by the Queensland Herbarium is very helpful. This key is available on the EPA website.

On the Sunshine Coast, *Eucalypts of the Sunshine Coast* by Tony Bean was published before the genus *Corymbia* came along but is still very helpful. If you want a definite identification send your specimen (a good section of mature leaves, as well fruits or flowers and other identifying features) to the Queensland Herbarium.

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my little corner

From Carpark to Forest

Have your reflections on your Land for Wildlife property printed in My Little Corner in 2009 and receive a free *Suburban and Environmental Weeds of South-East Queensland* DVD valued at $64.90. Send a max. of 200 words and a min. of 3 good quality images to the Editor (details on pg 2).

What do I value most about being a Land for Wildlife member?

Feeling that I'm part of wider movement of people who care about wildlife and that what I do to restore habitat in my little corner of the world can maybe help in a bigger way by connecting to a network of patches of habitat.

We are still finding new species such as *Litoria rubella* (shown below) which we'd never seen here before February 2008.

I have plenty of 'after' photos - not too many 'before'. Here are some of them.

Lynn and Chris Roberts
Land for Wildlife members,
Thornlands

These above two photos feature the same Scribbly Gum tree on the right hand side in 1981 (top) and in 2006.

This is where we used to park our cars until the scribblies and casuarinas started to come up (so we park them somewhere else now).

This used to be a grassy paddock until three years ago. This photo was taken in May 2008.

environmental weeds

A Weed for Every Ecosystem

Article by Martin Bennett
Land for Wildlife Extension Officer
Lockyer Valley and Somerset Regional Councils

People often ask "What is a weed?" The usual answer is a plant in the wrong place. Some people assume that if you buy a plant from a local nursery, it couldn't possibly be a weed. Unfortunately some plants sold in nurseries have proven themselves to be weeds in our local bushland. Some of our serious weeds were brought to this country as old time favourites and hedge plants by early settlers where they were used as an assimilation tool and as an aid in pastoralism. Unfortunately some of these plants quickly became naturalised and were of little use to the farmers.

Weedy Succulents
Many succulents are spread by seed but more often by people dumping garden debris. Succulents can grow from any small piece of plant that is left behind or dropped. One example is Mother-of-millions of which there are 3 to 4 weed species. These have been seen growing on bricks, steel and wooden objects weeks after being pulled up out of the ground. The small and large Agave species, Mother-in-laws Tongue and Purple Succulent should never be dumped in the bush, as they will easily establish there. Some of the worst weeds are cacti, they range from small clumping ones to some the size of small trees. Some cacti have been successfully controlled biologically which is good news because the herbicides required to control succulents are often harmful to the environment.

Mother-in-laws Tongue and other succulent weeds can easily become established in bushland areas.

The Umbrella Tree is an environmental weed in SEQ. It is native to North Queensland and is an attractive garden plant whose seeds are readily spread by birds. Photo by Deborah Metters.

Rainforest Weeds
The rainforests of Ipswich, Bremer and Lockyer Valleys have their fair share of invasive weeds. A few weeds are only of minor concern but some untreated pose a very serious threat to the integrity of the canopy of these forests. One such weed is Madeira Vine a fleshy-leaved plant which has aerial and ground tubers which make it a hard plant to eradicate. Madeira Vine will climb to the top of trees and cover the trees' leaves which interrupts photosynthesis (the process by which green plants make carbohydrates from water and carbon dioxide using the energy that is absorbed by chlorophyll from sunlight). This results in the ill health of the tree and weakening of the limbs which will eventually break-off leaving the plant without leaves and certain death. Like Cats Claw Creeper the control of Madeira Vine can take many years of follow-up treatment.

A common weed in rainforest is Coral Berry (*Ardisia humilis*) and Brazilian Nightshade (*Solanum seaforthianum*) which is best pulled by hand as chemical treatment can be indiscriminate.

Riparian Weeds
The riparian community doesn't escape the alien weed invasion; in fact there are more weeds along watercourses than almost anywhere else. Riparian weed vines include Thorny Poinciana (*Caesalpinia decapetala*), Lantana and Cats Claw Creeper. Riparian weed trees include Chinese Celtis, Camphor Laurel, Packalacca (*Phytolacca dioica*), Tree Privet, Small-leaved Privet, Mulberry (*Morus alba*) and Easter Cassia. There are also many small weed plants such as Crofton Weed, Mistweed and Cobbler's Pegs. The tree and vine species can be eradicated or at least controlled with follow up treatments; the smaller plants can be hand pulled. Only Roundup Bioactive or Weedmaster dual salt should be used on waterways.

Dry Sclerophyll Weeds
Eucalypt forests that occur on very poor soils often have fewer weed species than forests with better soils. Weeds may include Lantana and Creeping Lantana and in grasses such as Green Panic (*Panicum maximum*), Rhodes Grass (*Chloris gayana*) and Red Natal Grass (*Melinis repens*). Grass and Lantana are fuel for fires and will need to be eradicated if you want to keep out fire. In some areas there are naturalised native species such as Umbrella Tree (*Schefflera actinophylla*), Cadaghi (*Corymbia torelliana*) and a hybrid between Cadaghi and Spotted Gum. These should also be removed as they can have some detrimental effects on the environment.

People should always dispose of garden refuse at their local rubbish tip or compost it at high temperatures to kill seeds. Make sure that the plants you buy from nurseries are not environmental weeds. The removal of weeds species can be extremely costly. Not only is it costly to remove weeds but there is the damage it does to the environment in stopping the germination of natives species and the collapsing of the canopy in rainforests and riparian communities.

I've heard some people say "What's wrong with Camphor Laurels and Chinese Celtis on our waterways?" The fact is that on those waterways there were in the vicinity of 250 plus native species of plants that offered fruit, seeds, nectar and insects for a varied group of birds and other animals for the whole year. Now some waterways are dominated by Chinese Celtis and Camphor Laurel that have the one fruiting time, therefore accommodating a smaller range of wildlife for a much shorter time. I believe that it is important to remove these weeds and replace them with native species that belong there. To find out what native flora should be used to replace weeds, you can ask your local Land for Wildlife Officer for a species list and revegetation advice.

weed profile

Hygrophila - an invasive semi-aquatic weed

Article by Dave Burrows
Land for Wildlife Extension Officer
Sunshine Coast Regional Council, North
Photographs by Vanessa Moscato

Hygrophila invading Lake Macdonald.

Hygrophila (*Hygrophila costata*) is a native of Mexico and Argentina. It is a herbaceous sprawling to erect shrub which grows to approximately 1 metre high in full sun, but can grow taller under shade. It appears to prefer growing in the zone directly above the mean waterline in freshwater streams and impoundments, but can also grow out from the bank as an emergent semi aquatic plant into shallow water. Stems are square or four angled and robust when at full height. Leaves are opposite, narrowly elliptic, 3-18 cm long, 1-4 cm wide tapering to the base, and have prominent veins and mid-rib, fine hairs and are course textured. The white papery flowers are 10 mm long and occur just above the stem and leaf junction.

Hygrophila spreads mainly by vegetative reproduction. It is not yet known if the seeds are viable in Queensland. The seeds are sticky when wet, thus adhering to wide spreading vectors such as boats, birds and animals. Vegetative reproduction occurs when prostrate stems come in contact with the soil, thereby rooting at the nodes and sending up erect stems.

Hygrophila can spread rapidly and colonise areas left bare by receding water levels. The main threat posed by this plant is its ability to completely suppress native ground cover vegetation in riparian areas by forming a dense monoculture. Little is known about the biology of hygrophila particularly it's modes of seed dissemination, germination, and viability.

Hygrophila was first recorded in Queensland in 1993 at Lake Macdonald, an artificial water impoundment in the Noosa hinterland. It was thought to have been deliberately introduced to the lake by an individual who made a living by introducing non native waterplants into publicly owned waterbodies and periodically harvesting the material for sale as aquarium plants.

At the time it was recorded hygrophila was considered to not pose a major risk to the lake in terms of water quality and public safety, therefore nothing was done to eradicate it at that early detection stage. There was also reluctance to use herbicides in a potable water storage. Ten years later in 2003 the extent of the infestation within Lake Macdonald was mapped, indicating it had covered 70 hectares of riparian land around the perimeter of the lake.

Hygrophila is a Class 1 declared plant under the *Land Protection (Pest and Stock Route Management) Act 2002*, and is ranked 14th out of a list of 200 environmental weeds in SEQ by the Queensland Herbarium. A Class 1 pest is not commonly present in Queensland and, if introduced, would cause an adverse economic, environmental or social impact. It is illegal to transport, supply or release Class 1 plants under the Act. Lake Macdonald has the largest infestation of hygrophila in Qld.

Promisingly, the larvae of the Chocolate Argus butterfly (*Junonia hedonia*), which feeds on the native *Hygrophila angustifolia*, has been observed feeding on *Hygrophila costata*.

In 2007, Noosa Landcare, in partnership with the Burnett Mary Regional Group and Sunshine Coast Regional Council (formerly Noosa Shire Council) conducted a pilot eradication project on a targeted area within Lake Macdonald. The eradication techniques focused on burning hygrophila with hand held LPG fuelled torches to destroy the bulk of the plant material with follow up spraying of a glyphosate herbicide registered for use near water. The burning reduced the quantity of herbicide required. Treated areas were then planted with a diverse range of native riparian plants that will eventually create shaded conditions less suitable for hygrophila to re-establish. These areas will be monitored over time. In the short term, maintenance of the treated areas will be required to control regrowth of hygrophila.

Hygrophila flowers and leaves.

Treating Hygrophila with flame.

Early detection and reporting of any new outbreaks of Class 1 weeds such as hygrophila is important to prevent these invasive species becoming established in Queensland. Aquatic weeds in particular are easily, and often unwittingly, spread by human activity. Check vehicles and watercraft for the presence of any plant material when leaving any freshwater stream or lake.

property profile

Bird Banding at Cornubia

Article by Stephen and Tessa Blaber
Land for Wildlife members
Logan City Council

Our 10 acre property in the Mount Cotton area is made up of 3 distinct zones, namely the garden area of around 1 acre, a treed field of about 2 acres and 6 acres composed of sclerophyll forest. It was this latter part of the property which attracted us as buyers 25 years ago when we were looking for a block with mature eucalyptus species and a well developed understorey as a site for a bird banding project under the Australian Bird and Bat banding Scheme.

Over 5,000 birds consisting of around 100 species have been banded on the property over the last 25 years. A special study was made of the Scarlet Honeyeater which winter in the area between March and October. Records indicate site fidelity with the same individuals returning year after year. This small bird can be long-lived with some individuals being over 10 years in age.

Our initial hopes that the field area would naturally regenerate proved optimistic and only wattles re-grew, hence we undertook some planting of Koala food trees in this area with limited success - the main difficulty being taking water to the saplings during prolonged dry spells. But some of the trees survived and we were speechless when about 15 years after planting we saw our first Koala in them - our plan had actually worked!

A good stand of Swamp Box (*Lophostemon suaveolans*) has also established in a section of the field (they are now 20+ years old and have circumferences up to 65 cm), but there is little tree species diversity in the field.

The 6 acres of forest at the back of the property is within the watershed of Native Dog Creek and is a beautiful area with a good diversity of plants gently shaded by some magnificent old Swamp Box trees over 2 metres in circumference.

The Blabers have been banding birds on their property for over 25 years. A Variegated Fairy Wren (above) and Double-barred Finch (right) are just 2 of the 100 species that have been banded. Note the tiny silver bands around the legs. Photos by Stephen Blaber.

Yabby holes mark the flow of water during wet times and there are some Blackbutt Orchids in some of the trees and Hyacinth Orchids are common on the ground. Other groundcovers in this area include Star Goodenia, Fringed Lily, Kangaroo Grass and Blue Flax Lily. Trees include Tallowwood, Grey Ironbark, Red and Pink Bloodwoods,

"Records indicate site fidelity with the same individuals [Scarlet Honeyeaters] returning year after year."

Swamp Box and Broad-leaved Paperbark. Resident animals include bandicoots, echidnas, wallabies, carpet snakes, possums and goannas.

There are a few problems in this area, the most significant being a patch of lantana in a previously cleared area. This has been spreading at a steady pace. We aim to control rather than eradicate this pest as it is very popular with wrens. Groundsel was a pest in this area in the past, but this is no longer the case. We hand-weed

Stephen Blaber points out some features of the Swamp Box bushland on his property during the Land for Wildlife Open Property Day in September 2008. Photo by Deborah Metters.

Singapore Daisy which is rampant on the neighbouring block as well as some *Ageratum*. There are also a few Camphor Laurels (left as the fruit are favoured by White-headed Pigeons).

The wildlife of the area has been a great source of fascination and interest over the years. Some of the things we've enjoyed about living here has been the resident pair of Crested Hawks. We once had the mixed pleasure of seeing one of them come down and take a day old domestic chick which had escaped from a pen on the front lawn.

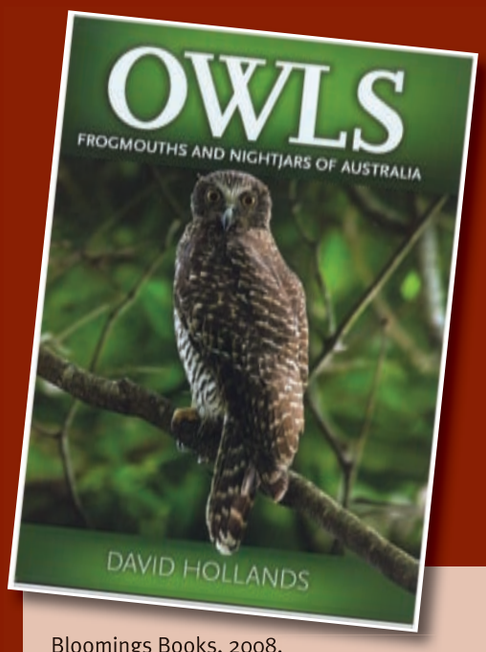
Another favourite bird is the Owlet Nightjar. We've had many carpet snake stories over the years, but one of the favourites was finding a seven footer on the front veranda draped over a bicycle drying itself after shedding its skin. Last October we had hundreds of butterflies in a section of the forest for around a week forming a moving cloud around you when you walked.

The wildlife has been a great source of interest and fascination over the years. The rewards of a natural environment are enormous and requires little intervention on our part apart from weed control. Fingers crossed for an effective biological control of lantana!

book & dvd reviews

Owls, Frogmouths and Nightjars of Australia

by David Hollands



David Holland is clearly fascinated by owls - and thank goodness. For we can all benefit from being able to read about these amazing animals and see images of them in remote and wild places in the pages of this wonderful hardcover book.

This book gives an insight into how David photographs these nervous nocturnal birds that don't like camera noises and flashes. You appreciate the commitment and patience of the author to deliver these sharp images, often taken in difficult photographic conditions.

The story of how John Young and the author built a 30 metres high hide in the rainforest canopy in 3 hours using nearby branches and nails is amazing. The result are images showing the secret life of nesting Rufous Owls.

This superbly presented book details all 17 species of owl, frogmouth and nightjar found in Australia all with great colour photographs. Personal accounts of how the owls were found in the wild, what they were observed doing and the knowledge of researchers who assisted David are all bought together in this easy-to-read book.

I was interested to read how owls' eyes absorb 100 times more light than human eyes and that an owl's hearing is extremely specialised to detect minor movements such as rustling small animals.

Conservation issues such as drought, fire, global warming and fragmentation are bought home by the author's own observations of former owl territories abandoned due to such threats. The book ends with 'field guide' pages showing distribution maps, breeding seasons and other identifying characteristics.

This is a beautiful book that asks us to seek inspiration from, and conserve, our untamed and elusive wildlife.

Bloomings Books, 2008.
Hard cover, 350 pages, full colour
ISBN: 9781876473648
Price: $59.95
Available from all good bookstores.

Review by Deborah Metters.

Suburban and Environmental Weeds of South-East Queensland DVD, Version 2

by Sheldon Navie

Version 2 of Suburban and Environmental Weeds DVD has been developed by the Centre for Biological Information Technology at The University of Queensland with the support of Brisbane City Council. The aim of this product is to provide a comprehensive tool that enables users to identify weed species that may be found in suburban gardens and natural areas in south-eastern Queensland.

With 667 weed species described in the key, it is very comprehensive and uses a Lucid3 key. Lucid software is a filtering key that eliminates species that do not match the 52 characteristics available to select from. So as you select more characteristics, the possible list of plants gets smaller and smaller until you are left with either one plant or a small number to choose from.

This large range of characteristics enables identification of a plant at any time of the year regardless of its reproductive stage. Even if you just have a couple of characteristics (eg. a vine with yellow flowers) the Lucid key will narrow down the possibilities, so that then you can have a look at photographs of all vines with yellow flowers to pick the one that matches your specimen. Once you have found the right species, you can go to the fact sheet, which gives very comprehensive information on each weed, and its impacts. To find out how to control each weed, there are web links to information on weed management.

The definition of a weed in this DVD is fairly broad, with some native species not endemic to SEQ included, such as Kauri Pine from the Wide Bay District and several Acacias from southern Australia that have become weedy in suburban areas of Brisbane.

The DVD has a tutorial to help first time users. One of the best features of the DVD is the numerous photographs of each weed species at different growth phases and showing different characteristics (leaves, seeds, flowers, stems, habit etc.). In fact there are over 10,000 photos on this DVD and is a credit to the diligence and attention to detail of the author.

Published by CBIT (Centre for Biological Information Technology), University of Queensland, 2008.
ISBN: 9781864999389
Price: $64.90 (plus postage)
Available from CBIT on 3365 1851 or visit http://shop.cbit.uq.edu.au/

I found the DVD easy to use and can highly recommend using this product as a reference guide for identifying weeds in the SEQ region.

Review by Dave Burrows.

practicalities

Chytrid Fungus and Frog Conservation: how to minimise risks

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

It is important to handle frogs such as this Stony Creek Frog (*Litoria wilcoxii*) with clean, washed hands and for the handler to wash their hands between animals. Photo by Robert Whyte, SOWN - see www.saveourwaterwaysnow.com.au

Cane Toad tadpoles are small, black and swim close to the surface.

Photo by Graeme Sawyer, Frogs Australia, www.frogsaustralia.net.au

Chytrid Fungus (pronounced "Ky-trid") is an introduced menace thought to be responsible for recent extinctions of frog species in Eastern Australian mountain rainforests. It is a continuing threat to the conservation of frogs. Our native frogs have not been exposed to it before and therefore are very susceptible. The fungus is listed as a Key Threatening Process in NSW.

Batrachochytrium dendrobatidis is a species of fungus in the phylum Chytridiomycota (and thus all members are called "chytrids") that likes cool and wet conditions, like those in high altitude mountain rainforests. It is prevalent above 400 metres altitude and is often more active in winter. The organism is waterbourne and more likely to affect stream-living frogs.

This fungus causes a fatal disease in adult frogs called chytridiomycosis. It attacks keratin, a common protein found in nearly all animals, and found in humans as callouses on the skin. Adult frogs have keratin in areas exposed to wear, such as hands and feet and where legs rub against the body. Tadpoles have keratin on mouthparts and on their hands and feet as they form. The fungus establishes in both tadpoles and, fatally, in adult frogs and affects respiration through the skin as well as attacking the nervous system.

Frogs that have probably become extinct in recent times are – Southern Dayfrog (*Taudactylus diurnus*), and Southern Platypus Frog (*Rheobatrachus silus*). It is thought that chytrid fungus may be the cause.

To prevent the fungus from spreading, sensible protocols need to be followed when either moving around in mountain rainforests or when handling frogs or keeping tadpoles. It seems that not all frogs in an infected pond have the chytrid fungus, so it is important to adopt a frog-aware approach.

Here are some protocols to help minimise the spread of chytrid fungus.

Moving Between Creek Systems

- Footwear must be cleaned and disinfected with a solution of benzalkonium chloride (Toilet Duck, Sanpic, New Clenz, Pine Clean), without, of course, letting any solution enter a water body. Changing footwear and bagging between sites might be a practical alternative.
- Equipment must be cleaned and disinfected or used only once.
- Vehicle wheels must be cleaned and disinfected between sites, if moving from an infected site into a fungus-free area. Footwear must be cleaned before getting into a car.
- Foreign materials (especially water from another area) must not be brought into rainforest frog habitat.

Handling Frogs & Tadpoles

Science has always stressed the importance of wearing gloves when handling frogs and tadpoles to protect the experimenter and to prevent the transfer of pathogens, such as chytrid fungus, between frogs. However, a recent study found that latex and nitrile gloves can be lethal to tadpoles.

Disposable gloves are known to contain a large number of chemicals which may cause sensitivity in humans and now have been shown to be toxic to tadpoles.

The study found that all tadpoles that were held in latex or nitrile gloves for only 30-90 seconds died within 24 hours!

This is the first study to show nitrile gloves are toxic to tadpoles, producing a 100% mortality of Cane Toad tadpoles following direct glove contact. Whereas all of the tadpoles handled with rinsed vinyl gloves or bare hands survived to metamorphosis. Brand new vinyl gloves also killed some tadpoles, so it is important to thoroughly wash vinyl gloves prior to use with tadpoles or cleaning aquaria. It seems that the toxic chemicals on the outside of brand new vinyl gloves can be rinsed off in water.

> *"all tadpoles that were held in latex or nitrile gloves died "*

In summary:

- Use well-washed vinyl gloves – one for each frog, or hands cleaned and disinfected and dried (don't allow disinfectant to touch frogs).
- One bag – one frog and then dispose.
- One bag – one tadpole and then dispose.
- Don't release frogs into the wild from another area.

Basically, be clean and think of quarantine.

References

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letters to the editor

Reflections on 10th anniversary events

In this, the 10th anniversary year of Land for Wildlife (LfW), I would like to let you know of a couple of "hidden" benefits of LfW.

My 10 year old son is an active supporter of my LfW efforts and often helps out. Last plant order I received, he voluntarily spent a 12 hour day with me helping to plant our new trees and at the end of the day told me how much he enjoyed himself! Needless to say I was exhausted! He can identify most of the native trees and weeds that we have and thoroughly impressed a "native plant expert" on a recent school excursion.

Both my son and eight-year-old daughter love using the rainforest area and the fact that we have found so many creatures - both small and larger - living in the area has made them very appreciative of the benefits of conservation. I believe that the values they have both gained from having a LfW area on our property will be of great benefit to them in the future.

LfW is a wonderful programme and I hope that it continues to grow in the future.

J. O'Brien
Land for Wildlife member, Gold Coast

Please accept my thanks and appreciation for the wonderful 10th Anniversary Day in Brisbane. It was most enjoyable and thanks so much for the books we were given. The "Wildlife of Greater Brisbane" will be most useful for identification here on our property. The Commemorative book so well presented is a real treasure to us. It was a shame Ray was unable to be there due to work commitments, but he did participate by doing the interview with Bush Telegraph which can be listened to on the net and was very good.

I would like to take this opportunity to also thank Land for Wildlife and our local Officers namely Nick Clancy and Alan Wynn for all the wonderful support they have given us and continue to do so.

Ray and Pam Seddon
Richmond Birdwing Corridor Co-ordinators
Land for Wildlife members, Lower Sunshine Coast

We really enjoyed Wednesday [at the Land for Wildlife Launch]. It was a great celebration and a wonderful property to visit. The wide-range of properties in the new publication are a great selection to represent all that has been accomplished over the past ten years. Congratulations to you and everyone at Land for Wildlife for a job well done and many thanks for the beautiful books and the water bottles.

Craig Hosmer and Daryl Reinke
Land for Wildlife members, Flaxton

Opportunities to learn what other LFW'rs have achieved plus the valuable information in the regular newsletters have been of great assistance to us in maintaining our wildlife habitat.

Doreen & John Payne
Land for Wildlife members, Redlands

Land for Wildlife has helped us learn what a diverse amount of trees, plants and ground cover we have on our block. It is interesting watching wallabies come across our block eating the grass and the native birds enjoying our native plants. Due to our association with Land for Wildlife, we have utilised purchases and 'plants for weeds' on occasions that gave us and other people a chance of furthering our plant stocks considerably and also clears the area of weeds etc.

Brian and Margaret Rowse
Land for Wildlife members, Redlands

We believe LfW is making a valuable contribution. We have been particularly appreciative of the on-going advice on relevant topics in areas we have previously found good advice is hard to come by. Areas of particular relevance include weed control, native species identification and restoration, water conservation and purity using dams, and wildlife issues in general. The newsletter is always of interest and relevant. Help with lantana reduction has been most appreciated and has enabled much more comprehensive in-roads than we could have made on our own. Looking forward to maintaining our association.

Jill and Hugh Simpson
Land for Wildlife members, Windsong Equestrian Park

Historic explanation for decline in Glossy Black Cockatoo numbers

Regarding recent articles on how, due to dependence on what are called "Scrub Oaks", the Glossy Black Cockatoo has disappeared from the destruction of these trees. This bit of history may be of interest.

In the days when every small town had its own bakers shop and bakery, the prized timber for its heat, long-lasting coals and non-tainting smoke was "oak". Many teamsters (bullock wagon drivers) and timber-getters would find stands of these "oak trees", ringbark them and then come back later when they judged them dry enough to cut for "cordwood" to sell to the bakers. [Editor's note: One cord equals 4 ft x 4 ft x 8 ft of wood or about 3.6 m^3 of stacked wood].

Naturally, this led to the virtual elimination of the mature trees except for inaccessible pockets, and also with clearing for farming, nobody realised the tree-bird association. However, I have noticed in areas that my Grandfather and other teamsters used in the Glass House Mountains area natural regrowth has led to more trees than there were originally so hopefully the cockatoos will also rebuild in numbers.

E. McCosker
Land for Wildlife member, Mapleton

Chewed cones (orts) underneath a Belah (*Casuarina cristata*) tree are a tell-tale sign of Glossy Black Cockatoos. Photo by Deborah Metters.

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

This unfortunate weevil was found on a Banksia flower spike with a hole in it, probably made by exiting parasites. The amazing thing was that this weevil was still alive.

Photograph by Alan Wynn.

Australia's Largest Huntsman

This photograph was taken by Land for Wildlife landholders near Mount Mellum in December 2008. This spider has been identified as a male *Beregama aurea* by David Hirst from the South Australian Museum, and is recognised as Australia's largest huntsman spider. There is no common name for this giant spider.

Despite its top-of-the-list size status (body length of 41 mm and leg span of 250 mm) very little is know about its ecology. It is thought that its natural habitat is under loose bark on the trunks of Eucalypts. Described as 'friendly' by the Land for Wildlife members who took this photo, this spider seemed quite happy living under the deck.

This species was thought to be the largest huntsman in the world until 2001 when an even larger huntsman from Laos, *Heteropoda maxima* was discovered, with the body length of 46 mm and a leg span of 300 mm. Photograph by M. Prociv.

Raspberry Sawflies

This Raspberry Sawfly, *Philomastix macleaii,* is laying eggs through the surface of this Rose-leaved Raspberry leaf (*Rubus rosifolius*) using its specially adapted saw-like ovipositor that cuts a small slit in the leaf. Sawflies are named for this unique feature. Sawflies are not true flies and are more closely related to ants, bees and wasps. They do not sting, though the larvae which group together for defence, will produce fluid irritant from their tails if threatened. Photograph by Alan Wynn.

Opinions expressed by contributors to the Land for Wildlife newsletter are not necessarily those of the Land for Wildlife program nor any of the supporting agencies.

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