



Big Greasy, big attitude

The Big Greasy is one of Australia's largest butterflies whose evolutionary path can be traced back to when the Australian, South American and Antarctic continents were all joined, making this one of the oldest surviving forms of butterfly.

The common name, Big Greasy, I assume, comes from the translucent, brown, grease-proof paper looking wings of the female. The male's wings are more transparent and clear, hence their other common name, Clearwing Swallowtail.

In SEQ, the female lays her eggs on only two native plants, *Aristolochia meridionalis* and *Pararistolochia praevenosa*.

Unfortunately, she also lays her eggs on the weed *Aristolochia elegans* (Dutchman's Pipe), which usually kills the larvae. See pages 6-8 for more information on both

The female Clearwing Swallowtail (top left) is dingy brown in colour and can fly long distances, while the male (top right and above) is white, black and red and is highly territorial.

the native and exotic *Aristolochias*.

During spring and summer, the larger male Clearwing Swallowtails (up to 80 mm in size) can be seen flying low, patrolling patches of *Aristolochia*. They will vigorously defend their patch and oust any other butterfly intruder. Smaller females will fly long distances in search of *Aristolochia* plants and have reportedly travelled 7 kms in one day.

Like many butterflies, Clearwing Swallowtails are short-lived with captive males surviving for an average of 38 days and females 25 days. So enjoy them while they are flying and keep an eye out for their native *Aristolochia* host plants.

Article and photos by Deborah Metters

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In May 2014, we will be running an
OPEN PROPERTY SCHEME

with at least 26 Land for Wildlife properties from across
SEQ available for you to visit.
Details will be in the April newsletter.



editorial

Sitting on my back deck in the shade of an old mango tree, I too appreciate the value of one tree, similar to Land for Wildlife member, Neil Schultz, reflecting on the one large blue gum near his home (see pg 10). The mango tree cools my home by at least 5°C, is beautiful to look at and attracts wildlife.

This summer has broken records for being the hottest. Just like last summer, and the one before it. It shouldn't be surprising, I remember learning about 'global warming' 20 years ago. I am again thankful for the shade of one tree.

We are lucky to live in an affluent country with meteorologists tracking weather and climatic patterns, and I encourage readers to visit the Bureau of Meteorology website to observe the unprecedented documentation of climate change. I can't help thinking that the answer to living in a climatically stable and biodiverse world also depends on people seeing the value of each and every tree.

As well as the mighty trees, it is the small plants and animals that make the world go round, so to speak. This edition looks at some iconic summer invertebrates – butterflies and cicadas. As I write this, the cicadas are going-off. Sprinkler systems, stuck CDs, electrical hums and typewriters all moving in sound waves across my yard from left to right and back again. Birds

cease singing and time slows down as the sun's heat intensifies. The male cicadas have waited maybe a decade for this moment to sing, and they are not going to let a summer's day pass without effort.

Thank you to all Land for Wildlife members who contributed to this edition. The story of the Hare's property (pg 14), which was ravaged by flood, stripped of wildlife, and has slowly recovered (with much human effort) to support platypus once again, is heartening.

Finally, I would like to wish the team of Land for Wildlife Officers on the Sunshine Coast smooth sailing during this period of Council de-amalgamation. Dave Burrows will be returning to Noosa Shire Council after successfully managing the Sunshine Coast Conservation Partnerships team for several years. The Sunshine Coast region has arguably the highest concentration of Land for Wildlife properties in Australia and I hope that the two new Councils continue to offer the outstanding conservation services that their landholders value so highly.

I wish you all a shady (by trees that is), prosperous and happy 2014. Enjoy!



Deborah Metters
Land for Wildlife
Regional Coordinator
SEQ Catchments

Landholder Registrations, Land for Wildlife SEQ - 1/12/2013

Registered Properties	Working Towards Registration	Total Area Retained	Total Area under Restoration
3044	751	54,904 ha	4,791 ha

Forward all contributions to:

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

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www.lfwseq.org.au

Land for Wildlife Extension Officers South East Queensland

Brisbane City Council

All enquiries, 3403 8888

Peter Hayes Catherine Madden
Cody Hochen Scott Sumner
Tony Mlynarik Fflur Collier

Gold Coast City Council

Darryl Larsen, 5582 8896
Lexie Webster, 5582 8344
Todd Burrows, 5582 9128

Ipswich City Council

Stephani Grove, 3810 7173

Lockyer Valley Regional Council

Kaori van Baalen, 5462 0376

Logan City Council

Lyndall Rosevear, 3412 4860
Nicole Walters, 3412 4859
Rachel Booth, 3412 5321
Rebecca Condon, 3412 4979

Moreton Bay Regional Council

Danielle Crawford, 5433 2240

Noosa Shire Council

Dave Burrows, 5485 0229

Redland City Council

Maree Manby, 3820 1106

Scenic Rim Regional Council

Keith McCosh, 5540 5436

Somerset Region

Trevor Page, 5424 4000

Sunshine Coast Council

Alan Wynn, 5439 6477
Marc Russell, 5475 7345
Nick Clancy, 5439 6433
Stephanie Reif, 5475 7395

Toowoomba Regional Council

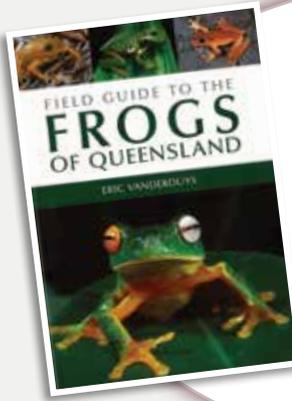
All enquiries, 4688 6611

Burnett Mary Region

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

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

fauna vignettes



PRIZES!

SEQ Catchments is giving away free copies of *Field Guide to the Frogs of Queensland* (released November 2012) RRP \$45 to selected Land for Wildlife members who contribute published articles in 2014. Limit of three free books per newsletter edition. Please send your article and/or photographs to the Editor (details pg. 2)

There's a Thingy looking at me!

Well I had heard that there are lots of different cute, little marsupial 'thingys' living in the Mount Barney area. My Land for Wildlife 50 acres near Mt Barney Road, has some trees and remnant vegetation and so far I've encountered Sugar Gliders on the rope swing, antechinus in the wood heap and very small bats living in the exhaust of "Gus" my old Ferguson '49 model tractor. But none of these sightings had prepared me for an encounter with the fast and furious rat-thingy with an enormous brush tail.

It darted so soundlessly, but so quickly around the inside of my storage shed and then just sat there looking down at me at about 7pm one evening. A bit more of a wide-eyed look, a couple of clicks of my camera, followed by an eager google search and I was soon lead to believe the thingy looking down at me was in fact a Brush-tailed Phascogale, and most likely a female hunting for a nest.

How lucky I thought, not only to see the beautiful little creature, but how lucky for it to have survived the perils of

scampering amongst all my heaped up treasures stored haphazardly in my old shed. I do hope it finds a suitable nest - be it in my sleeping bag or not. If it happens to mean that I don't disturb the camping gear over Christmas, then not to worry as I am delighted to have a furry visitor for friendship over the festive season.

However, I can't get too attached as apparently the females don't live much past 12 months of age and the males much less as they basically mate and then die from the stress.

Kylee Mallinson
Land for Wildlife member
Mount Barney, Scenic Rim

Photos top to bottom:

- Perched on my sleeping bag looking like a grey rat with a white tummy.
- So cute in amongst my books.
- When you see the tail, it ain't no rat!
- Almost impossible to photograph at the speed with which it flings itself around.



Nature at Work

Even the narrowest strip of regenerated vegetation can be very rewarding. This area approximately 20 metres wide and 35 metres long, boarded by the road, our house and the neighbours cow paddock has now, after 12 years developed a fertile forest floor.

Originally this patch of land was weed infested. Several Red Kamalas (*Mallotus philippensis*), a Sandpaper Fig (*Ficus fraseri*) and a large Blackwood (*Acacia melanoxylon*) were the only mature trees. The Blackwood promptly fell over in a storm not long after we had planted around 30 endemic trees.

Over the years this area has been regularly spot sprayed to remove weed infestations. Recently I walked over the land and removed only 12 weed

seedling! The neighbouring properties are still heavily weed infested and pasture, but this small forested area is alive and thriving.

Birds regularly feed, nest and survey their world from the tree tops. Lace monitors use it as a corridor as they move through the understorey on their way to and from the creek. This photo (left) shows many native seedlings among the roots of a Blue Quandong tree that was planted 11 years ago.

Don't despair; every small patch of regenerated forest is worth all the toil.

Carolyn Burford
Land for Wildlife member
Tallebudgera Valley, Gold Coast

fauna profile

Cicadas of SEQ: The Song of Summer

“They taste great with a beer”, I had been asking a few friends about their experiences with cicadas and this strange response was not what I was expecting. However, there is much about the cicada that is strange and unexpected (and the same could be said about some of my friends).

For many people, and wildlife, around the world, the cicada is a valued source of protein. The friend who suggested them as a good accompaniment to a beer had just returned from living in Laos, where cicadas are commonly eaten and are considered easy to prepare. Apparently all you have to do is pull the wings and legs off and then drop them in a wok of hot oil. In the Western MacDonnell Ranges in Central Australia, Aboriginal children used to collect newly emerged adult cicadas for the old people to eat.

Cicadas are and have been an important introduction to nature for Australian children for generations. You only have to contemplate the visually evocative common names of Australian cicadas to understand this; some local examples are Flourey Baker, Cherrynose and Double Drummer. So it is no surprise to discover that some of these names were made by children over 100 years ago.

Much of the myth and mystery of the cicada comes from its extraordinary lifecycle. The 1.5–3 mm eggs are laid into a series of slits cut by the female’s ovipositor in anything from the branch of a tree or shrub to the stem of a grass or herb both living and dead. In two to seven months

the eggs hatch and the tiny nymphs drop to the ground and quickly search for a crack or crevice to avoid desiccation or predation.

Once underground they will tunnel in search of a suitable location to excavate a cavity beside a plant root, on which they can feed. As they grow they will moult several times and may also need to move to find a new plant root to feed on. The exact time spent underground for most Australian cicadas is unknown, one of the exceptions is the Greengrocer (*Cyclochilae australasiae*) that has a nymphal stage of about seven years. The lifecycles of American cicadas are much better known and have nymphal stages lasting 13 and 17 years.

Most people’s experience of the nymphal stage is limited to the empty dried brown skin found on tree trunks, grass stems and fence posts. The emergence of the adult from the nymphal skin takes more than an hour and usually occurs during the first few hours of darkness on a warm evening after rain. Once free of the nymphal skin the wings are pumped full of a greenish watery fluid called haemolymph to expand them, which is then withdrawn to allow them to dry and strengthen.

The song of the cicada is a remarkable thing. And for me, more than any other sound, the song of the cicada is the sound of summer in Australia. The Greengrocer is reputedly the loudest insect on the planet at nearly 120 decibels and the Double Drummer is pretty close to that. Put a few hundred in a tree all calling at once and the

“The Greengrocer is reputedly the loudest insect on the planet...”

noise is not far off the pain threshold.

There are other species of cicada that produce calls of such high frequency and low intensity that they are almost inaudible to the human ear. Some sing during the day, others at dusk and some at both times. However all cicada calls are temperature dependent, that is they will not commence calling until air temperature reaches a certain threshold for their species and it will cease once it drops below that threshold. Only the males call and its primary purpose is to attract a female, though some species have a separate distinct distress call.

I haven’t revealed all the secrets of the cicada here, there just isn’t enough space. If you are interested in finding out more, check out Lindsay Popple’s excellent website.

References and Further Reading

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- <http://www.nt.gov.au/westmacs/stories/culture/all/146>
- <http://www.abc.net.au/science/articles/2001/02/17/2822486.htm>



Dried brown skins of immature cicadas are commonly found on tree trunks at the beginning of summer. After spending many years underground, a cicada nymph emerges from the ground and climbs the nearest tree, allowing the adult cicada to emerge, leaving behind an empty shell.



**Article by Alan Wynn
Land for Wildlife Officer
Sunshine Coast Council**

flora profile

"I suspect that this butterfly host plant is more common than we realise"

Hidden Treasure Amongst the Weeds

In March this year I was carrying out some weed control on the steeper parts of our Mt Crosby block of land. As I was about to spray a matting clump of Creeping Lantana (*Lantana montevidensis*) around the base of a low growing Lloyd's Olive (*Notelaea lloydii*) shrub (a vulnerable plant species that is quite common on our block), I saw another plant that stopped me in my tracks. I instantly recognised the plant as *Aristolochia meridionalis* because of its curious, brownish-green, tubular flowers, small pear-shaped ribbed fruit and spear-headed shaped leaves.

It is a species that I am familiar with, having seen it on a few occasions during botanical surveys in other parts of SEQ over the years. I also thought I had seen it on our own land many years ago. However I had never been sure of its identity because the plant hadn't been flowering or fruiting at the time. Since then I have probably seen *A. meridionalis* on our block on other occasions, when it was infertile, but I just assumed it was Slender Bindweed (*Polymeria calycina*), which also occurs on our block. *Polymeria calycina* is another slender, twining vine, which often has similar shaped, but smaller leaves, and quite different flowers.

Eureka! Here was definite, living evidence that *A. meridionalis* was actually growing on our block. After a quick search further down-slope I found three more *A. meridionalis* plants in another weedy area. Two of which had fruit and one had fruit and flowers. A further comprehensive search may find even more plants hidden amongst the weedy ground cover.

I will certainly have to be even more careful in future when I'm manually removing weeds or spraying them. Otherwise I may pull out or kill this unimposing, sometimes hidden and hard to recognise plant.

Aristolochia meridionalis subsp. *meridionalis* occurs in scattered locations over a wide area of SEQ (from near Gympie in the north, west to near Kingaroy and south to the Qld/NSW border). It is not currently listed as a threatened species, although it is seemingly rare and not commonly collected. This is borne out by only 22 specimens collected in SEQ being lodged with the Queensland Herbarium. Of these specimen records only 8 were collected since 1990.

Unlike the two other vine species that occur in the Aristolochiaceae family in SEQ,

Pararistolochia praevenosa and *P. laheyana* - (Richmond Birdwing vines), both of which grow in rainforests, *Aristolochia meridionalis* prefers the more open drier habitats of Eucalypt, grassy woodlands and open forests. Also unlike these two species it is a slender, trailing scrambler, which relies on the support of grasses, herbs and low shrubs and has more delicate, softer leaves.

Aristolochia meridionalis is the host food plant for the larvae of the Clearwing Swallowtail butterfly (Big Greasy) *Cressida cressida*. From the good numbers of Clearwing Swallowtails that are seen during the warmer seasons in Southeast Queensland, I suspect that *A. meridionalis*, this butterfly larvae food plant, is more common than we realise. I would imagine that the larvae of such a large butterfly would speedily devour many of the host plant's leaves, leaving the host plant virtually leafless. However it is now known that *A. meridionalis* can recover rapidly from defoliation given the right conditions. It has an underground tuber in which it stores its reserves. It is known to remain dormant as an underground tuber without any sign of stems or foliage for up to three years, while waiting for the right



Aristolochia meridionalis subsp. *meridionalis* with greenish-brown tubular flower (circled) and pear-shaped, ribbed fruit capsule (circled) growing among weeds. Photo by Paul Grimshaw.



Slender Bindweed (*Polymeria calycina*), which may be mistaken for *Aristolochia meridionalis* subsp. *meridionalis* when it is infertile. Leaves of *P. calycina* are usually smaller and narrower. Photo by Paul Grimshaw.



Clearwing Swallowtail (Big Greasy) butterfly male and female in copulation. Males have strong red spots warning would-be predators of its toxicity. Males are usually larger than the duller females. Photo by Paul Grimshaw.

soil moisture and climatic conditions to resprout (pers. com. D.P. Sands). This may explain to some extent its seeming rarity.

All other *Aristolochia* species, which are food plants for the Clearwing Swallowtail butterfly larvae, occur further north. The Clearwing Swallowtail butterfly is probably very dependent on *Aristolochia meridionalis* subsp. *meridionalis* in SEQ for its existence. Its only other known food plant here is seedling plants of the Richmond Birdwing vine (*Pararistolochia praevenosa*).

The open forest where the *Aristolochia meridionalis* is growing on our property consists of canopy trees such as Spotted Gum (*Corymbia citriodora* subsp. *variegata*), Narrow-leaved Ironbark (*Eucalyptus crebra*), Broad-leaved White Mahogany (*Eucalyptus carnea*) with occasional Brush Box (*Lophostemon confertus*) in the understorey. In our location our rocky soils are derived from Neranleigh-Fernvale Beds metamorphic rocks (probably meta-volcanics rather than meta-sediments).

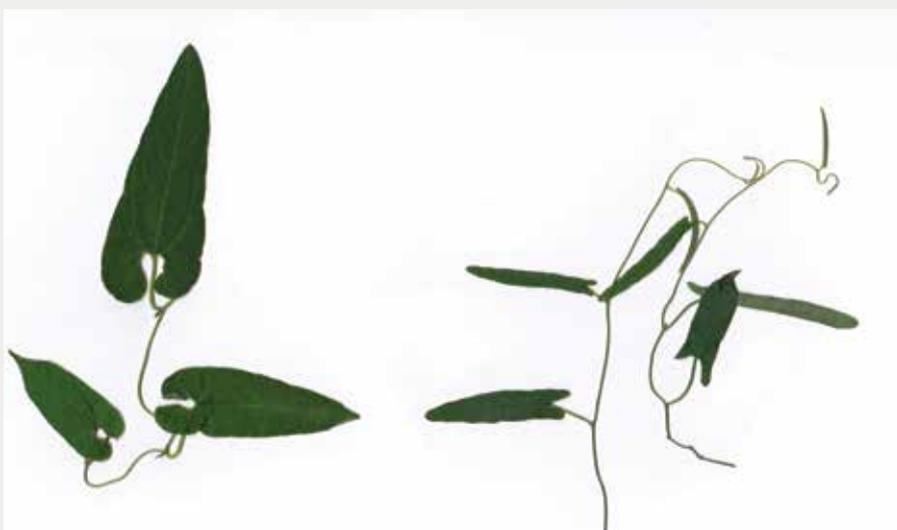
If you have similar geology, soil type and conditions and grassy Eucalypt woodlands or open forests with a similar species mix on your property, there is a good chance of *Aristolochia meridionalis* occurring on your place.

A number of historic and more recent records of *Aristolochia meridionalis* have come from the Mt Coot-tha - D'Aguilar Range area and western suburbs of Brisbane, so these are a key area where one could expect to find the plant growing. So if you see Clearwing Swallowtails flitting around your property there is an excellent chance that *Aristolochia meridionalis* is growing close-by.

The male Clearwing Swallowtail butterfly has a quite unusual mating behaviour. Also the female of the species has a reproductive system, which is unique among butterflies. If you want to know more about this unusual butterfly species I recommend *The Butterflies of Australia* (2010) by Albert Orr and Roger Kitching.



Yellow eggs of the Clearwing Swallowtail can be seen here on leaves of *Aristolochia meridionalis* at The Fort Bushland Reserve. Photos by John Lahey.



Aristolochia meridionalis* subsp. *meridionalis

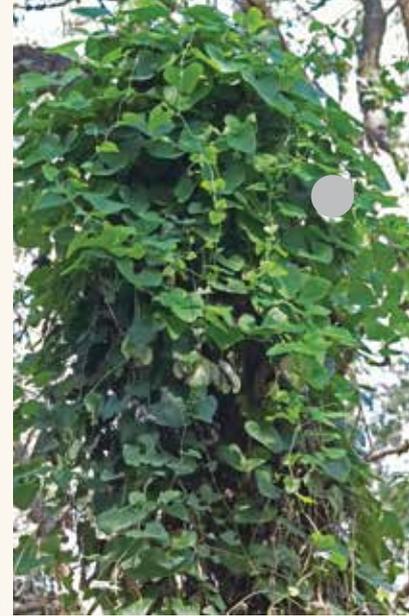
Slender Bindweed (*Polymeria calycina*) - note the smaller, narrower leaves.

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**Article by Paul Grimshaw
Land for Wildlife member
Mount Crosby, Brisbane**



weed profile

Dutchman's Pipe: A fatal attractant for butterflies

Dutchman's Pipe (*Aristolochia elegans*) is a vigorous exotic vine originally from Brazil. Popular as an ornamental, it has escaped into bushland where it favours the edges of rainforest remnants, creeks and moist gullies. In addition to its destructive habit of smothering native plants under its dense mass of foliage, Dutchman's Pipe is also fatal for threatened native butterfly species.

The Richmond Birdwing (*Ornithoptera richmondia*) and Clearwing Swallowtail (*Cressida cressida*) butterflies use Dutchman's Pipe for their similar-looking, native larval-food vines, *Pararistolochia praevenosa* and *Aristolochia meridionalis* respectively, and lay their eggs on the weed leaves. Their hungry larvae die as they begin to eat the toxic leaves.

In Queensland, Dutchman's Pipe is a Declared Class 3 Pest plant, and removing this weed from gardens and bushland and replanting with native vines is strongly encouraged. Birdwing butterflies have been seen to prefer the weed vines over native larval-food vines when they are growing near each other, and so removing Dutchman's Pipe can have a huge impact

on the survival of re-establishing butterfly populations.

Dutchman's Pipe is named for its distinctive tubular flower that looks like a traditional Dutch pipe. The inside of the flowers are reddish-purple with white and yellow spots and grow up to 7 cm in length during summer. The leaves are characteristically heart-shaped, up to 12 cm long, alternate on the stems, with a glossy green upper surface, and a waxy, pale grey lower surface.

The stems are slender and woody, and will twine tightly around any structure. The young stems are slightly corky, while older stems can have fissured, corky bark. It can be hard to identify Dutchman's Pipe by the stem alone, but if you scratch the bark off, the stem emits a strong, acetone-like smell. In fact, all of the plant emits this same unpleasant smell when crushed or disturbed.

Another distinguishing feature is the papery, segmented fruit capsules that open like upside parachutes and hang on the vine for a long time. Each capsule contains about 350 papery seeds which are spread by wind or water.

Dutchman's Pipe (left to right): A juvenile plant with an egg of the Clearwing Swallowtail butterfly; distinctive flowers that look similar to a traditional Dutch pipe; open seed cases hanging in a tree; a mature vine smothering native plants. Photos of flower and mature vine by John Lahey, other photos by Deborah Metters.

Control of Dutchman's Pipe can be difficult and manual removal is possibly the best option for small infestations. Small plants can be hand-pulled or dug out, ensuring the crown and all roots are removed.

Herbicide can be used as per Off-label Permit 11463. For thin vines, cut the stem close to the ground, just above the first root node and immediately apply glyphosate herbicide mix to the cut. For thicker stems, scrape a 40 cm basal section of the vine and apply herbicide to the scraped area. Foliar spraying mature vines on the ground may not be entirely effective, given the waxy leaf surface, but young vines and regrowth vines are more susceptible. Follow up treatment is necessary. Bag and dispose of any removed vine material as general waste. If you cannot remove vines immediately, remove and bin the seed pods before they open.

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Treatment method	Herbicide and rate	Notes
Cut stump (small vines)	Glyphosate (360 g/L) at 1:2 parts water	Apply in spring and reapply later if necessary.
Stem scrape (larger vines)	Glyphosate (360 g/L) at 1:2 parts water	Apply in spring and reapply later if necessary.
Foliar spray (leaves of either mature or young vines)	Glyphosate (360 g/L) at 10mL per 1L of water	Apply up to twice a year. Best applied in early autumn. Only use where supporting trees and understorey plants are dead. Do not spray to the point of run-off.



Article by Fflur Collier
Land for Wildlife member
Tallebudgera, Gold Coast

fauna profile

Recovery of the Richmond Birdwing

The Richmond Birdwing Conservation Network (RBCN) is an affiliation of individuals, groups and organisations dedicated to the conservation of the Richmond Birdwing butterfly (*Ornithoptera richmondia*) and its host plants, the Richmond Birdwing Vine (*Pararistolochia praevenosa*) and Mountain Aristolochia (*Pararistolochia laheyana*). Last year, the RBCN joined as a project within the Wildlife Preservation Society for Queensland (WPSQ) and now has a part-time project officer, which will help enormously with achieving recovery plan activities.

The RBCN is focussed on connectivity, conservation and achieving the milestones outlined in the recovery plan for the butterfly. There has been over 20 years of scientific research carried out on the butterfly indicating that the female birdwing can fly up to 30 kilometres. This is imperative knowledge to ensure that future plantings of the vines will connect areas and can be accessed by the butterflies.

The RBCN gathers data on sightings of the butterfly and locations of planted and wild vines. To date there are around 10,000 records but we know there are more!

Data is confidentially stored at WPSQ and is used to develop flight path maps and future planting locations while considering waterways, land tenure, regional ecosystems and dedicated conservation hubs.

There seems to have been an influx of Richmond Birdwing butterfly numbers since September 2013, possibly in response to releases from the captive breeding program. For more information on the captive breeding program visit the Dept. of Environment and Heritage Protection website at <http://tinyurl.com/mruq69s>

To submit sightings of the butterfly and vines, email: rbcncommitee@wildlife.org.au

To get involved or for more information, visit www.wildlife.org.au/projects/richmondbirdwing/ or call WPSQ on 3211 0194. Please consider joining the RBCN for only \$15 per year and help fund recovery efforts of the birdwing.

**Article and photos by Catherine Madden
Land for Wildlife member
Guanaba, Gold Coast**



A male Richmond Birdwing butterfly feeding on *Lantana camara*. Yes lantana is a weed, but it is also food for some wildlife species – a consideration for your weed control activities.



A female Richmond Birdwing butterfly resting on Black Wattle (*Acacia concurrens*).

Conservation of the Richmond Birdwing Butterfly in Australia

by Donald PA Sands and Tim R New

Although insects play a critical role in our environment, very few have been the focus of conservation efforts in Australia or worldwide. *Conservation of the Richmond Birdwing Butterfly in Australia* showcases the importance of this vulnerable butterfly and its near threatened food plants. The book is a culmination of 20 years of research and conservation efforts toward one of Australia's largest and remarkable butterfly.

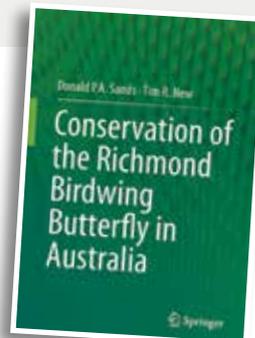
Dr Donald Sands is the Chair of the Richmond Birdwing Conservation Network (RBCN) and has been at the forefront of conservation efforts of this flagship species from the beginning. The book illustrates both the passion and expertise of both writers. Those who have appreciation not only for this butterfly but habitat conservation as a whole will find this book informative and interesting.

There would be many Land for Wildlife members who understand the plight, or have been involved with the recovery, of

this flagship species. Once a common site fluttering through the streets of Brisbane, the Richmond Birdwing, along with its food plant has dwindled and now exists only in small pockets of remnant forest scattered through its original range. Some of those small pockets are on Land for Wildlife properties and are specifically mentioned in this book.

One section of the book I particularly enjoyed was community involvement. Being involved with the planting of many *Pararistolochia praevenosa* vines on Land for Wildlife properties throughout the western suburbs of Brisbane, it was reassuring and encouraging to read about the efforts of schools, catchment groups, landholders and organisations who have helped bring back this butterfly.

Through this book I have gained a greater appreciation and insight into this species, its food plant and the past and present difficulties faced in recovery



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efforts. I certainly hope one day to see the Richmond Birdwing butterfly on Land for Wildlife properties in western Brisbane.

This book would appeal to a wide range of landholders including budding and expert entomologists, those involved in recovery programs and those who want to learn about the butterfly and participate in its recovery. The book is also an excellent reference on how to implement effective strategies for threatened species.

You may wish to view some of the pages for free on the Springer Publishing website, or you may encourage your local Land for Wildlife Officer to buy a copy to share.

**Review by Cody Hochen
Land for Wildlife Officer
Brisbane City Council**

my little corner

What is the value of one tree?

When shopping for a new residence 27 years ago we immediately snapped up our current home, mainly because of the 40 mature Queensland Blue Gums (*Eucalyptus tereticornis*) growing on the block. All of these trees were in excess of 100 years old. The largest may have been growing here when James Cook sailed down the coast.

To give a single tree its worth, let's look at a single 40 metre specimen in the front yard. This spreading tree has lost a few of its larger branches to thunder storms but still maintains a decent sized canopy shading an understorey of Black Tea-tree (*Melaleuca bracteata*), Boobialla (*Myoporum montanum*) and River She-oak (*Casuarina cunninghamiana*).

Like all of the eucalypts in our local area, this tree has been hollowed by the activity of termites during its century-plus life span. When a branch breaks during a storm, it opens up access to the hollow trunk. Invariably, the hollows are taken up by various forms of life for either shelter or nesting. Competition for nest sites in late winter and spring can be intense.

At this very minute (early-October) this single tree has nesting in various hollows the following birds: Sulphur-crested Cockatoos, Galahs, Rainbow Lorikeets, Scaly-breasted Lorikeets, Red-rumped Parrots, Dollarbirds, Nankeen Kestrels and pardalotes. Figbirds, Crested Pigeons and Rufous Whistlers are raising chicks in constructed nests high in the branches.

In the Black Tea-tree against the trunk

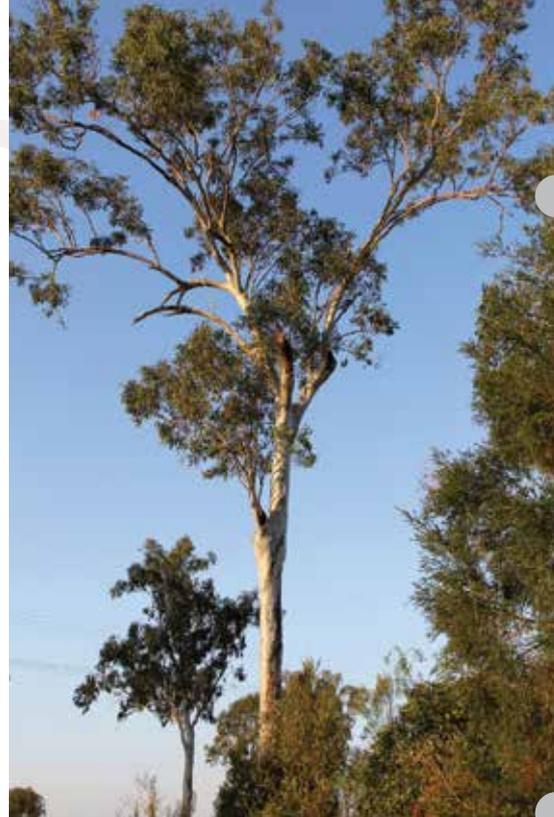
of the gum are nests of Bar-shouldered Doves and Double-barred Finches.

In addition to the birdlife, there is a family of Common Brush-tailed Possums calling this tree home along with a cloud of Gould's Wattle Bats and a hive of stingless native bees.

That is just the wildlife currently residing in this single blue gum. Broadening our view to those species finding food in the tree at the moment will see six species of honeyeaters, Olive-backed Orioles, White-winged Trillers, Red-backed Fairy-wrens, Restless Flycatchers, Grey Fantails, Willie Wagtails, Black-faced Cuckoo-shrikes, Little Bronze Cuckoos, Grey-crowned Babblers, Yellow-rumped Thornbills, Grey-headed and Little Red Flying Foxes, Carpet Pythons, Green Tree Snakes, a large skink species yet to be positively identified, Red-tailed Skinks, and this week, a Koala.

During the course of year, nesting hollows are also utilised by Pacific Black, Wood and Grey Teal ducks along with Cotton Pygmy Geese, Pale-headed Rosellas, Cockatiels, Little Corellas, Southern Boobooks, Laughing Kookaburras, Sacred Kingfishers and Barn Owls.

Wagtails, mudlarks, magpies, Brown Falcons, Hobbies, Black-shouldered Kites, thornbills and Ground Cuckoo-shrikes have all use the tree as a platform for their nests during the past couple of years.



The subject of these observations - a single, centenarian Queensland Blue Gum.

Today, this one tree has fifteen species of large fauna as permanent residents. A further 22 species find food within its canopy.

It is only these long-lived trees that provide nest hollows for so many of our local species of wildlife. On our little 5.5 hectare block we have positively identified 35 species of native bird nesting in mature eucalypts. Twenty two of those, ranging from tiny Striated Pardalotes and Sacred Kingfishers up to stately Barn Owls and raucous Sulphur-crested Cockatoos, rely on hollows for nest sites.

It takes approximately 100 years for a eucalypt to be mature enough to provide the large hollows required by many of our native fauna. Trees of that vintage have a significant environmental value and cannot be replaced within our lifetime.

Even a dead tree containing hollows is a treasure. So many of these are being lost to the firewood industry, burned by well meaning folk who mistakenly believe burning wood to heat their homes is environmentally friendly.

So what is the value of one tree? *Priceless!*

Article and photos by Neil Schultz
Land for Wildlife member
Mount Tarampa, Somerset



A male Grey Teal in repose above the entrance to the pair's nest hollow.



Photos top to bottom:

The Nankeen Kestrel is the only Australian falcon to nest in hollows. This kestrel raised three chicks in 'the tree'.

Galahs have taken up residence in one of the smaller hollows, just metres from the larger cockatoos.

This pair of Sulphur-crested Cockatoos use the same nest hollow, the largest in 'the tree' each year.

letters to the editor

Nesting in Weeds

Sometime last year the water level in the creek was low enough to wade over to this tiny island and pull the weeds on it. It was mainly Guinea Grass and, after removing any seeds, I draped the remaining weeds in the fork of this paperbark shown here.

The weeds are all dried out and dead now, and a Ringtail Possum has made its nest in this fork. The lower photo shows the nest with the rear end of the possum showing.

The island badly needs weeding again – weed seeds are washed down every time the creek flows. I'll have to try not to disturb the possum when I do it.

Louella Harley
Land for Wildlife member
Belmont, Brisbane



Wild Tobacco - Another View

For the last 15 years, we have been restoring the sub-tropical rainforest on our steep 13 ha Reesville property near Maleny. The article on Wild Tobacco in the October 2013 *Land for Wildlife Newsletter* puts forward a similar positive view of this woody weed that was advocated by Barung Landcare in our early years here. While we accept that, in frost-prone areas, there can be value in allowing Wild Tobacco to help protect young plantings, we have found it otherwise better to remove it along with the other woody weeds before planting an area, for three reasons.

Firstly, in our frost-free location, sun-hardened tubestock (and self-sown natives) grow much more quickly and vigorously in full sun than in part-shade. Secondly, if Wild Tobacco is left in place for several years while young native trees develop, it becomes difficult to cut down and remove without damaging the youngsters underneath. Thirdly, leaving the Wild Tobacco in place just adds to the weed seed resource brought in by birds from surrounding properties and roadsides. There is already a big enough ongoing job of removing the germinating woody weed species as part of our busy maintenance programme without making it worse. Furthermore, Wild Tobacco's toxicity reinforces the reasons to remove it.

Incidentally, we have found that after lantana is removed from an area, lots of Wild Tobacco plants continue to germinate there over the next few years, meaning that birds that like eating tobacco fruit also like perching in lantana.

David and Alison McDonald
Land for Wildlife members
Maleny, Sunshine Coast

membership survey results

Land for Wildlife is good for you!

Land for Wildlife (LFW) encourages members to remove weeds, learn about native plants and protect wildlife habitat, activities that require getting hands dirty and learning from others who have already done it. And it would seem that these things are good for your health! According to the membership survey undertaken in mid-2013, LFW members reported improved physical activity and greater social connectivity as a result of their participation in the LFW program.

“Attending workshops brings a sense of community to an otherwise solitary activity.”

As well as physical health and social benefits, LFW is improving how landholders relate to their local Council, with LFW members reporting better relationships with their Council as a result of their involvement in LFW. This finding supports the ‘carrot’ approach to incentive-based behavioural change rather than the ‘big stick’ of compliance.

“The initial contact with the LFW Officer was very beneficial and indicated his dedication to the job and the environment. It was good to know that Council has such people.”

LFW members in SEQ have taken to bush regeneration activities with gusto. Collectively, LFW members spent 60,000 days and \$2.25M of their own funds on conservation activities on their LFW properties in the last year alone. In total, this effort is valued at \$16.25M per year, which is an outstanding demonstration of how much landholders value a healthy environment and are prepared to work hard to achieve it.

1.2 million trees planted

LFW members have achieved remarkable results with revegetation and weed control. Collectively, 1.2M native trees have been planted and 3,600 hectares of weeds controlled on LFW properties in SEQ. Some properties have planted over 10,000 trees. A commendable feat by the landholders, some of whom have dug every hole by hand. It is no surprise that LFW activities are good for your physical health!

Weed warriors

Consistent with past surveys, weed control is still the dominant conservation activity undertaken on LFW properties and weed

identification is the number one workshop of choice. Most LFW members (80%) believe that their knowledge and skills in relation to weed control have improved as a result of their LFW membership. Looking forward, the LFW program aims to continually improve the services offered to LFW members to help them correctly identify weeds, especially emerging invasive ones, and to offer practical advice and training in weed control techniques. Offering peer-to-peer learning, such as field days and online forums, will help build the social and networking aspects of LFW.

Thanks for support

Understandably, LFW members highly value the assistance that they receive from the LFW program to help with weed control, tree planting or other conservation work. Some Councils in SEQ offer grants or other funding to help obtain herbicide, labour or trees. Where these are offered, there is a strong uptake of incentives.

“After 17 years of intensive bushcare I am slowing down, and it is the hands-on assistance which I most value.”

Think global, act local

The 2013 survey tested and demonstrated that LFW not only delivers on-ground outcomes on LFW properties, but also has impacts beyond the front gate. 88% of respondents reported that LFW has helped their understanding of habitat connectivity across the landscape.

56% of respondents want more information on VCAs

Compared to the last membership survey in 2005, there has been a marked increase in LFW members wanting to learn more about Voluntary Conservation Agreements (VCAs) and similar mechanism. This result is a great opportunity for LFW to act as a stepping-stone to conservation covenants where available, and to suggest alternative pathways where they are unavailable.

Groups within groups

The 2013 survey was the first time that basic demographic data was collected for the SEQ LFW membership, revealing distinct groups such as young working families, retired households and farmers. All groups are motivated by environmental goals, but some members are also motivated by financial or health goals. Economic drivers were important for working households



and primary producers, whereas health motivations were stronger for retired members. This information is useful for LFW agencies to deliver events and products that can be tailored to specific groups within the membership.

Tick of approval for services

Overall, the survey clearly indicated that members value the current suite of services provided by LFW, namely property visits, technical advice, contact with LFW Officers, quarterly newsletters and the LFW notes. This newsletter is read by an impressive 99% of survey respondents and has an estimated readership of 6,355 people.

The future – more of the good stuff, more networking, more technology

Into the future, the LFW program will be looking at more opportunities for social interactions, online forums and using emerging technologies. For example, the LFW program would like to offer our members online short videos demonstrating weed control techniques and easy access to citizen science initiatives such as the Atlas of Living Australia. Hopefully these new tools will enable LFW members to share information easily, feel connected to landholder networks and inspire on-ground environmental work. All of which are good for our health.

Thanks again to all 1,124 LFW members who answered this survey (that’s 30% of the SEQ LFW membership).

The full report, *SEQ Land for Wildlife Program: Results of the 2013 Membership Survey* will be available for download from www.lfwseq.com.au, or from your local Land for Wildlife Officer in late January.

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

Quotes are from survey respondents.

book reviews

Tadpoles and Frogs of Australia

by Marion Anstis

Wow, you don't see many books like this anymore! It is beautiful. With gold edging on each leaf, hard cover and weighing in at nearly 4 kgs, this is an impressive reference book. The dedication and precision required by the author, Marion Anstis, to complete this book is awe-inspiring. The Foreword by Angus Martin points out that there is no other known guide to frogs of a continent that is as thorough and comprehensive as this one. Australians are very lucky to have Marion Anstis on our continent.

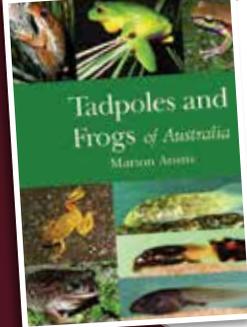
From what I can gather from the brief author profile, Marion Anstis was a high-school music teacher who had a passion for frogs since childhood. After retirement, she dedicated a decade to travelling in her campervan around Australia, collecting, raising and photographing tadpoles and frogs. She has authored two previous books on Australian tadpoles and frogs, with this book being the most complete.

The book is divided into three main sections. The first is a guide on how to find, collect and raise tadpoles. This

section also contains an insightful discussion on conservation issues such as impacts from Cane Toads, chytrid fungus and high-altitude population declines. The second section is an impressive key to tadpole genera, created and illustrated by Marion. The third section contains descriptions, photographs and illustrations of 241 species of Australian frog. About 30 species have little to nothing known about their life history, but what is known, is listed here. The photography is impressive and shows adult frogs, tadpoles and eggs. Striking, detailed illustrations depict tadpoles and their oral discs (mouthparts), as features of an oral disc can be important in determining a correct identification.

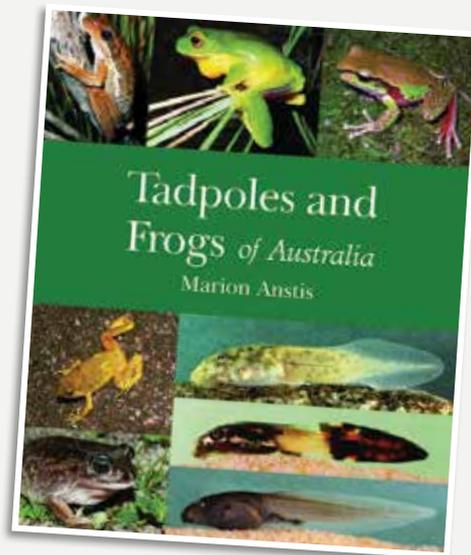
This book is understandably more costly than a soft-cover field guide, but I think it is worth every cent. If you have a keen interest in wildlife, then this book is a one-stop shop for frogs.

I would like to extend a huge thanks to Marion for her tenacity and vision in making this book a reality.



WIN A BOOK!

SEQ Catchments is giving away ONE free, signed by the author, *Limited Edition* copy of *Tadpoles and Frogs of Australia* by Marion Anstis valued at \$150 to a chosen Land for Wildlife member who contributes a story about a wetland or creek project on their property. Winning story will be printed in the October 2014 newsletter. Prize drawn 1 Sept 2014.



New Holland Publishers, 2013
Hard cover, colour photos, 816 pages.
ISBN: 9781921517310
Price: \$125
Available from most online and in-person bookshops.

A Complete Guide to Reptiles of Australia (4th Ed.)

By Steve Wilson and Gerry Swan

Like many books that I am fortunate enough to review for this newsletter, this one is a labour of love, reflecting the authors' lifelong passion for reptiles. If reptiles are your thing, living in Australia must feel like winning the lucky dip, as Australia boasts the highest diversity of reptiles in the world. The similar sized USA, for comparison, supports only one-third of Australia's reptile diversity.

The authors suggest that this high diversity can be attributed to Australia's geographic isolation, its size and the mosaic of varied habitats that we have. Some reptile species have become very specialised and have found a way to thrive in dry salt lakes, deep cracking clay soils and high altitude rainforests. Apparently, one square kilometre of Australian spinifex desert supports more species of reptile than any similar sized piece of land on Earth.

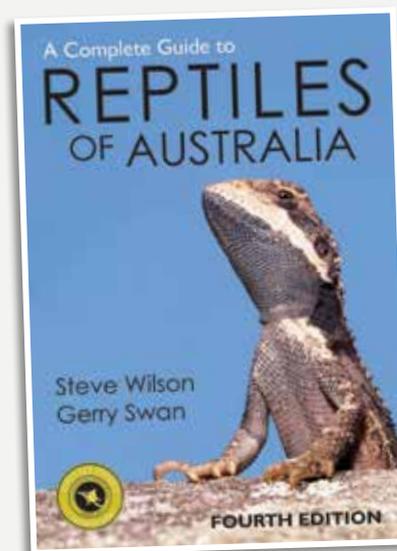
This book showcases this diversity with descriptions and excellent colour photographs of 946 described Australian

reptile species. This is a field guide, so descriptions are concise and often contain herpetological terms, for which there is an illustrated glossary showing the difference between ventrolateral and dorsolateral lizard stripes, as an example.

This latest (4th) edition contains many new images and is encased in a plastic cover with rounded edges to withstand rough treatment in the field. I have heard rumours that an app of this book will be available for smart phones and other devices, although it was not available by the time this went to print. An app will certainly be welcomed as there is currently no comprehensive, interactive guide to Australian reptiles.

Reptiles are a fascinating group of animal, for which Australia is internationally renowned. This book is a must have for anyone wanting to know more about the geckoes, skinks, snakes, turtles, dragons or lizards that live on your property, or inhabit your domestic holiday destinations.

Book reviews by Deborah Metters



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ISBN: 9781921517280
Price: \$49.95
Available from most online and in-person bookshops.



property profile

Bringing Back the Platypus

When we first came to our property we were amazed by the rainforest, the figs, orchids, butterflies, giant birds nest ferns and an astounding diversity of native wildlife - it was our own little utopia. After the floods of January 2011 our beautiful rainforest stream was transformed to an open, shallow waterway where large trees, boulders, bridges and all manner of soil and vegetation were stripped from the creek and the adjoining banks. Our family was shocked and upset by the transformation and devastation.

Our greatest sorrow was for the wildlife that had suffered including the missing platypus that once resided in the creek. The platypus' homes were destroyed and lost with whole banks being washed away and food sources scoured out and replaced with thick silt up to six feet deep coming down from the restoration works occurring along the railway line. We pondered how the platypus could possibly re-colonise from further downstream where they had to cross roads and culverts, and travel through a landscape that had been so dramatically transformed.

Since January 2011 our family has worked to re-establish the pools and riffles within the creek, remove chemicals, asbestos, car bodies and all manner of rubbish. We have also worked to stabilise landslips and creek banks, revegetate the banks of the waterway, monitor water quality and expand our weed management to a whole new suite of weeds.

Current and future management issues relate to ongoing stabilisation, revegetation, water quality, weed control and the impacts of encroaching high-density housing development in adjoining escarpment areas and infrastructure works such as railways and roads.

Much of the creek bank and landslip stabilisation, tree planting, weed control and water monitoring efforts have been undertaken by ourselves. We have received

some funding from a SEQ Catchments e-Tree grant through the Lockyer Valley Regional Council Land for Wildlife program during 2012, which gave us a start on the tree planting and these plantings are powering along, some were over two meters high after just 8 months. We have also successfully received some funding from SEQ Catchments for waterway restoration. With this funding we are establishing more plantings sites with erosion control matting and continuing with our weed control efforts.

The creek with its curves, pools and riffles is starting to take shape, and though the creek continues to move with each significant rainfall event we feel that these movements are becoming less dramatic over time. With the rainfall events of January and February 2013 the creek movements removed or scoured-out some of the still establishing plants that we had planted along the waterway and the creek banks continued to slip and move.

Weed control has been an ongoing management issue. We have a number of serious weeds on our property including cat's claw, privet and lantana. Since January 2011 we have received a whole new scope of weeds that we never had before including Madeira Vine, Camphor Laurel, Canna Lily, Asian Watercress and other aquatic weeds.

Being in the upper catchment of the Lockyer Valley our weed control and waterway stabilisation efforts are important for us here on our property and also for the benefit of the local native plants and wildlife, as well as for the health of those downstream, all the way to Moreton Bay. We are like gatekeepers for the spread of weeds throughout the Lockyer Valley and beyond as not only are we at the headwaters of the catchment we



Before and after the flood. Left photo shows Murphy's Creek in October 2008. Right photo shows Michael standing on that same small weir in February 2012 after the devastating floods of 2011.

are also at the junction of two waterways coming off the escarpment. Likewise our property also serves as a source of seed dispersal for native plants along our waterway, the Lockyer Valley and further afield.

Since January 2011 we have noticed that the species of native animals and their associated movements have also changed. The platypus were gone and we observed that the Richmond Birdwing butterfly, the Blue Triangle butterfly, turtles, certain species of dragonflies, echidnas, black cockatoos and a variety of water life such as eels, yabbies, crayfish and mayfly larvae had all disappeared. However over the last six months we have been noticing a return of some black cockatoos as well as a steady increase in aquatic life, much of this being the food source for the platypus.

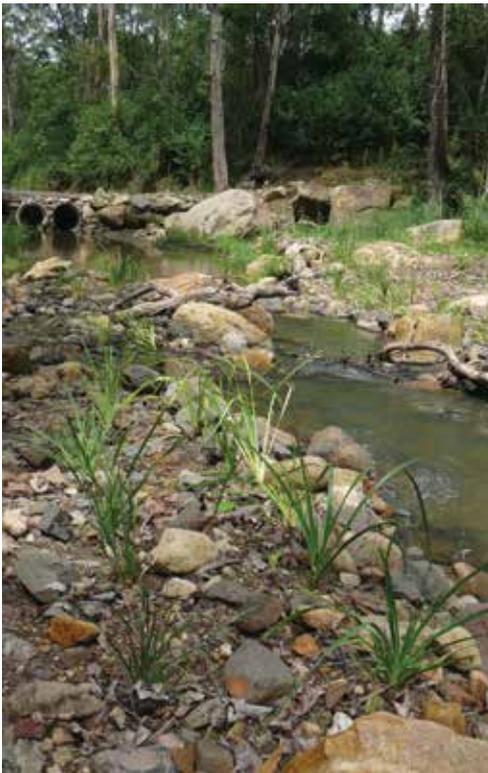
During early March of 2013 we were overjoyed at the sighting of a returning platypus in our creek. This sighting raised our hopes and energy levels that the work we have been doing has not been in vain and reminds us that local wildlife rely upon us and our ongoing commitment and efforts to retain their homes and food.

On understanding that our natural environment forms the base and structure of healthy lives and stable economics, and that all of the interconnected life on Earth has a role and purpose, we will continue to strive to achieve our goals of stabilising and restoring our local waterway. Through our local Land for Wildlife community we know that we are not alone in our dreams and efforts and we offer our joy and hopes to those of you who are also working towards the same goal.

**Article by Michael Hare
Land for Wildlife member
Murphy's Creek, Lockyer Valley**



Along some creeks in the upper Lockyer, weeds are a big issue, especially after the January 2011 floods. Shown here is Madeira Vine in flower (left) and Cat's Claw Creeper (right), both of these weeds are being controlled by Michael, but present a huge, ongoing challenge.



Far left: Michael stands next to a 2 metre high seedling that he planted only 8 months prior to this photo being taken.

Left: Significant earthworks and in-stream planting was done by Michael and his family to stabilise Murphy's Creek.

Below: As part of the reconstruction and stabilisation of the creek, Michael embedded large logs in the lower banks and re-created riffles (shallow rocky areas) where platypus search for invertebrates to eat. These reconstructed areas survived well in the Australia Day floods of 2013.





Turkey Tangentials



Focus on Pittosporums

If you love collecting seed and growing native plants, then sticky fingers are what you'll get when collecting the seeds from the fruit of this genus. Some of their seed are so sticky you need to wash them in several changes of soapy water to separate them for sowing. We are of course talking about the Pittosporums.

According to the book *Mangroves to Mountains*, we have eight native Pittosporums, although three of them used to be in the separate Genus *Citriobatus*. We also have one native species out of its natural range, *Pittosporum ferrugineum*. Although there is some debate, in certain publications, as to whether this plant is a local native or not, it is definitely a weed on the Sunshine Coast. To add to the confusion we also have the local rainforest plant called the Holly-leaved Pittosporum (*Auranticarpa rhombifolia*), which used to be a Pittosporum...

A few of the Pittosporums of SEQ include the Native Daphne (*Pittosporum undulatum*) a small to medium tree to 25 metres in height; it is spectacular in flower and abundant in fruit. They have the stickiest seed of all the Pittosporums, but this is obviously no deterrent to the birds as they are readily spread and this species is considered a weed in southern Australia.

Next up is the Hairy Pittosporum (*Pittosporum revolutum*). This small shrub reaches 4 metres in height and grows in a variety of ecosystems from coast to mountains and can be readily identified by its large knobbly yellow fruit, which split to reveal large glossy seeds to 4 mm.

Last but not least is one of my favourite of the spiky bushes, the Orange Thorn (*Pittosporum multiflorum*) (syn. *Citriobatus pauciflorus*). This shrub to 2 metres in height has beautiful glossy foliage and a

Top: The delightful yellow flowers of *Pittosporum revolutum*.

Above left: The white flowers of *Pittosporum undulatum*.

Above right: Sticky red seeds can be found within the large yellow fruit of *Pittosporum revolutum*.

small orange fruit that looks a bit like, you guessed it, a small orange. As opposed to the other Pittosporums, Orange Thorn does not have sticky fruit, but collecting them has its own difficulties as you will end up with hands full of prickles.



Spencer Shaw
Land for Wildlife member
Owner, Brush Turkey Enterprises
Reesville, Sunshine Coast

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