LAND FOR WILDLIFE SOUTH EAST QUEENSLAND newsletter

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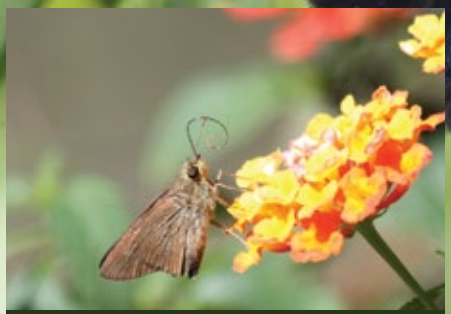

Lantana - friend or foe?

Camera Trapping

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LAND FOR WILDLIFE
VOLUNTARY WILDLIFE CONSERVATION

CELEBRATING 20 YEARS
1998 - 2018

editorial

Re-wilding and wilding are terms not widely used in Australia, yet. I hope they gain traction. They speak to the creative parts of our brains, more so than natural regeneration or ecological restoration. People can get behind a re-wilding project even if it does come with a sense of the unknown.

Many Land for Wildlife members are actively wilding their properties. They are uncovering nature's potential by removing the stifling pressures of weeds and over-grazing. They are allowing the messiness of nature in and letting it take the driver's seat.

Australian re-wilding projects are not about bringing back bison and wolves. They have to accommodate our boom and bust ecosystems and they should be underpinned by our rich indigenous land management history. It is an exciting time to see how the global re-wilding initiative plays out in this ancient country. *Wilding* book is reviewed on page 13.

The article by Nick Clancy asks the question about lantana – is it good habitat or a noxious weed? Lantana is an opportunistic plant, arguably a proponent of wilding, but it can dramatically simplify habitat benefiting only a narrow range of wildlife. His article recommends that we come to know our sites well and tailor our weed control accordingly.

If you want to find out what animals are living in the wild parts of your property, a fauna monitoring camera might be the way to go. Alan Wynn's article is a great starting point if you are buying a camera or if you want to get the most out of the camera you already have.

The 20th anniversary celebrations will be ramping up over the next few months. If you are a long-term Land for Wildlife member, we would love to hear from you. The next newsletter edition will be celebrating our 20th year and I am keen to showcase the diversity of Land for Wildlife journeys. Please contact your local officer or myself if you want to share your thoughts.

Thank you to my colleague Liz Gould who ably kept the wheels turning while I was on leave. I have come back to work part-time and endeavour to sustain a pace fast enough to do my job, but slow enough to enjoy life and be grateful. I look forward to connecting with many of you during the 20th anniversary events.

Deborah Metters
Land for Wildlife
Regional Coordinator
Healthy Land and Water

LANDHOLDER *registrations*

Land for Wildlife SEQ 1/6/2018

Registered Properties	**3449**
Working Towards Registration	**929**
Total Area Retained	**62,468 ha**
Total Area under Restoration	**7,385 ha**

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Front Cover: An adult female Regent Skipper sips nectar from a lantana flower. Photo by Todd Burrows. More detail on back page.

letters to the editor

Connecting with nature

I loved the story in the April edition about celebrating Sunshine Coast's 1000th Land for Wildlife property, in particular the reference:

"*Late last year I was sitting weeding quietly in our forest. It was late in the afternoon and I had escaped to do some weeding after a rather long day at work. To my surprise I looked up to see only a few metres away from me a wallaby eating a native plant in its little paws. It was a special moment for me. Hopefully for us.*" So very well put by the author Jenny Brice.

I immediately thought, isn't this what we do our revegetation work for - the hope of coming face to face with some beautiful fauna? Maybe it is unlikely to happen in such a charming way at our revegetation site at Kenmore High School but we do have our occasional connections with nature and that's what keeps us going. I have sent a copy of this article around to those associated with our group and am sure that it will help motivate them to keep going.

Thanks for the great stories and information in your newsletter - I look forward to reading each issue.

Bruce Dymock
Kenmore State High School P&C Environment Sub-committee and Land for Wildlife member
Kenmore, Brisbane

No hole-punches?

Thankyou for your new look wildlife newsletter. I read every page of every newsletter. I then file it in a ring binder. I was disappointed to discover that there are no holes in this issue to continue this practice. I am therefore requesting that consideration be given to placing holes for filing in subsequent newsletters. Once again, thank you for a great newsletter.

Name and address supplied.

Reply by the Editor:

Thanks for your feedback. We decided to no longer hole-punch the newsletters due to the annual cost being over $3000 for hole-punching alone. We apologise for the change as we know that some of our members file the newsletters in the ring binders provided by the Land for Wildlife program. In general, we are moving away from providing ring binders in preference for a booklet of technical notes. I encourage you to either buy a sturdy hole-puncher or a magazine holder (they come in a nice range of colours and materials these days). I hope this change doesn't diminish your enjoyment of the newsletter.

Blue Birdwings

This remarkable photo shows one female and two male Richmond Birdwings congregating for nectar around this bottlebrush tree. Amazingly, one of the males is blue! Image taken by Stephanie Fielder on her Land for Wildlife property at Landers Shoot on the Sunshine Coast near a core habitat area with mature host vines for the Richmond Birdwings.

Golden Swampy

We attach a photo of this golden swampy sighted at our property in Tallebudgera Valley today. It looks like the Stradbroke Island variation. They are very rare off the island and rarely seen this far south. It's the second sighting here in a couple of weeks now. The photo doesn't do it justice, it is bright mango coloured. Truly amazing.

Raine Davis
Land for Wildlife member
Tallebudgera Valley, Gold Coast

Reply by Scott Sumner, Land for Wildlife Officer, City of Gold Coast:

The golden colour phase of the Swamp Wallaby is really cool! There is a great photo inside the back cover of the 2007 edition of *Wildlife of Greater Brisbane*. I saw one on Peel Island some ten years ago and had to ask around to work out what it was. I thought it was restricted to the larger Moreton Bay islands (predominantly Stradbroke Islands) and only recently became aware that they were on the mainland.

Apparently it is the same species, just a different colour form that became prominent due to isolated populations on the islands. There have been occasional sightings on the northern mainland Gold Coast and recently a few as far south as Tallebudgera and Currumbin Valleys. Thanks for sharing.

Wildlife Tragics

"we have our very own national park, and we're happily hooked on being its hard working rangers"

You could argue that being a Land for Wildlife member is a form of obsessive compulsive disorder.

Think about it.

In stultifying summer heat, you're wading through chest high Molasses Grass, searching for the marker sticks which indicate planted trees overwhelmed by the rampant wet season growth.

You're passing a couple of hours yanking lantana roots out of your woodland when alarm bells ring: you've disturbed a nest of very large and aggressive ants which are all over your boots and trousers. Ouch!

With four hoses connected to get water from your tank, you spend an afternoon watering-in new tubestock plants. This involves mattocking a clearing, digging a hole, removing weeds and stones, collecting and laying mulch, and hammering in a marker stake for every plant.

When you do 40 plants in a session, (and we've put in over 1500) by mid-afternoon you start to yearn for that cold shower and even colder wine at sunset.

A relaxed, early morning stroll up the track becomes a sweaty rescue mission as you rip away the creepers which have rapidly enveloped a dozen of those saplings planted four years ago.

Having a weekender in the depths of the Sunshine Coast is to be the privileged custodian of a slab of old growth native forest.

My wife and I bought our land as an out-of-the-way escape where we could relax and commune with nature. And that is exactly what we do. We love it more as every year passes. But 'owning' nine hectares of koala and glider habitat comes with responsibilities. So, perhaps like most Land for Wildlife supporters, we're addicted to improving habitat as best we can.

It's seldom we go for a stroll on our block without gloves, because we can't resist pulling weeds.

Our friends in Brisbane think we're mad, and we probably are. Retired, and working physically much harder than when we earned salaries?

Why? We do it because nature gives so much back. The rewards are simply fabulous.

- With morning cuppas in hand, we've stood quietly as two young Red-necked Wallaby males have fought hard for more than 10 minutes. They would rest, then resume kicking each other in a tussle which brought them within two metres of us, without them realising it.
- To see a Scarlet Honeyeater, in bright sunshine, checking out a red bottlebrush on a tree we've planted.
- Being amused by a beautiful Australian King Parrot, brazenly sampling green tomatoes in the veggie patch, when we were almost close enough to touch it.
- Watching an Owlet Nightjar, sunbathing with his head sticking out of a nesting box which Land for Wildlife provided.

To us, these moments are very special.

And after a Land for Wildlife workshop on how to use movement sensitive cameras, we have discovered some of the nocturnal wanderings of our wildlife. Bandicoots, antechinus and Mountain (Short-eared) Brushtail Possums... even feral pigs, have been recorded.

We've collected over 80 species on our bird list, and have admired big Lace Monitors, healthy tree frogs, majestic Carpet Pythons and delicate tree snakes; all minding their own business.

In short, we have our very own national park, and we're happily hooked on being its hard working rangers.

Article and photos by Phil Hammond
Land for Wildlife member
Kidaman Creek, Sunshine Coast

Time & Nature Heal

(PLUS SOME HARD WORK!)

In 1982 when we moved to Bundaberg we purchased an old pineapple farm of 24 ha with sandy wallum-type soil, with one lonely old mango tree. We relocated a lovely old Queenslander house (which needed renovating) onto the block and with our young family and business interests found ourselves very busy.

With the help of a small Queensland Forestry assistance package, we purchased approx. 10,000 tubestock seedlings to start to dampen the dust bowl we were living in after we ploughed in the pineapples. Not all the species of trees supplied were suitable for this area and we suffered significant loses, but over time some really thrived.

The block had areas of salt intrusion and patches where nothing would grow as chemicals had been wantonly mixed and discarded in these areas. We relied on a bore for garden water and dug a dam on the place to start to provide habitat for the wildlife, which started to arrive.

Establishing a new and rapidly growing business in 1990 and a busy active family meant we had little time to devote to revegetation. Nature stepped in and given time (and some hard work), an emerging ecosystem established to provide cover for the fragile, denuded soils. We have been amazed at the diversity that has established even though surrounding areas have little native vegetation apart from the usual introduced plants. The wildlife thrived with the diversified food supply and the increased refuge.

After registering with Land for Wildlife in the 1990s, we were provided with small amounts of assistance from Landcare in Bundaberg and from Maureen Schmidt and her small team with the Burnett Mary Regional Group. This was appreciated and certainly aided with species diversity. We worked hard to keep down the feral weeds. We have always maintained fire breaks to allay the neighbours' fears of bushfires, but an uncontrolled fire from a neighbouring cane farm spread through a small section of the property in 1995.

Our wildlife encounters have been many but a few highlights emerge.

- A bedraggled young Brush Turkey who appeared under our clothes line during the devastating 2013 floods....was it the same one that created the nest outside our front door in 2017?
- The Sugar Gliders we rescued after feral cat attacks, with the help of wildlife carers, rehabilitated back in the wild.
- The Tawny Frogmouth pair (regulars for 13 years outside our kitchen window) who brought their 2 young into the protection of the house when the severe storms of early 2018 hit the Bundaberg area.
- The bandicoot we rescued from the swimming pool before we installed a 'wildlife ramp' to ensure it didn't happen again.

We are one of only a small number of properties in the Bundaberg area who have taken up Land for Wildlife and participation is still extremely low.

We have met resistance from people who see our bushland as the perfect 'dumping ground' for their rubbish and those who rail against kangaroos 'hitting their cars' on the road in front of our property.

We hope our experiences over 36 years serve to remind people that, in spite of some of the crazy environmental decisions our politicians and bureaucrats make, time and nature can work together to create positive outcomes. Our property is not a pristine restoration of original natural habitat, but none-the-less it is a living, vibrant patch of bushland in a sea of agriculture. It's been great to have Land for Wildlife along on our journey.

Living by example in this sanctuary has been a privilege for us and we respect that our family all share our passion for nature.

Article and photos by Helen Rohen
Land for Wildlife member
Branyan, Burnett Mary

1982 - a degraded dust bowl.

2018 - a thriving wetland and forest.

What a difference 30 years makes! Aerial imagery clearly shows the hard work done to help bring back nature to this once barren property.

Camera Trapping
FOR BEGINNERS

Camera traps are a great way to learn about the cryptic and common animals on your property. Brush Turkeys seem to be always drawn to cameras.

If, like me, you've ever wondered what animals are using that pathway through the grass on your property, then a camera trap may be able to help. It is a great tool for finding out about some of the more cryptic animals (and common ones) that live on your property. Camera trapping involves setting a fixed digital camera to capture images or video of animals which pass in front of the camera.

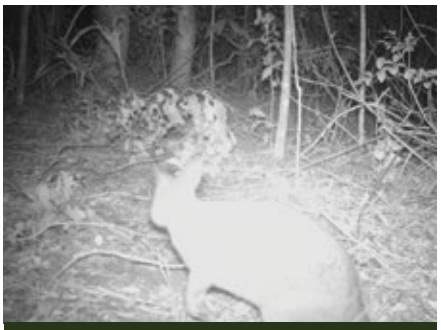
The most commonly used, cost effective, commercial camera traps use a passive infrared (PIR) sensor. They require a temperature differential between ambient and animal body temperature, combined with movement within the detection zone. They are best suited to detecting mammals or birds.

In the past, before camera traps became relatively cheap and readily available, if you wanted to survey for small mammals you would've had to use techniques such as live-trapping, hair tube traps or sand traps. Compared with these techniques camera trapping has a number of advantages. They can be deployed for extended periods of time. They are less labour intensive and you avoid the ethical and practical difficulties involved with capturing and handling animals.

As with regular digital cameras there are a number of features to consider when it comes to choosing a camera apart from the price. For me, the most important are: flash type, image resolution, detection zone size and trigger speed.

Flash Type. Infrared flashes, while still able to be seen by most wildlife, tend to create less of a disturbance than white flash, which can be an important consideration for behavioural observations. An additional benefit is increased camera security due to the lack of a flash that is easily detected by humans. However, white flash cameras provide full colour images, often with better resolution than infrared models.

Image Resolution. When evaluating a camera's image resolution you will often find that good quality lenses and image sensors are more important than the number of megapixels. Cheaper cameras can often have poor resolution at night or suffer from 'flash burn'. If possible, compare sample images from the cameras you are interested in.



'Flash burn' can be minimised by putting masking tape over the flash when targetting animals at close range.

Detection Zones. Detection zones vary between camera trap models, and for some, only a small proportion of the field of view (what the photo will show) actually corresponds with the camera's detection zone. Detection zones that are wider than the field of view can result in 'false triggers' while narrow detection zones are best suited to situations where animals are attracted to a point of interest. False triggers are the result of something other than a target animal triggering the camera. Detection zones that match the width of the cameras field of view or just inside this area are the most suitable for general use.

Trigger Speed. The trigger speed is the time it takes for the camera to start taking pictures after it has detected an animal. This varies between about 0.2 seconds for the high-end professional cameras to over 2 seconds for cheaper models.

Other features you may find useful are:

- Manual programming of settings such as how many and how quickly the camera takes photos per trigger.
- Video or the ability to take multiple photos very quickly to achieve near video results. This feature is particularly useful for gaining insight into animal behaviour.
- Time lapse can be useful for site monitoring and for cold-blooded animals like reptiles or insects that often don't trigger PIR sensors.

Once you have decided on a camera that suits your requirements and budget, don't forget that you will need batteries and an SD card. Battery choice adds a whole new level of complexity to the prospective fauna camera owner. I have seen the results of leaking batteries enough times to say with great certainty that if you are spending $300 or more on a camera then it is worth spending another $80-100 on good quality, high capacity NiMH rechargeable batteries and a smart charger. However, some NiMH batteries will discharge quickly in high temperatures. For an in depth discussion on batteries, visit www.trailcampro.com/pages/game-camera-battery-information.

SD card choice is simpler. A 16GB high capacity 'fast' card should cost less than $15 and will be adequate for most users.

So, the postie has delivered your camera and you're keen to put it out in the veggie

A fast trigger speed is advantageous for capturing images of small, fast moving animals like birds and rodents.

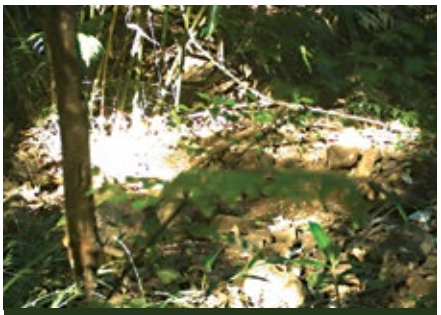
patch to find out who is stealing the snow peas. Before you do, take some time to familiarise yourself with the various settings, perhaps start with the default ones but don't be afraid to change them to see if you get different results.

Changing the sensitivity will alter how the PIR sensors detects an animal. Use a high setting when ambient temperature approaches an animal's body temperature (in summer) and a medium or low setting in the colder months. For the number of photos per trigger start with a minimum of three, one second apart with a delay of 30 seconds. This will give you a greater chance of capturing a good shot while reducing the number of photos of the same animal (usually a brush turkey), extending battery life and SD card memory space. If you are interested in animal behaviour, increase the number of photos per trigger and reduce or remove the delay.

A passive set up takes advantage of animal trails, burrows, rotting or hollow logs and watering points to bring animals to the camera, while an active setup uses a bait or lure. Using baits or lures may alter behaviour, increase predation risk and requires Queensland Government permits, so a passive set up is best for private landholders.

The next step, after you've fiddled with all the settings, is to install the camera. To capture images of animals like possums, bandicoots and small wallabies securely attach the camera 30–50 cm from the ground on a tree or post. Slightly direct the camera down towards the focal point which should be about 1.5–2 m from the camera and in the centre of the camera frame. To aid in the identification of small mammals, which can be difficult, consider placing a reference scale (such as a plastic ruler) in the field of view.

Now you need to wait. Try to resist the temptation to check the SD card for photos daily as your scent may cause some animals to avoid the area. An absolute minimum would be four nights but ideally cameras should be left in place for two weeks or longer. Be prepared for some disappointment when you start looking through the photos from your first deployments. It is not uncommon to get several hundred (or more) of a fern leaf waving or a seemingly unending variation on a theme of 'patch of sunlight on leaf litter'.



To minimise the chance of false triggers, carefully prune vegetation within the detection zone (remember to carry secateurs) and try to deploy the camera in a sheltered area (less wind) or facing south (fewer dark shadows). Shown here is one of a thousand false trigger images taken due to the moving fern in foreground and moving sunlight.

If you are lucky enough to have access to more than one camera, ensure the camera programming is consistent across all cameras to be deployed (e.g. sensitivity settings, numbers of photos per trigger, interval between photos and image size and resolution or video length). Also, to make the data as useful as possible, try to set up the cameras in a consistent manner to maintain similar detection probabilities.

A good passive set up on a pathway. Note the slight downward tilt and the camera oriented at an angle to the pathway. Even better would be two cameras pointed in opposite directions, there is not much that would be missed. Photo by Alan Wynn.

There are a few legal and ethical considerations when using fauna cameras. If cameras are used on your own property and do not use a bait or lure then no permits or licenses are required. If using video and sound is recorded, privacy laws may apply; see the Office of the Information Commissioner for more information - www.oic.qld.gov.au.

The best way to improve your camera trapping skills is to get out there and experiment. Don't be afraid to make mistakes. I have about 200 photos that are upside down along with countless others of unidentifiable blurs. Experiment, try some different setups to see what works best with different animals.

Make sure you have clean, scent-free hands, or wear gloves when handling cameras. This was the last photo taken before this possum opened and dismantled the camera.

Some Tips and Tricks

- When setting up, place a laser pointer on top of the camera to help its aim.
- Format your SD cards to each camera and always keep that card for that camera – reformat the card after downloading photos.
- Holding a small blackboard with details (i.e. location, target species) in front of the camera at deployment and collection will give a photographic record of important details.
- When using rechargeable batteries, use a smart charger to ensure that all the batteries are charged to an equivalent level. Never mix charged and uncharged batteries in the camera.
- Before each deployment check the time and date settings.
- Be wary of setting up on trees or posts that livestock may use for scratching.

References and online reading

www.pestsmart.org.au/act/act-step-4/camera-trapping/

www.trailcampro.com/

Article by Alan Wynn
Land for Wildlife Officer
Sunshine Coast Council

The ripe reddish fruit of coffee. Photo by Sheldon Navie.

Coffee

THERE'S TROUBLE BREWIN' IN THE BUSH

Photo by Scott Sumner

A mature coffee shrub with dark, shiny leaves and ripening green fruit.

Photo by Scott Sumner

Newly germinated coffee seedlings at the cotyledon stage and seedlings with shiny, pointed leaves.

Photo by Scott Sumner

Photo by Glenn Leiper

Watch out for the look-a-like native plant! Young coffee seedlings (two above) have two separate leaves (cotyledons) on each stem, whereas the native groundcover Large Pennywort, *Hydrocotyle pedicellosa*, (above) has a single leaf on each stem.

Coffee is one of the most popular beverages in the world so it comes as no surprise that many people love the idea of growing and making their very own coffee. In south-east Queensland coffee plants (*Coffea arabica*) are ridiculously easy to grow. They grow fast and produce fruit prolifically within a couple of years. The problem starts when people find that the process of picking the fruit, de-fleshing the coffee 'beans' (seeds), drying, removing seed membranes, roasting and milling is extremely laborious, and without meticulous care the resulting coffee can be pretty bloody awful.

The real trouble starts when fruits are left on the plant unharvested and our native birds and bats get an easy feed and then disperse the seed far and wide.

The coffee plant originates from the mountain rainforests of central Africa and outside its natural range it has all the hallmarks of a perfect rainforest weed. As mentioned, it not only fruits prolifically, but also has the ability to germinate and grow happily in full shade. This is particularly problematic for our precious patches of undisturbed rainforest.

I have seen patches of local rainforest that have a canopy of large native trees with the understorey dominated by thousands of coffee plant seedlings and dense thickets of coffee bushes. This competition with native rainforest tree seedlings and understorey plants will disturb the natural process of long-term forest renewal. If a native tree falls and a gap in the canopy is created, then the coffee plants will take over quickly, preventing natives from recolonising the gap.

Recently I spotted a large coffee shrub growing at the entrance to a popular national park. There were hundreds of seedlings around this individual plant which were competing with seedling of two native threatened rainforest species Fine-leaved Tuckeroo (*Lepiderema pulchella*) and Long-leaved Tuckeroo (*Cupaniopsis newmanii*).

Coffee plants thrive on rich volcanic soils and invade rainforests in most tropical and sub-tropical areas around the world where it has been cultivated. It is a significant weed on numerous Pacific Islands and it has also been found invading creek beds and vegetation along waterways.

Coffee grows as a shrub or small tree usually to 5 metres tall. However, in the wild they have been documented to an impressive 12 metres in height. Plants can be single or multi-stemmed. Older stems are rough or flaky and light brown in colour. The bush has large, dark green, glossy leaves (7-20 cm long and 3-8 cm wide) with a prominent mid-vein and wavy or undulating margin (leaf edge). It has clusters of fragrant white flowers that produce shiny green fruit (13-15 mm long) that turn red when ripe.

If you have mature coffee bushes on your property and are not methodically harvesting the fruit please remove these bushes and replace them with fruit trees that are not weedy, or better still, local native plants for the wildlife.

When keeping an eye out for new incursions it is important to know that the leaves of coffee seedlings are remarkably different to the mature plant's leaves. See images on this page for comparison.

Coffea arabica was first identified as a potential 'sleeper weed' in the mid-1990s. A sleeper weed is a plant species that has escaped cultivation but is uncommon and appears benign for many years. At some point in time they are triggered by certain events or conditions (such as flood, fire, drought or climate change), and then spread widely and their population explodes. Coffee is now awakening from its slumber and it's not going to need a caffeine fix.

References and further reading

Global Compendium of Weeds - www.hear.org/gcw/

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Article by Scott Sumner
Land for Wildlife Officer
City of Gold Coast

When a Tree Becomes a Forest

AND A FOREST BECOMES A CATHEDRAL

"In 1998 ... [our] Land for Wildlife Officer looked at what we had started, and believed in us."

We have been planting on Echidna Creek for 24 years. When we started it was a degraded grazing property with spurs and gullies and steep shoulders infested with lantana, yellow-berry and glycine.

We have come a long way in those years. Whether it is the early morning sun angling in from the east or the late afternoon sun angling in from the west, the forest suddenly shows itself. The sunlight defines and illuminates the trunks of the trees in their many breadths and heights.

The forest comes alive with its many layers. The clouds of moths that fly out of rainforest grasses, the fungi, the vines, the wildings, the understory and the mid-story. You hear the small birds, but they are not as obvious as they were in the early years, as they are now high in the canopies.

You pass a possum day-camping in the fork of the native elm and the water dragon launches itself into the dam. A Swamp Wallaby comes to eat near where we are weeding. A bandicoot rushes out of its hiding place. Growing flocks of Topknot Pigeons, and the elusive Rose-crowned Fruit Doves delight our eyes and ears.

It is all working together. And it is the light, that sudden cascading light, making one think of a living cathedral.

It is a tribute to all those who have helped us over the years, especially the revegetators, the regenerators, the educators who work with landowners all over the region every day. Special thanks from us go to Kennedy Webb, Jolyon Froude, Marc Russell, Denise Irons, Stephanie Reif, Mark Savage, Clayton Stokoe, Nick Willis, Greg Smyrell, Spencer Shaw, Alan Wynn, Jonathon Edgar, Barung Landcare, Sunshine Coast Council's Conservation Partnerships Program and many others.

We have been members of Land for Wildlife from its first year in south-east Queensland. In 1998, Cath Moran (then Land for Wildlife Officer) looked at what we had started, and believed in us. Today, thanks to Land for Wildlife, we have a Voluntary Conservation Agreement on over 30 acres.

It is fantastic to see the forest grow. Congratulations to Land for Wildlife for 20 super years.

Craig Hosmer and Daryl Reinke
Land for Wildlife members
Mapleton, Sunshine Coast

Lantana
NOXIOUS WEED OR GREAT HABITAT?

It is impressive what some Land for Wildlife members are willing to tackle! This steep gully with rocky scree slopes was wall-to-wall lantana. Slowly the landholders are controlling it in stages targeting any existing trees as a priority. The dead lantana tower in the foreground offers an indication to how high this weed can climb into the canopy. Photo by Nick Clancy, taken on a Land for Wildlife / Nature Refuge property near Wootha, headwaters of the Stanley River catchment.

Lantana camara is possibly the most widespread weed in south-east Queensland (SEQ); very few rural properties can claim a lantana-free status. It covers an estimated four million hectares of eastern Australia, often to the exclusion of wildlife, people and livestock.

Despite being considered in the top ten of the world's worst weeds and a 'Weed of National Significance', landholders don't actually have a legal requirement to control lantana. However many landholders do feel compelled to reduce its extent.

But not everyone feels this way. I often hear the comments, "but it's great habitat for birds" or "it provides important cover for wildlife". So, which is it? Great habitat? Or serious weed? Well, like many polarised debates the answer probably lies somewhere in the middle and is often site specific.

Many Land for Wildlife properties in SEQ consist of regrowth forests that have a history of logging and/or grazing, providing ideal disturbed niches for lantana to grow. Lantana is not a fussy plant, it grows in most SEQ vegetation communities. As far as plants go, it's somewhat of a 'shape shifter'. It adapts its growth form in response to environmental conditions. In high rainfall areas it can form impenetrable thickets that blanket entire hillsides of neglected pasture. In regrowth forests where it struggles for light it will climb up and over trees creating lantana 'towers', while in drier, 'hungrier' country it can form tough, raspy shrubs. It can also send long runners out along the ground, which then shoot skywards when they find a sunny gap. This adaptability, coupled with the fact that there are hundreds of recognised varieties of this nursery manufactured 'species', makes generalising about *Lantana camara* and its control somewhat problematic.

So why is lantana considered a problem? For starters it's highly invasive. First introduced into a Sydney garden in the 1840s it quickly spread. By 1889 the first dense stands were mapped close to the mouth of the Brisbane River. Eight years later it was described as Brisbane's "most troublesome weed" that formed "impenetrable thickets on the banks of stream, deserted farms and the edges of scrubs".

Lantana seeds are dispersed by birds and mammals and germinate readily, especially in disturbed areas. While seed viability decreases with time (about a quarter will germinate after 36 months) some have been found to remain viable for up to 11 years. Lantana establishes rapidly in disturbed sites at the expense of other plants, due to its fast growth rates and allelopathic effects (toxicity to other plants).

Regenerating native seedlings are shaded out, as are groundcovers and grasses, existing shrubs and small trees can be smothered and are eventually pulled down by the sheer weight. So in essence, it can stall the successional process of regrowing forests and dominate the understorey of disturbed forests, especially if the canopy has been opened up through activities such as logging. Combined, these impacts can lead to a reduction in biodiversity.

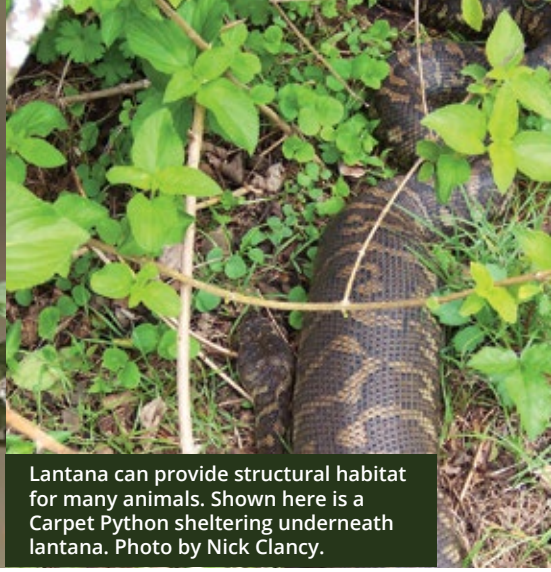
Lantana provides cover for some undesirable feral animals such as cats, pigs, rabbits, foxes and wild dogs, which have all been shown to take cover in lantana thickets. Contributing to another threatening process for wildlife, lantana can promote changes in fire regimes, in some instances it can increase wildfire intensity, while in others situations it can limit the spread of fire.

On grazing properties lantana is not just a problem because it competes with pasture, it is also toxic to livestock. The economic costs of lantana to the grazing, forestry and conservation sectors are very high. In 2005/06 it was estimated that the Australian grazing industry alone was losing $104 million per year in lost productivity as a result of lantana. So we have heard from the nay side of the debate, what about the ayes?

On the 'great habitat' side of the debate, lantana provides food for a range of wildlife. For example I have often observed Richmond Birdwing butterflies and numerous species of honeyeaters feeding on the nectar of lantana flowers. Birds such as Silvereyes, Pied Currawongs, Satin Bowerbirds and Lewin's Honeyeaters eat the small fruits. The vulnerable Black-breasted Button-quail utilises lantana for day-time foraging and nocturnal roosting and lantana thickets are considered

Removing lantana can assist the regeneration of native plants. Photo by Nick Clancy.

Lantana flowers provide nectar for birds and butterflies, while lantana fruit is eaten by many kinds of birds. Photo by Deborah Metters.



Lantana can provide structural habitat for many animals. Shown here is a Carpet Python sheltering underneath lantana. Photo by Nick Clancy.

a crucial component of their habitat requirements in some locations.

Of the numerous native species that utilise lantana thickets as habitat, it is the dense growth structure that makes it attractive. Whipbirds, scrubwrens, Pheasant Coucals and fairywrens all utilise the dense structure provided by lantana. Bandicoots, wallabies and pythons will use lantana as a refuge during daylight hours. Its habit of occupying forest edges is also useful for species such as Red-necked Pademelons as it provides dense cover from predators immediately adjacent to more open foraging areas. Prior to 1840 all of these native animals thrived in an environment without lantana, and in the absence of their pre-European habitat they have adapted to utilise lantana in various ways. So there is no doubt that lantana provides habitat opportunities for a range of wildlife. But does this mean that we should simply leave lantana wherever it grows and assume that everything is hunky-dory in downtown lantana land?

Well, in some instances the answer is probably yes. For example where there is an absence of alternative cover for lantana dwelling native wildlife. Also, where lantana forms a fringing thicket along forest margins, then it can function well as an 'edge' plant. As an edge plant it can help to exclude livestock from natural areas or waterways. The buffer provided can be beneficial, preventing spread of other weeds into the forest. However in this context lantana is not providing anything that structurally-similar natives such as Native Raspberry (*Rubus* spp.) can't also provide.

In many cases I would suggest that we can do better than simply leaving lantana, especially in the mosaic of remnant, regrowth and open country that occurs on many Land for Wildlife properties.

Where lantana forms a mono-cultural land blanket it offers a very simplified habitat. By this I not only mean structurally, but it only provides one variety of flower, fruit and foliage. When the dominant lantana is not flowering or fruiting, alternative food sources are limited. If, as 'Land for Wildlifers', it is our objective to expand and improve the habitat resources available to native wildlife on our properties, then we should aim to replace lantana with a suite of endemic plants. This doesn't always mean that you need to plant trees either, often when lantana is removed we release the brakes on natural regeneration, stimulating a flush of germinating native plants from all strata including herbs, ferns, grasses, shrubs, trees and vines.

> *"In many cases I would suggest that we can do better than simply leaving lantana"*

With assistance, this regenerating pulse of plants can provide a greater variety of both structure and feeding opportunities, offering a range of foliage, flowers, seeds and fruits throughout the year. Over time the subsequent increase in plant and invertebrate diversity will likely result in an increase in the diversity of wildlife.

Of course there is a lag effect. For a time there will be limited cover available in the cleared area. For this reason it is often recommended to stage your lantana control so you are not removing large areas all at once. This is not only better for the wildlife but it also means you are more likely to keep up with the required maintenance. Regardless of the method employed the key to successful control is follow-up weeding. Manual control can be done in autumn outside the usual breeding season for most small birds and when the weather is mild. Chemical control is best done in the summer growing season. While the clumps will lose their foliage after spraying they will maintain a dense structure of canes through to autumn when the brittle frame can be knocked down manually.

Try to assess your lantana patches objectively, take some time to determine the beneficial habitat roles that a patch may be providing but also assess what's being smothered and/or suppressed. Consider the potential diversity of plants that may be locked up in the soil seed bank. Look around and see what alternative dense thickets are available and also check what other weeds may be waiting to move in once the lantana is removed. Other invasive species such as Broad-leaved Paspalum are best controlled prior to tackling lantana, otherwise you will end up with one weed replacing another.

For better or worse, lantana is here to stay as an entrenched component of SEQ ecosystems. Many properties will have lantana patches that may never reach the top of their owners' priority list, they will remain for the next generation of land managers to consider. Wherever lantana grows a range of native animals will continue to take advantage of its resources and some observant landholders will choose to keep some patches of lantana for dependant species such as whipbirds and the Black-breasted Button-quail. Other landholders will choose to remove lantana patches and restore native forest cover to the benefit of other animal species and some will choose to have a bet each way.

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Article by Nick Clancy
Land for Wildlife Officer
Sunshine Coast Council

Kooky Coucals

Adult Pheasant Coucals in non-breeding plumage (left) and in breeding plumage while displaying with a leaf in the rain (top), photos by Deborah Metters. A coucal chick (above) with their bizarre hair-like down. Photo by Ian Sutton, Flickr CC BY 2.0.

With its raptor-like head, striking red eye, talon-like legs, small rounded wings and long pheasant-like tail the Pheasant Coucal looks like it's been put together by a mad taxidermist. Into this mix can be thrown its own unique set of behavioural characteristics. It's a member of the cuckoo family and in Australia is the only cuckoo that doesn't parasitise other birds' nests.

So, unlike other cuckoos, it constructs its own nest, raises its own young and just like its pheasant namesakes, spends a large part of its life on the ground and is a reluctant flier. One trait that it definitely shares with its cuckoo relatives is a loud call, which it's not afraid to use. This distinctive, deep, booming, repetitive, accelerating coop-coop-coop-coop call is a frequent part of the ritual dawn chorus and is again commonly heard towards twilight even if the bird itself isn't sighted.

In Australia, the Pheasant Coucal's range extends from the Pilbara, across the Top End and down the east coast as far south as Illawarra, New South Wales.

Its preferred habitat is a thick groundcover of grasses, sedges and ferns, particularly around watercourses. Coucals make networks of tunnels through this thick ground cover. When startled they prefer to run down these to safety. They will reluctantly, and not very gracefully, take to the air on their short wings often coming to an inglorious crashing stop in the mid-storey. If you happen to spot one running across in front of you it often takes a moment to realise that it's a bird that's gone scuttling by before disappearing into the undergrowth and not some weird mammal.

Pheasant Coucals breed between September and March. Breeding plumage sees the head, neck and body change from the strikingly reddish-chestnut colour flecked with white, to black. The nest is hidden in thick undergrowth and constructed on the ground. It consists of a platform of grass or rushes drawn together to form an open-ended dome structure. This is lined with leaves and grasses onto which a clutch of 3-5 white eggs is laid.

The male does the majority of egg incubation and, once the chicks hatch, takes on the primary role of food provider for the growing brood. This male-dominated incubation and chick raising is yet another unusual trait of Pheasant Coucals. Only 5% of bird species are known to exhibit this behaviour.

When they first hatch, young coucals are black with bizarre, long, white, almost hair-like down. As they grow, moult and mature, young coucals look more like paler versions of non-breeding adults. They fledge at about 17 days, but aren't truly independent until they're about 40 days old.

Pheasant Coucals are predominantly ground feeders and have a wide culinary taste. They enjoy feasting on large insects as well as lizards, snakes and frogs. They aren't averse to raiding other birds' nests and eating eggs or nestlings and are known to catch and eat small mammals and even crabs.

Like many native species, the Pheasant Coucal has had a mixed response to habitat change. In some areas it has benefitted from human changes to the environment, enjoying the cover of weedy thickets and thick weedy grasses including sugar cane. In other areas they have become scarce or even locally extinct as their preferred habitat disappears or is modified. In south-east Queensland the population of Pheasant Coucals is considered secure.

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Article by Tony Mlynarik
Land for Wildlife Officer
Brisbane City Council

Recovering Australian Threatened Species: A book of hope

BY STEPHEN GARNETT, PETER LATCH, DAVID LINDENMAYER & JOHN WOINARSKI

This book is an attempt to paint a more positive picture of species recovery in Australia along with guidance on what it inevitably takes to recover species. It looks at the successes and the not-yet-successful-but-hopeful projects to give us all a bit more hope. So many species in Australia are on the edge of extinction but people all over the place are getting to work, hoping to make a difference. I salute those heroes.

The book covers about 24 species recovery campaigns, and some habitat recovery and some pest reduction projects. It ranges from Macquarie Island to The Inland; from Humpback Whales to Helmeted Honeyeaters; from Eastern Barred Bandicoots to Western Swamp Tortoises.

A number of different authors tell of their projects. Many are very successful. Some are still hoping to get there. Some are well known species and recovery efforts. Some I have never heard of, so therefore a delight to investigate.

Whilst the topic was of the highest interest, I struggled with the style. The book is written by scientists in a structured format, and somewhat resembles a class assignment. I was hoping to catch a lot of excitement (a lot of 'hope') but the format was a bit too heavy. And too many projects are still battling without having reached a definitive success status – I found that depressing. Perhaps the book is more of a reference book for professional policy people, than a motivational tool for citizen scientists.

I think this book is a useful starting point to talk about threatened species recovery in Australia and I hope other uplifting books will follow.

CSIRO Publishing, 2018. Paperback, 360 pages. $59.95
Review by Keith McCosh

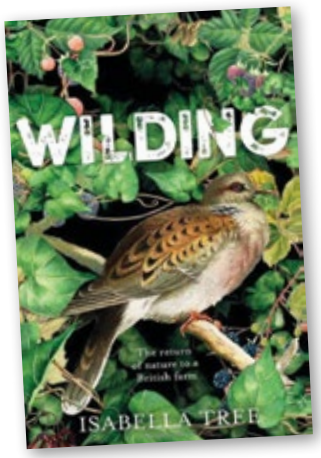
Wilding: The return of nature to a British farm

BY ISABELLA TREE

At its core, *Wilding* takes us on a tour of Knepp, an English farm that moved from a near-bankrupt, high-input, high-stress grain and livestock business to a rich, biodiverse, life-filled landscape with unexpected incomes. More broadly, this book recounts global trends, especially in Europe, towards learning from nature, rather than trying to restrain it.

Many of the lessons parallel what we are doing on Land for Wildlife properties here in SEQ and the reasons why. This book details ecological concepts such as disturbance, edge effects, natural floodplains, herbivores vs predators, grasslands vs forests and decomposition by fungi, which play out as much on an English marsh as they do in the Lockyer woodlands.

Written like you would to a friend, this book offers a delightful read, and if some sections get a bit dense with English history or ethical reasons why we should eat grass-fed animals, you can easily skip over them and come back to the storyline of the farm. As with any pioneering ecological work, the author encounters opposition to Knepp's wilding. However, her family remains steadfast on their journey, buoyed by nature's delights such as rare butterflies, nightingales and microbats that now call Knepp home.

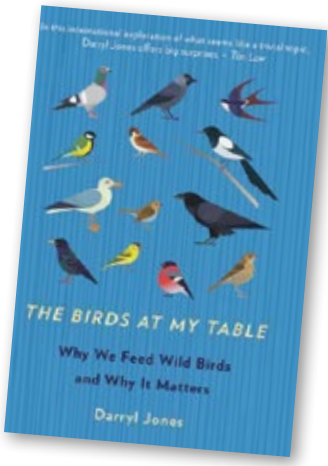


Pan Macmillan, 2018. Paperback. 320 pages. $33.75
Reviews by Deborah Metters

The Birds at My Table: Why we feed birds and why it matters

BY DARRYL JONES

We have all done it. A few crumbs here, a bit of fish there. We have all fed wild birds at some time in our lives, intentionally or not. Our landfills feed birds, so do our agricultural crops and fishing boats.



This book cleverly moves the discussion beyond pros and cons to the known facts about wild bird feeding. Clearly the result of decades of personal interest and research by the Brisbane-based author, this book explores the origins, expansion and results of intentional wild bird feeding.

We are introduced to feeding tables, tray feeders, seed cakes and high protein balls. This is a multi-billion-dollar industry. Over 500 million kilograms of food is purchased annually in the US and UK for wild birds. This book explores an industry that has boomed in the past two decades but has seemingly escaped critical analysis until now. What happens to all that food we put out, and are humans the main beneficiary?

Research shows that feeding birds does change their behaviour and probably even changes ecosystems. But people that feed birds are afforded hope and a genuine connection with nature. This book will help further the much-needed dialogue and conservation recommendations around feeding wild birds.

NewSouth Publishing, 2018. Paperback. 352 pages. $27.99

Little Brown Birds

OF SOUTH EAST QUEENSLAND

Often heard but rarely seen - that's little brown birds. Whether you learn the calls, actively birdwatch or master pishing, it is possible to identify these tricky birds. Shown above is a Brown Thornbill - note the red eye and rufous forehead.

Little brown job or 'LBJ' is a widespread term used by birders to describe a group of small, generally brown coloured perching birds (passerines), which can be difficult to identify. There are about a dozen or so species in south-east Queensland (SEQ) that fit this description and we will focus on seven of the most common to assist you in distinguishing them from one another.

The first thing to consider when trying to identify an LBJ is the habitat in which you observe it. Each species has their own habitat requirements and it can be possible to almost rule out some species from your list of suspects based upon this alone. Another important factor to take note of is the part of the habitat you are seeing the bird in. Is it in the canopy, mid-storey, undergrowth or on the ground? This is helpful as some species are unlikely to be seen on the ground or in the undergrowth, while others are rarely seen outside of these areas.

The next step is to try and discern some of the bird's physical features. Does it have any obvious markings, such as streaks/stripes, a white eyebrow or white on the tail or wings? Can you see the colour of the eye? Immature birds add to the challenge as these characteristics are less distinct than on adult birds, and young birds usually have different coloured eyes and plumage.

A technique for gaining a closer view of these inquisitive little birds is achieved through the art of pishing. This is simply making a repetitive bird-like noise as an attractant and it works remarkably well at times. One effective method is to hold a couple of fingers to your mouth and draw air through closed lips (it may take a bit of practice). You will probably feel a bit silly doing this but it will be well worth the potential embarrassment when you are observing birds at close range. Pishing is best combined with using binoculars, but sometimes the birds may be too close to focus on!

One of the best ways to distinguish one LBJ from another is to listen for their calls as each species is distinctive. This is a skill that generally only develops with time and practice. You can purchase apps with bird calls to assist your learning. Many free recordings can be found online via xeno-canto (www.xeno-canto.org), a website dedicated to sharing bird sounds from around the world. Playing recorded bird calls in the wild is not recommended though, as it can disturb birds feeding or while they are nesting.

Many forest birds become uncommon or absent as areas of habitat are degraded. Removal of ground and shrub layer plants is enough to enable aggressive native species such as Noisy Miners to dominate and drive out most other bird species. The ongoing survival of our little brown birds depends largely on the retention and restoration of native habitat, which provides them with essential opportunities to feed, nest and find shelter.

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Silvereye

Size: 12 cm in length.

Habitat: Can occur in all habitats in SEQ including rainforest, woodland, parks and gardens, forests, scrubs and mangroves.

Behaviour: They often move in flocks that keep together with regular contact calls, and feed by foraging over shrubbery for insects, nectar, seeds and fruit.

Appearance: A distinctive white ring around the eye, green-yellow head and wings, and a pale underside. During autumn and winter Silvereyes that breed in Tasmania visit SEQ. These migrants have paler throats and an obvious chestnut-brown colouring on their flanks.

Article and photographs by Todd Burrows
Land for Wildlife Officer
City of Gold Coast

White-browed Scrubwren

Size: 11-13 cm in length.

Habitat: A variety of habitats from rainforests to parks and gardens, a dense undergrowth being the important factor.

Behaviour: Most of their time is spent in loose groups moving about on the ground or in the undergrowth. In rainforests they sometimes follow the Australian Brush Turkey and Albert's Lyrebird to feed on invertebrates exposed by their diggings.

Appearance: Distinct facial markings with white bands partially enclosing a darker patch around a pale eye. White edges to some of the feathers on the shoulder are also useful markings to help distinguish this species from others.

Large-billed Scrubwren

Size: 11-13 cm in length.

Habitat: Rainforests and wet sclerophyll forests.

Behaviour: Most often seen in small groups acrobatically moving through the lower and mid-storeys in search of invertebrate prey. One confusing habit for the observer is that this species can mimic the calls of a variety of other birds including the White-browed Scrubwren and Brown Thornbill.

Appearance: A general lack of markings and plain brown plumage. The relatively long bill that appears to incline upwards is another important feature to note.

Brown Gerygone

Size: 9-11 cm in length.

Habitat: Predominantly subtropical rainforests.

Behaviour: They search in pairs or small parties for invertebrates through the layers of vegetation from close to the ground up to about 20 metres. The distinctive and incessant call sounds like 'diddle-it-did-it' and is a characteristic noise of the rainforests of SEQ.

Appearance: Brown Gerygones have a white eyebrow extending from the bill over the red eye, grey colouration to the face and breast and a buff suffusion on the flanks.

Striated Thornbill

Size: 10 cm in length.

Habitat: Wetter sclerophyll forests.

Behaviour: They move about in groups amongst the foliage of trees up to 50 metres above the ground, calling constantly to keep in contact with each other. Their diet consists of leaf beetles, caterpillars, spiders and particularly scale insects.

Appearance: Striated Thornbills are often confused with Brown Thornbills but differ by having brown eyes and heavy, white streaking on their forehead, face and ear coverts.

Brown Thornbill

Size: 10 cm in length.

Habitat: A variety of habitats including rainforest, sclerophyll forest, woodlands, scrubs, mangroves, parks and gardens.

Behaviour: They forage for invertebrates in singles, pairs or small family parties through the mid-storey and down into the shrubby understorey.

Appearance: Note the dark red eye, rufous forehead, chestnut rump and blackish streaks on the breast. Incredibly, they will mimic the hawk alarm calls of other birds in an attempt to protect their nests from Pied Currawongs.

Buff-rumped Thornbill

Size: 11 cm in length.

Habitat: Drier open eucalypt forests.

Behaviour: In habitat with little understorey the birds will forage about in small groups for insects on the ground, amongst the leaf litter and on the trunks of rough barked trees. In areas with dense undergrowth birds are usually observed higher, up to 20 metres, in the canopy.

Appearance: Buff-rumped Thornbills are olive-grey above with a cream colour underneath turning to yellow on the flanks. The forehead has fine tan scallops and the eye is a pale greyish-white.

Regent Skippers

Adult Regent Skippers usually settle with outspread wings, whereas Regent Skipper larvae and pupae rest in daytime shelters made of bound Wilkiea leaves. Photos by Todd Burrows (top) and Deborah Metters.

One of the most unusual butterfly species in the world is found right here in south-east Queensland - the Regent Skipper. The male Regent Skipper is unique because it possesses a wing-coupling structure that links the fore and hind wings together. This structure is only found in some moths and was once considered, until the Regent Skipper was documented, a key feature to discern butterflies from moths.

Regent Skippers are a mid-sized butterfly with a 5-6 cm wingspan. They fly rapidly usually in the morning or late afternoon and you can generally glean a flash of yellow from the otherwise dark wings when they fly. They are often encountered perched in shrubs underneath a rainforest canopy or drinking nectar from flowers, including weeds such as lantana, in open areas adjacent to rainforests.

There are three known host plants for the Regent Skipper larvae in SEQ – Smooth Wilkiea (*Wilkiea austroqueenslandica*), Large-leaved Wilkiea (*W. macrophylla*) and Veiny Wilkiea (*W. huegeliana*). All of these plants grow as shrubs to small trees in rainforests.

For protection during the day, larvae of the Regent Skipper make small shelters by binding together adjacent leaves. During summer, you can often find these shelters of the Regent Skipper larvae if you look closely at healthy Wilkiea plants. Larvae only emerge from their shelters at night to feed on Wilkiea leaves.

As with many species of butterflies in SEQ, male Regent Skippers have been known to congregate on the tops of hills and ridges to compete with other males and maximise their chance of finding a mate. These congregations usually occur during summer and are spectacular to witness. If you have rainforest on your property or nearby, keep an eye out for the charming Regent Skipper.

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CELEBRATING 20 YEARS
LAND FOR WILDLIFE
VOLUNTARY WILDLIFE CONSERVATION
1998 - 2018

Calling all long-term LfWers

We would love to hear from long-term Land for Wildlife members, especially those who are celebrating their 20th year with us this year.

The next newsletter edition will focus on the things that we have achieved together since 1998 and the important role of private land conservation.

This is a call out for you to share your Land for Wildlife story.

Please get in touch with either your local Land for Wildlife Officer or give me a call or email. If you are keen to contribute something, however small, please be in touch by **10 August 2018.** I look forward to celebrating with you.

Articles by Deborah Metters

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