



LAND FOR WILDLIFE

SOUTH EAST QUEENSLAND

FEBRUARY 2022 VOL. 16 NO. 1

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Land for wildlife SOUTH EAST QUEENSLAND SNAPSHOT

 **5,214**
TOTAL
PROPERTIES

 **4,167**
REGISTERED
PROPERTIES

 **1,047**
PROPERTIES
working towards
RESTORATION

 **73,493** ha
RETAINED HABITAT

8,076 ha
Habitat Under
RESTORATION

 **9,049**
Facebook
Page Likes

16,745
iNaturalist
OBSERVATIONS

 facebook.com/lfwseq

[www.inaturalist.org/
projects/lfwseq](https://www.inaturalist.org/projects/lfwseq)

To join contact your local LfW Officer

 www.lfwseq.com.au

Land for Wildlife is a voluntary conservation program that encourages and assists landholders to provide habitat for wildlife on their properties.

Land for Wildlife South East Queensland is a quarterly publication published by 13 Local Governments in south-east Queensland and distributed free of charge to their Land for Wildlife members.

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

Printed on EcoStar Silk 100% post-consumer recycled paper, FSC certified, chlorine-free process and made carbon neutral. Printed using vegetable based inks.

ISSN 1835-3851 Print run - 4255 copies

Front Cover: Various stages of revegetation on a Land for Wildlife property, Blackall Range, Sunshine Coast. Photo by Nick Clancy.

Front Cover Inset Photos: A spider wasp, photo by John Anderson; and piles of Lantana removed by Land for Wildlife members, Sunshine Coast, photo by Nick Clancy.

Land for Wildlife South East Queensland Team, December 2021

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Proof-reader: Todd Burrows

Prepress: Kingfisher Creative

Printer: Greenridge Press

I am always grateful to visit Land for Wildlife (LFW) members to see how they are controlling weeds and working with nature. A recent visit to a Brisbane LFW property showcased this relationship between owner and land nicely. The owners had recently bought this property that ticked all their boxes – a stately home with space to get away from the city bustle. Understandably, it has taken them a few years to get settled, open up old access tracks and to walk all of their property.

A large part of their property was historically cleared for timber and bananas, and it was then left neglected. It is steep and completely overgrown with grass, vine and shrubby weeds. It looks messy, impenetrable and, dare I say, sad. No one has cared for it for decades... until now. Poking up through the weedy tangle are a few native remnant trees, mostly dry rainforest scrub species. It is these native species that the owners have seen and are now rescuing from the 'monstering' weeds. I know other landholders who have referred to these isolated native trees or clumps of trees as 'nodes'. They are liberating the nodes and pushing back the weeds from there.

This technique aligns with the tried and tested theory of bush regeneration that you work from the best areas to the worst areas. On my visit, we enjoyed standing at one of these nodes in the shade of the freed trees and native vines. It was as though they were saying thank you by offering us their cooling shade.

None of this would have occurred if the owners didn't do what Kylie Gordon suggests doing on pgs 8-9, which is, contextualising your property in the landscape. Backed up by maps and advice provided through LFW, the owners understand where their property sits in the catchment, its historical landuse and the underlying ecosystems. Combined, these things tell a powerful story and help make sense of what we are seeing today and how we can help nature repair itself. From here, they did what Nick Clancy suggests on pgs 10-11, which is to prioritise their weeds. It is impossible, and arguably unnecessary, to control every weed. Instead, the owners pick their weed battles at the nodes and along the tracks to protect their natural and built assets.

I love it when theory and practice merge, especially in the world of ecological restoration. It is a young science and is constantly expanding. Many LFW members are at the forefront of ecological restoration and it's exciting to be a part of this.

On a final note, I would like to welcome Jim Johnston as LFW Officer for Fraser Coast Regional Council. It is great to see the program kickstarting again up there with Jim prioritising property visits and workshops for LFW members. Similarly, I am delighted to see the Logan LFW team expanding with the appointment of Josh Hall – welcome.

Enjoy the remainder of this La Niña summer and please stay safe now that covid is knocking at our doors.

Deborah Metters
Land for Wildlife Regional Coordinator

We welcome all contributions.

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Climate & Weather REGIONAL OUTLOOK Jan-Mar 2022



Daytime and Night-time Temperatures. It is likely that daytime temperatures will be above median with night-time temperatures warmer than average.



Rainfall. Above median rainfall conditions are likely for eastern Australia.



Streamflow. Near median to high streamflows are most likely in south-east Queensland.

Influences

- A La Niña continues in the tropical Pacific, suggesting wetter than average conditions persisting until early autumn.
- Southern Annular Mode (SAM) is neutral, but is likely to be positive towards the end of January. A positive SAM during summer typically brings wetter weather to eastern Australia.
- Indian Ocean Dipole (IOD) remains neutral, having little influence on Australia's climate at this time of year.
- Australia's climate has warmed by ~1.44°C since 1910.
- In recent decades there has been a trend towards rainfall from high intensity but short duration rainfall events.

Sources - www.bom.gov.au/climate/ahead/
www.bom.gov.au/water/ssf

Weeds to Watch Jan-Mar 2022

Inkweed has formed thickets after recent rains growing to 2m tall. The berries turn ink black when ripe. Can be hand-pulled when small or after rain. Larger plants can be sprayed with herbicide or cut at near the base and treated with herbicide.



Wild Tobacco is both flowering and setting seed now in response to rain. Its irritating hairs can become hazardous when airborne. Can be hand-pulled when small. Mature plants can be treated with herbicide using basal bark or cut stump methods.



Lantana - a weed that needs little introduction as it is so widespread. Recent rain has seen it flourish with new growth and flowers. Control can be manual or using herbicide as a foliar spray or with the cut stump method.



Ghost Orchids A HAUNTING DISPLAY OF BEAUTY

The Ghost Orchid or Leafless Nodding Orchid (*Epipogium roseum*) is a terrestrial herb that forms small colonies on the forest floor in high rainfall areas. It is found in rainforests, open woodland and grasslands on the east coast. These orchids can range from white, pale cream, yellowish to pale pink in colour. They are saprophytic, meaning that they are not able to photosynthesise and rely on mycorrhizal fungi that grow on decaying woody debris.

Ghost Orchids have no leaves and only grow when there is optimal soil moisture allowing the growth of their host fungi. The majority of terrestrial orchids pass through a saprophytic seedling stage but form leaves and photosynthesise when they mature.

You might notice these small Ghost Orchids emerging from accumulations of dead vegetation and leaf litter after consistent rainfall or the first summer rains of the season. The flowering stems, typically observed between December to March, grow to 20-60cm tall and can persist for up to two weeks. Like other saprophytic orchids, they are highly

localised and often difficult to find unless you know of colonies occurring in your local area. If you do happen to come across a small colony of these orchids, take a moment to marvel at their fragile and beautiful flower display, as it may be rare for you to stumble across them again.

De-Anne Attard
Land for Wildlife Officer
Sunshine Coast Council



Assassin Bugs FUZZY BUT DEADLY

Being a Land for Wildlife Officer brings you into contact with weird and wonderful creatures you never knew existed. After visiting several Land for Wildlife properties in Upper Brookfield, I looked down to find this curious little critter on my clipboard. It was only 1cm long and seemed to be wearing densely furred leg-warmers.

A query to Queensland Museum Discovery Centre confirmed it was from the bug Family Reduviidae, Genus *Ptilocnemis* - a Feather-legged Assassin Bug. These unusual insects occur across eastern Australia. With only photographic evidence to work with, the species is either *Ptilocnemis femoralis* or *P. lemur*, both occur in the SEQ region.

Feather-legged Assassin Bugs live on eucalypt trees where their dull colouring camouflages them against the bark. They can be found in urban areas, coastal heath, forest and woodlands. Their feathery antennae have three segments and their bodies are covered in hair-like structures called setae. The furry leg-warmers on their hindlegs serve as a costume to attract prey.

Feather-legged Assassin Bugs are specialist predators of ants. They position themselves on an ant trail with their long back legs raised, which they waggle to attract the attention of inquisitive ants. The bug then exudes an irresistible chemical attractant from a gland called a trichome on the underside of its thorax. Ants that investigate and taste the substance are paralysed, leaving them defenceless. The assassin bug injects powerful saliva into the ant, which dissolves the ant's internal tissues and the bug then sucks out the juices.

There are several videos of Feather-legged Assassin Bugs in action online if that is your thing. Thanks to the Entomology team at the Queensland Museum for assisting with the identification of this interesting insect.

References

<https://australianmuseum.net.au/feather-legged-assassin-bug>

https://en.wikipedia.org/wiki/Ptilocnemis_lemur

Fflur Collier
Land for Wildlife Officer
Brisbane City Council



HI HO HI HO

Tree Popping we will go...

Thanks to our local Conservation Partnership Officers, Marc Russell and Alan Wynn, we were recently introduced to a very useful tool - the Tree Popper. The jaws of the Tree Popper clamp the weed at the base of the stem, then using the lever principle they pull the whole plant out of the ground, roots and all. Amazing! They are ideal for removing unwanted plants whose roots have developed past the point of where they can be hand-pulled without risking a hernia.

This simple, yet effective one-person tool comes in three sizes and is designed to be an alternative to stem scrape and cut-poisoning methods of controlling woody weeds.

- Small - weighing 2.5kgs is able to remove plants with a stem diameter of 5-20mm.
- Medium - weighing 5kgs can remove plants with a stem diameter up to 40mm.
- Large - weighing a hefty 7.5kgs (you'll need good muscles to use this one) can remove plants with a stem diameter up to 60mm. It is claimed that the large Tree Popper has the equivalent pulling power of 10 times the weight of the user.

We used the small and medium Tree Poppers to concentrate on the removal of Night Jessamine (*Cestrum nocturnum*), Chinese Celtis (*Celtis sinensis*), Golden Trumpet (*Handroanthus chrysotrichus*), Polka Dot (*Hypoestes phyllostachya*) and Camphor Laurel (*Cinnamomum camphora*).

Check with your local Land for Wildlife Officer to see what tools are available to borrow which could assist you with some of those more difficult jobs on your property.

Jill Cutting
Land for Wildlife member
Witta, Sunshine Coast



Tree Poppers made reasonably easy work of removing the extensive tap root of Golden Trumpet trees. They made an otherwise very difficult task just a tedious one.



L-R: Land for Wildlife members Linda Scharf, Jill Cutting and Peter Scharf with their small and medium sized Tree Poppers.



Striped Marsh Frog (*Limnodynastes peronii*)

Frog Pond INSPIRATION

Some newsletters ago, I was inspired by an article about building a frog pond, so I did. Most evenings I now hear very distinctive calls.

Susan Hollindale
Land for Wildlife member
Guanaba, Gold Coast



Spider Wasps

A NIGHTMARE ON WEB STREET



Top photo: Female spider wasps can choose the gender of their offspring by choosing to deposit a fertilised or unfertilised egg. They will generally choose a fertilised (female) egg if they have caught a large spider, such as this huntsman spider shown here. Photo by John Anderson.



Left: There are many different species of spider wasps, but they usually are black and orange in colour. When hunting, their long antennae are constantly moving, tapping the ground, trying to detect spiders. Photo by Ian McMaster.

"Blinding, fierce, shockingly electric. A running hair dryer has just been dropped into your bubble bath. A bolt out of the heavens. Lie down and scream".

Such is the evocative description of the pain inflicted by the sting of the insect that rates a solid four by Dr Justin Schmidt the famed entomologist and creator of the Schmidt Pain Index for insect bites and stings. Only the Bullet Ant and Warrior Wasp of South America rate higher. He goes on further to describe the pain as being "so debilitating and excruciating that the victim is at risk of further injury by tripping in a hole or over an object in the path and then falling onto a cactus or into a barbed-wire fence. Such is the sting pain that almost nobody can maintain normal coordination or cognitive control to prevent accidental injury. Screaming is satisfying and helps reduce attention to the pain of the sting."

And here I was with my nose only centimetres from this fearsome creature as she dragged her latest victim to a grisly doom. Just what was I thinking?

The 'creature' in question was a beautiful female Tarantula Hawk and her 'victim' was a spider. Luckily for me they have to be seriously provoked to elicit a sting, unlike their feistier colony defending wasp cousins.

Tarantula Hawks are the largest wasps in the Family Pompilidae and can grow to an impressive 5cm, but in Australia they 'only' manage to reach 3.5cm. Wasps in this family are all solitary wasps, have a worldwide distribution and are found in a wide range of habitats. They come in various colours that are usually based on black, orange and yellow. The Tarantula Hawk that I'd watched had a shiny black, almost metallic body with beautiful orange wings.

Collectively, the Pompilidae are called spider wasps due to their reliance on spiders as a food source. This spider meal however

isn't for the mature wasps which are gentle herbivores, feeding as they do on the nectar of flowers and fermented fruit. Instead, it is their offspring that are carnivorous, and this is how I knew that the Tarantula Hawk that I'd encountered was a female – only females use their fearsome sting on spiders as they take on the risky business of hunting spiders for their babies.

Despite hunting spiders that are usually many times their size and that are themselves ferocious predators, it is the wasp that inevitably comes away victorious when they come together in what are often epic battles. When hunting for spiders, females are constantly on the move, darting around, flicking their wings, tapping their antennae on the ground and doing short restless flights before starting the hunt again. As I watched my Tarantula Hawk she continued dragging the spider over every obstacle in her path using her characteristically long legs and never ending 'nervous' energy to a pre-dug hole. If the spider is especially large, spider wasps will sometimes bite the spider's legs off to make transport easier. Smaller spiders they will pick up and fly off with.

Arriving at her hole she dumped the spider at the entrance and with a flick of her wings disappeared inside only to quickly reappear, grab her spider and drag it underground. There, unseen, she laid a single egg on the hapless spider, again emerged, sealed her baby inside and flew off.

As well as digging purposely excavated holes, as I'd seen, or utilizing existing crevices for their spider prey they will also repurpose a spiders' already dug burrow and turn it into their own baby incubator, restaurant and crypt. They either hunt spiders that are already out in the open, or if the spider is in its burrow,

spider wasps will either try and entice the spider out, or they may fearlessly plunge into the spider burrow to do battle underground.

It was a spider wasp that eventually ended the life of the world's oldest known spider, a 43-year-old Australian trapdoor that was found dead in its burrow after being the subject of years of constant study.

Some spider wasp species dispense with the stashing of their spider prey and simply lay an egg on the paralysed spider wherever it was stung. An even smaller group are klepto-parasites that steal the already paralysed spider from other spider wasps onto which they then lay their own egg.

For every spider wasp born a spider has died - and what a gruesome death it is.

The deposited egg hatches after 3-4 days and the larva starts to feed on the spider. This is where the gruesome part comes in as the developing wasp larva requires the spider to remain fresh as it needs to grow and moult through several instars before finally pupating and emerging as a mature wasp. Two strategies are employed to ensure the freshness of the meal. Firstly, the spider isn't killed in the struggle between the spider and the wasp. The spider that I'd observed being dragged along as a 'dead' weight wasn't dead at all but had been stung and paralysed by the female wasp. Secondly, the larvae are selective in the order in which they consume their meal. They carefully munch around the vital organs of the still live spider, thus keeping it alive until the final instar stage which devours the rest of the spider before pupating.

Male spider wasps are normally a bit smaller than females. They don't need the physical size or strength to hunt spiders, but instead spend the two months of their adult life feeding and defending their territory from other males and attempting to mate with females.

Female spider wasps, like other members of the Order Hymenoptera (ants, wasps, bees and sawflies) are able to determine the sex of her offspring. To this end she will selectively fertilise an egg using stored sperm to produce a female or deposit an unfertilised egg to produce a male. Sex selection isn't simply random as the female wasp will deliberately choose the sex of her offspring depending on the size of the spider she has hunted. Larger spiders are selected for females. They, after all, are required to do all the dangerous and hard work of spider hunting, tunnel digging and dragging to ensure that the next generation of spider wasps is produced.

Article by Tony Mlynarik
Land for Wildlife Officer
Brisbane City Council

References and Further Reading

<https://www.aboutanimals.com/insect/tarantula-hawk/>

<http://anic.ento.csiro.au/insectfamilies/>

Schmidt JO (2016) *The Sting of the Wild*. Johns Hopkins University Press.

<https://www.thoughtco.com/tarantula-hawks-genus>

Mason LD, Wardell-Johnson Grant, Main BY (2018) The longest-lived spider: mygalomorphs dig deep, and persevere. *Pacific Conservation Biology* 24, 203-206.

<https://australianmuseum.net.au/learn/animals/insects/spider-wasps/>

Female spider wasps catch, paralyse and then drag spiders back to a burrow. There, they lay one egg on the spider for their young to feed on.
Photos by John Anderson.





1958 aerial from QImagery



- 1 Ridgelines
- 2 Gullies
- 3 River (mid catchment)
- 4 River (upper catchment)

Contextualising Your Property IN THE LANDSCAPE

Discovering you have a weed list of 48 species on your property can be somewhat confronting. However, quantity alone cannot measure the task at hand - a list of 12 weed species may mean a higher workload than a longer list. Lists don't speak to abundance, distribution, threats or values. In land management, all is not what it appears at first sight, and therein lies the importance of growing your knowledge and contextualising your property planning for the on-ground outcomes you want.

Every property in the landscape is unique and presents its own set of conservation and land management challenges. However, the list of these challenges is not endless and there are often commonalities in a catchment area. For example, weed seed spreading downstream means properties on the same river might have similar riparian weeds. Heavy grazing on steep slopes may influence erosion and landslips, sending sediment downstream.

Conversely, unique values are often shared across the landscape too. Potoroos and Koalas do not understand the property boundaries they cross, crayfish move through cool streams, Powerful Owls nest in the most suitable hollows and frugivorous birds chase the juiciest fruit in the rainforest canopy. All the while, the seeds of host vines for threatened species of butterflies and moths are being washed downstream and are quietly germinating on a creek bank.

Understanding and contextualising your property within the landscape is as important as recognising the unique set of challenges and priorities you are managing.

The good news is that your Land for Wildlife Officer is here to help navigate you through the challenges, and it can be quite an enjoyable and rewarding journey.

Prioritising your challenges is the first step in getting to know your property. Getting to know your list of weeds is just the beginning. On that extensive weed list your officer gave you, there may be only a two or three high priority weeds that need your immediate attention. They may be located upstream or uphill or in an endangered ecosystem, so the environmental threat is higher. If the weeds are in the middle of the paddock, they probably fall further down your priority list. Concurrently, your property might have an actively eroding creek or landslip that requires immediate attention and some of those weeds are providing stability - suddenly revegetation has jumped the queue. Add to this a significant patch of healthy remnant vegetation, requiring little else than cattle exclusion fencing - a quick and easy win.

As you can see, there are often competing priorities in the context of an individual property. Juggling time and resources, new projects, maintenance (and more

maintenance) can be reminiscent of a complex logistical challenge. I've often described land management as a dance - you find a property you connect with, you learn the technical skills needed, and your footwork gets faster with practice. It's as much about 'doing' as it is about thinking and feeling.

Now you've settled into your property, perhaps you've been there a year or two, maybe much longer and the goals have shifted. You've reopened some old management tracks and explored new areas, created a bird list, or perhaps undertaken a revegetation project or two and some weed management. Whatever your situation, the intricacies of your property have become clearer to you, and so the next step is to create a longer-term action plan.

Environmental property plans are often five to ten years - any longer and they become more of a guide than an action plan. They require regular review since new challenges often present themselves, and therefore the original priorities shift. They give you a point of reference to help maintain focus on your goals - a road map of sorts. They consolidate your past efforts and investment and give you an opportunity to reflect on your achievements.

Whether you do this process internally or on paper with management zones and a



2021 aerial from Nearmap



2021 image from Queensland Globe
(Hillshade multidirectional and
Elevation layers)

These three images show the same section of a catchment on the Sunshine Coast. Steep areas in the upper part of this catchment (label #4) were historically cleared for agriculture and are prone to landslips and weed invasion. Sediment from landslips and erosion can run into creeks and rivers downstream, reducing the overall health of the system.

Vegetation in the catchment surrounding the river provides natural filtration and reduces the impact of sediment entering the waterway downstream in the mid-catchment (label #3).

In a 100m stretch of the mid-section of this river, 48 weed species were observed, including high priority weeds such as Morning Glory and Madeira Vine. Some of

the weed species recorded were historic garden escapees that have become highly invasive over time. Many of these weeds were washed downhill or downstream into this mid-section and have opportunistically taken up residence on a new property.

checklist of actions, maintaining flexibility and adapting to change is key.

No two properties or landholders I visit are the same, this is what gets me out of bed in the morning and leaves me happily exhausted at the end of each day. Land for Wildlife Officers have the privileged role of guiding landholders as they interpret their landscape and provide objective advice from an ecological and scientific perspective. Whether you are new to the program or are ready to review your plans, your Land for Wildlife Officer is available to help you achieve your on-ground ecological outcomes.

To delve more into understanding the context of weeds on your property, please see Nick Clancy's informative article on page 10 of this newsletter.

Resources

Queensland Globe (free)
qldglobe.information.qld.gov.au
- Current aerial maps and layers such as biota, elevation and geology
QImagery (free) qimagery.information.qld.gov.au - Historical aerial imagery
Nearmap (subscription) nearmap.com/au/en - High resolution aerial maps

Kylie Gordon
Land for Wildlife Officer
Sunshine Coast Council



Connecting corridors and supporting healthy habitat is essential for the survival of wildlife as they move through the landscape and cross multiple properties along the way.

This Koala, Noisy Pitta and Swamp Wallaby were photographed on a Land for Wildlife property in the upper reaches of the catchment pictured above. Due to historic clearing surrounding the property and landscape formations, these animals may be limited in their ability to safely travel much further. Revegetation that create safe havens and connects vegetated corridors across property boundaries is essential for such wildlife.

Weeding FOR OUTCOMES



What we do on our Land for Wildlife properties is contributing to conservation outcomes at a landscape scale in south-east Queensland.



Controlling stands of Broad-leaved Privet (*Ligustrum lucidum*) will stimulate the natural regeneration process.



Land managers have a tendency to divide plants into two groups, good and bad. A good plant to a cattle farmer is one that's nutritious for stock and a bad plant is one that is toxic, unpalatable or outcompetes desirable pasture. To the ornamental gardener, a good plant is one that they have selected to grow in a specific location, while any randomly germinating plants are considered weeds. While for the conservation land manager, local natives are good and exotic plants are bad. So, a conservationist's good plant can be a weed to a farmer and vice versa, and a gardener's favourite 'splash of colour' can be a conservationist's worst nightmare.

The term 'weed' can mean different things to different people, it all depends on your land management objectives. Some landholders will have different land management objectives for separate parts of their property. In fact, on many properties it can depend on which side of the fence a plant grows. Take the introduced Glycine (*Neontonia wightii*) for example, in the paddock its great cattle feed whereas behind the riparian fence it's an invasive, smothering weed that requires control.

Compartmentalising things into groups can make processing information easier. Narrowing the number of available compartments down to just two is very convenient. If one group is good then the other group must be bad! We can then direct our wrath at this latter group. Weeds are regularly contextualised in this manner with land management vernacular often referring to a 'war' on weeds, and as 'weed busters' we 'whack' these noxious weeds (sometimes mistakenly referred to as 'obnoxious' weeds!). But in this era of time poor people, are we using our time wisely? By adopting this overly simplified 'good and bad' approach to vegetation management are we just making ourselves

work harder and not smarter? Or are we setting ourselves up to fail and decide it's easier to look the other way and give up?

Sometimes it's worth taking a step back and applying some objective questioning, for example, "What is my land management goal here?". Is it to eradicate all the weeds on my property? This is an admirable goal, but I would question if it is achievable (or even necessary), and even if it is, will it remain weed free for very long once you've relinquished stewardship? Perhaps a more achievable goal is to improve the quality of habitats available to native wildlife on my property. Or to build the resilience of my bushland areas from further invasion by high priority weeds.

This slight shift in thinking could reduce your workload (and stress) and make your land management goals more achievable. For some people the thought of ignoring low priority weeds simply doesn't sit comfortably, it may even be seen as sacrilegious. I don't wish to downplay the level of threat that some invasive plant species pose to ecosystem conservation and recovery. Nor am I suggesting that as landholders we shouldn't be managing weeds. Invasive weeds pose a significant threat to biodiversity and in the regrowing forests on private lands in SEQ they significantly restrict natural regeneration processes. As conservation land managers we need to work towards improving our understanding of weeds, including which ones we devote our precious time controlling and how we approach that control.

So, what distinguishes the difference between a high and low priority weed? And when does a weed become a high priority for control? Take the time to consider whether it is choking or smothering existing native vegetation. Also consider whether it is limiting the regeneration of seedlings and if it is



Cat's Claw Creeper is a high priority weed, it can establish in relatively undisturbed forest and smother existing vegetation as well as restrict the regeneration of seedlings.



spreading into new areas. Is it a short-lived (annual) or will it persist for years (perennial)? Is it just growing on the forest edge, disturbed and sunny areas or has it established in a 'core', undisturbed area of the forest? For example, if the weed only grows in full sun and you are re-establishing a canopy you may be able to play the long game of succession and let it gradually reduce in abundance as shade levels and competition increase.

In the Sunshine Coast hinterland where I work, it's very insightful to look back at historical aerial photos from the 1950s and see just how much bushland has regrown over the last 70-80 years. Yes, the vegetation that has regrown is often devoid of pre-clearing ecological values such as old habitat trees and species now locally extinct. But the resilience of this bushland means that in some place's forests have regrown and now support an impressive diversity of plants and animals.

On many Land for Wildlife properties, bushland is attempting to regrow but has stalled because a few high priority weeds are holding back this regeneration process. To enable this regrowth to thrive and mature, bushland can benefit from our assistance to control priority weeds, not every weed, but the high priority ones. This will speed successional processes and increase the amount and quality of habitat available for wildlife.

Through careful observation and talking to experienced land managers with similar objectives we can learn to prioritise weeds. We can also better understand when to intervene in order to assist the natural regeneration processes. This may mean not controlling some weeds in some situations which can save time and money. Gaining this knowledge makes the goal of improving habitats on your property more achievable. Often this knowledge will be locally and even property specific. Sadly,

generational succession and knowledge transfer by custodians of nature is not as guaranteed as it once was.

However, the answers are out there! The Land for Wildlife program offers an ever-expanding network of experienced local landholders, many of which are willing to share their knowledge and experience. As Land for Wildlife members the program offers you various platforms (property visits, field days, workshops, social media and this magazine) to engage with and share our experiences and learn from each other. If you've had some wins in bringing back the bush on your property, why not share your learnings by hosting a field walk for other local landholders or penning a case study for this publication?

Over the last two decades I have been fortunate to see many remarkable transformations on Land for Wildlife properties and central to these outcomes has been a strategic approach to weed management.

Many of these success stories have been achieved by landholders that are willing to observe, question, listen, learn and adapt as they go, striving to work smarter rather than harder.

While individual successes are great, it's really at the landscape scale that these outcomes are required to achieve significant long-term conservation outcomes. By sharing knowledge and lived experiences with other landholders you can help inform and inspire others and quickly spread a wave of motivation through the growing Land for Wildlife network....one property at a time.

Nick Clancy
Land for Wildlife Officer
Sunshine Coast Council



This old fence post once stood in a cleared paddock, 80 years later it has been engulfed by natural regeneration.



These weeds were stalling the natural regeneration process. This area was selected for weed control because it was small enough to maintain and showed good signs of resilience.



Formosa Lily in flower



Formosa Lily leaves

STEP-BY-STEP GUIDE TO MANUALLY CONTROLLING FORMOSA LILY

Have a sturdy bag ready to dispose of the plant.



Clear back undergrowth so you can clearly see the base of the stem (note the pink-purple base of stalk). Hand-pulling is not an option given the bulbs are quite deep, to 25cm.



From about 10cm out from the base of the plant (using a shovel), gently and carefully lever the bulb up.



Lift the bulb and soil around it. Snip off the bulb holding it over the bag. Snip off the flower head. Put the bulb, soil and flower head in the bag.



If you do damage the bulb, you will need to pick up every piece of scale to prevent re-sprouting.

Weed Profile

FORMOSA LILY

Formosa Lily (*Lilium formosanum*) belongs to the Liliaceae family, a family of upright perennial herbs with scaly bulbs and large flowers, which includes cultivated tulips (*Tulipa*) and lilies (*Lilium*). Formosa Lily originates from Taiwan and has a long history as a garden ornamental plant.

In its natural habitat, Formosa Lily grows from sea level to high elevations often growing in human and naturally disturbed areas including fields, tall grasslands and on bare cliff walls. The combination of its preference for wide ranging and disturbed habitat types, plus its specialised propagation techniques makes Formosa Lily perfectly suited to becoming a weed in SEQ. It has already escaped gardens and is now found along roadsides, disturbed areas and bushland across SEQ.

Formosa Lily grows to 1-2m in height and is a deciduous perennial herb with annual flowering stalks. The stems are dark green in colour, unbranched and often purplish brown towards the base. The dark green leaves are widely spaced and grow alternately along the stem. They are hairless, stalkless and can be up to 20cm long and 1cm wide.

The flowers are typical trumpet-shaped lily flowers, white inside with a pink, purple or brownish tint on the outside. There are six equal-sized 'petals' with the tips curving backwards. The flowers are 12-20cm long, fragrant, in clusters of up to ten and appear in summer.

The flowers produce long (5-8cm) cylindrical seed capsules with flat disc-shaped seeds that are easily dispersed by wind and water. The underground bulb has numerous fleshy scales resembling garlic and each bulb scale can resprout if it is left in contact with soil. The ability of Formosa Lily to reproduce by winged seeds or by bulb fragments makes it ideal to spread quickly in disturbed areas. Moving soil and garden waste can also spread the seeds and bulbs.

Small infestations of Formosa Lily can be controlled manually using the steps shown here. You just need to be careful. It is best to control it before flowering to avoid the seeds releasing. For large infestations where manual removal is not possible, herbicide can be applied. Contact your Land for Wildlife Officer for specific herbicide rates and control techniques.

References

Weeds Australia. www.profiles.ala.org.au
Warner S, Grice A & Duggin J. (2006) Ecology of *Lilium formosanum* and implications for management. Fifteenth Australian Weeds Conference.

**Article and photos by Melanie Mott
Land for Wildlife Officer
City of Gold Coast**

- ➔ Don't try and sift through the soil as this may cause the bulb to break-up.
- ➔ Put the bag in the general waste bin.
- ➔ The stem can be left on the ground to decompose.
- ➔ Re-instate the disturbed area by covering it up with remaining soil and the leaf litter.
- ➔ Follow-up next season to make sure newly sprouted lilies are also removed.

Photographic Field Guide to Australian Frogs

Mark Sanders

Cicadas during the day and frogs at night are the quintessential sounds of a Queensland summer, especially in La Niña years such as this one. If you want to know more about the frogs that adorn your creek banks and commandeer your drainpipes, this new field guide is going to #1 on your wish list.

There is no other book like this on the market. The existing Australia-wide field guide from Tyler and Knight contains useful and detailed line drawings (one per species), but this new guide goes one big step further. Packed full of excellent photographs (each species has at least four images), it is a pleasure to turn its pages.

The multiple images show the differences in colourings and markings within the same species (intraspecific variation), which can be helpful in the field. There are also labelled close-ups of species-specific identifiers, such as foot webbing and snout size.

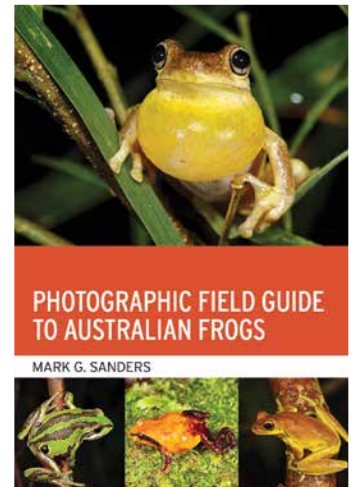
Eric Vanderduys' *Field Guide to the Frogs of Queensland* will probably retain its place as the go-to book for identifying frogs in Queensland due to its handier smaller size and clear photographs of our typical local frogs. However, those with a keen biological

eye or travelling interstate won't go past this new release.

This new field guide describes the morphology, genealogy and evolution of our amphibians. It even walks new enthusiasts through how to spot these elusive animals. Local populations may be easier to find with distribution points based on field data records rather than the traditional broad distribution maps.

The author, who is also the primary photographer, has clearly studied frogs for decades to amass the wealth of knowledge and images in this book. Queensland is amazingly privileged to host incredible frog diversity. Our frogs have specialised to live in 'acid' lakes on sand islands, in arid deserts going for years without water and in hot humid rainforests. But we live in a time where frog species are facing numerous threats. This book is based on the premise that we cannot save what we don't know. Increasing our understanding of native frogs is imperative to ensuring their survival well into the future.

Review by Amelia Carlson
Land for Wildlife supporter



Paperback | 2021 | \$50
376 pages | 245x170mm size
CSIRO Publishing

Birds of South East Queensland

Birdlife Southern Queensland

Last year saw the release of the 5th edition of BirdLife Southern Queensland's (BSQ) birding guide. This comprehensive booklet offers many advantages for birders, landowners and people just wanting to identify birds compared to traditional birding guides. Firstly, it features only birds found in SEQ, making bird identification much simpler. Secondly, this booklet has photos of local birds photographed in their natural environment. Finally, there are tick boxes under each photograph to assist with keeping track of birds seen. This is a great advantage for children, teenagers and new birders.

This edition boasts 44 photo changes for improved identification and includes images of female birds which can be difficult to identify. It now covers 375 species of birds all recorded in SEQ since January 2008. All the photos are sourced through local BSQ or BirdLife Photography members

who donated their photos for use in the publication.

This edition has also been extended to include eight more pages featuring birds of the Southern and Western Downs for those birders who venture or live further west.

The back of the booklet has a species index for easy searching, a list of vagrant and pelagic species names, as well as addresses of special places listed by region to assist with finding birds in the various council areas.

Birds of South East Queensland is a major fundraising initiative by BSQ. Profits from the sale of the book support a wide range of conservation activities and initiatives to improve the survival of birds. Books can be purchased directly from the website store.

Review by Rodney Appleby
BSQ Committee Member



Spiral bound paperback | 2021
A5 size

75 pages | \$18 + postage

Email for price on discount buys

Email BSQ at southernqld@birdlife.org.au

Or visit the BSQ shop at

www.birdlife.org.au



Caught IN THE ACT

Most dumped waste contains unwanted garden plants like Fishbone Fern, which spreads quickly into bushland areas and is especially tough to remove on steep slopes.

Many Land for Wildlife landholders would have had the experience of people dumping rubbish (particularly invasive garden waste) onto their property. And these landholders would have thought, "I wish I could catch those vandals." Well, this story should gladden your hearts.

Since we bought our property some twenty years ago, we have been subject to suburban dumpsters. The practice of dumping engines, water tanks, axles, batteries, carpets etc. has been going on for many decades. It seems that people have the 'out of sight, out of mind' thought process. What better place to dump rubbish than down a steep slope on somebody else's property?

The worst dumped matter, however, is suburban, invasive, feral garden waste. It has the propensity to rapidly swamp an area - especially on our steep slopes that border Kondalilla National Park. We have spent months hand grubbing over an acre of thick Fishbone Fern on extremely steep slopes. There is no regeneration when there are masses of thick clumps of Fishbone Fern! Digging out the clumps was like an archaeological dig - you never knew what item you would unearth.

We could never seem to catch anyone dumping their garden waste. The product was there but no evidence as to who the culprit was. Until recently...

Returning to our property one Saturday morning we noticed a large ute backed onto a steep slope on the border of our property. The ute was jam-packed with garden waste.

We stopped and asked, "What do you think you are doing?"

The reply was, "I am just dumping all my garden sh*t."

"Don't you know this is private property? We have spent months of hard work to get rid of feral plants that have been dumped and now you are dumping more!"

"Sorry, I didn't know it was private land" they said (as if dumping waste on council or public land was ok).

They proceeded to put back the dumped waste into their ute and we left, but not before taking note of the details of the vehicle.

Two hours later we drove back along the road. Bugger! The supposedly contrite perpetrator had waited until we had left and then proceeded to dump the total load!

Beware of mild-mannered oldies who have been lied to by a person who couldn't care less about the environment, other people's property or public spaces! We changed into our

detective's apparel and went on the hunt. Sure enough, we found the offending vehicle parked in a driveway. Evidence was all around that a spring clean of the garden was taking place with piles of pruned branches, succulents, ferns etc. all ready to be packed into the ute to be dumped. They tried to deny that they had dumped the rubbish despite being the same vehicle and same person!

On the Monday, I rang Sunshine Coast Council to report the incident. An officer came out and inspected the dump site and listened to our story. Thankfully they understood the environmental impacts of dumped garden waste on private or public land, and they have taken the matter up with the illegal dumper. The words of the officer and the realisation that council takes the dumping of invasive garden waste seriously made us feel that justice had prevailed and that others do care.

**Article and photos by Ian Webster
Land for Wildlife member
Flaxton, Sunshine Coast**

Editorial Note: If illegal dumping of waste is occurring on your property, please report it to your local council. For your own safety, we do not recommend approaching any person or vehicle that is engaged in illegal dumping.



Illegal dumping onto Land for Wildlife properties can be a real problem. Waste can include toxic and dangerous materials such as metal tanks and old chemical drums.

SCENIC RIM *BioBlitz*

Masked Owls

For a weekend in late October last year, over 20 people descended onto four adjoining Land for Wildlife/Nature Refuge properties in the southern Scenic Rim for a BioBlitz. Most attendees were Land for Wildlife members from across the Scenic Rim. They were all there to learn, listen, watch and share with each other, creating a memorable, respectful and positive gathering of like-minded landholders.

A BioBlitz is a gathering of professional, amateur and budding natural history experts. Some BioBlitzes cater for hundreds of attendees with concurrent surveys of birds, dragonflies, fungi, plants, bees, butterflies and other lifeforms during the day and mammals, frogs and invertebrates at night. This Scenic Rim BioBlitz was smaller in scale but nevertheless packed with diurnal surveys of plants, birds and butterflies and nocturnal spotlighting for mammals and birds.

The night before the official start of the BioBlitz, as we were unwinding and enjoying a social evening, a loud owl call stirred us into action. Testing out my new red filtered spotlight, we went to find what we thought was either a Barn or Masked Owl, based on the screeching call.

Sure enough, nearly back to camp from our walk, we spotted a pair of Masked Owls. The next few hours turned into an amazing discovery of watching and listening to this pair interact with each other. As the clock approached midnight, we all decided it was time for bed as the first event of the BioBlitz was to begin in a few short hours.

We were privileged to be able to survey these Nature Refuge properties, three of which had never been formally surveyed. The owners were interested to see if species varied with the different vegetation and aspects. With over 650

hectares of land to cover we were never going to get everything surveyed so we focussed on birds, flora and mammals. Over the duration of the weekend, some of us walked over 60km and we all left feeling full and grateful for being able to soak in other people's passions and knowledge of the natural world.

Article by Catherine Madden
Land for Wildlife Officer
Scenic Rim Regional Council
Wildlife photos by Deborah Metters



It was good to see a pair of Leaden Flycatchers nesting. Here is the female Leaden Flycatcher with begging chicks in her nest.



Ringed Xenica



Using red torch light when spotlighting is better for the eyes of wildlife.



Spotlighting by Paula Peeters

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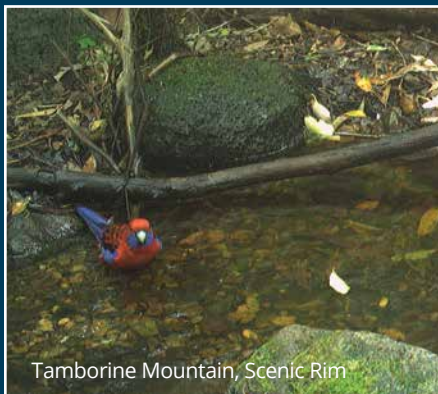


WHO CALLS MY PLACE *Home?*

How many birds can you identify in these
fauna monitoring camera images taken
from Land for Wildlife properties in SEQ?



Pullenvale, Brisbane



Tamborine Mountain, Scenic Rim



Stockyard, Lockyer Valley



Springbrook, Gold Coast



Answers from top, L to R: Spotted Quail-thrush, Crimson Rosella, Wompoo Fruit-dove, Regent Bowerbirds (not just one but three!), Wonga Pigeon, Brush Turkey, Eastern Whippoorwill, Green Catbirds, Brown Cuckoo-doves, Albert's Lyrebird.