LAND FOR WILDLIFE SOUTH EAST QUEENSLAND MAY 2021 VOL. 15 NO. 2

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Land for Wildlife South East Queensland Team, December 2020

NEW SCENIC RIM OFFICER

We are delighted that the Land for Wildlife Officer role for Scenic Rim has been filled and we congratulate Catherine Madden on her appointment.



Catherine worked with Brisbane City Council's Land for Wildlife program for a decade and will leave a legacy there with projects she established and partnerships with landholders. She is stepping into big shoes left by Keith McCosh, who held the position for over 15 years.

Keith's farewell note said, "Deciding to retire wasn't easy. I was surrounded by friends and colleagues and got to see some amazing properties and keen owners. Some called it work but I thought it was a privilege. Farewell to my friends in Land for Wildlife. You are a great bunch. I know you will be well supported into the future". With Catherine moving into this role, bringing a wealth of expertise in nature conservation and local knowledge, we are assured that Scenic Rim members will be in good hands.

Feel free to contact Catherine via catherine.m@scenicrim.gld.gov.au



*These above statistics reflect LfWSEQ

membership across all 13 Local Governments.

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 by Greenridge Press, Toowoomba using vegetable based inks.

ISSN 1835-3851 Print run - 4135 copies

Front Cover: An adult female Yellow-tailed Black Cockatoo chewing into an Acacia sapling to extract a cossid moth larvae. Photo by Tim Spencer.

Front Cover Inset Photos: A White-striped Noctuid (Agamana conjungens), photo by Ian McMaster; and a Squirrel Glider, photo by Josh Bowell.

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EDITORIAL

Welcome to the MAY 2021 ISSUE

One of my first jobs out of university was as a camp cook with a company that took birdwatchers and naturalists to remote parts of this country. I wasn't yet ready to join the 9-5 workforce, let alone an office, so this fitted nicely. I have strong memories of the country we saw, the wildlife we encountered and the obvious recentness of Indigenous tenure and the impacts of colonisation.

One of my most memorable wildlife experiences occurred along the Canning Stock Route. Fluorescent light tubes were used to illuminate the camp kitchen and they acted as magnets for a remarkable array of moths. It was a compelling nightly display of nature's beauty and diversity.

Back then, before mobile phones and digital SLR cameras, I had a wind and shoot and go to the shop to get film processed type camera. So, I didn't 'waste' my film on moths, but what if I had? Firstly, I would have almost certainly photographed moths that were new to science. Secondly, I would have waited years to have them identified given the lack of online photo-sharing technologies back then. And finally, it is likely that some of those species would have since become extinct, or their status would be unknown. Many changes have occurred over the past few decades and many have not been favourable for Australia's invertebrates.

Fast forward to last December when I participated in the Springbrook BioBlitz and saw my first professionally organised moth light trap set-up by curators of the Queensland Museum's Entomology Collection. It was clear that I was a newbie to moth light trapping. I left my sunglasses, hat and sunscreen behind – it was night-time after all. I soon realised the value of such items given the high UV conditions generated by the light. The assortment of moths, cicadas and other invertebrates delighted all attendees.

In this edition, several pages are dedicated to moths and describing how to construct your own moth light trap. With modern smart phones, macro lenses and citizen science hubs like iNaturalist, it is now relatively easy to photograph, identify and record moths, thereby broadening our understanding of the natural world.

I want to thank all Land for Wildlife members who record observations of species on their properties, whether it be birds, plants or moths. If suitable, please consider using one of the many citizen science portals like iNaturalist, eBird or Atlas of Living Australia to not only help organise your sightings, but to contribute to the bigger picture of Australia's biodiversity knowledge. For example, lan McMaster (see article page 6) has recorded over 3300 species (mostly moths) on iNaturalist from his property – truly impressive.

I hope you enjoy the diverse stories within this edition including Red Cedar farm forestry, ecotherapy and gliders to name a few. Thanks for all the conservation work you do, and I welcome your contributions and feedback.

Deborah Metters Land for Wildlife Regional Coordinator

We welcome all contributions. Please send them to: The Editor ✓ deborah@seqlfw.com.au ✓ 0437 910 687



Climate & Weather REGIONAL OUTLOOK

Apr-Jun 2021



Daytime and Night-time Temperatures. Likely that daytime and night-time temperatures will be warmer than average for south-east Queensland.



Rainfall. Below average rainfall conditions are likely across south-eastern Australia.

Streamflow. Median to low streamflows are most likely in south-east Queensland.

Influences

- El Niño-Southern Oscillation (ENSO) is neutral and has little influence on the Australian climate.
- Southern Annular Mode (SAM) is neutral and has little influence on Australian rainfall during autumn.
- Indian Ocean Dipole (IOD) is neutral and looks to remain neutral for the remainder of autumn.
- Australia's climate has warmed by ~1.44°C since 1910.
- Southern Australia has seen a 10-20% reduction in cool season (April-October) rainfall in recent decades.

Sources

www.bom.gov.au/climate/ahead/ www.bom.gov.au/climate/climate-guides/ (south east Queensland)

Weeds to Watch Apr-Jun 2021

Weedy passionflowers such as Stinking Passionflower (top) and Corky Passion Vine (middle) are flowering and fruiting. Most young passionflowers can be hand-pulled whereas mature vines may require herbicide to control. Herbicide can be applied as a foliar spray onto the leaves, or scraping the stem and painting the scrape with herbicide. Your LfW officer can provide more detailed weed control advice.

Easter Cassia is flowering and setting seed. The bright yellow large flowers stand out in the forest. Treat larger plants with herbicide using the cut and paint method, or hand-pull seedlings.





Persistence PAYS OFF

oving birds is one thing but photographing them is a completely different matter. It can be endlessly frustrating but once in a while something unexpected occurs.

Several weeks ago I wandered up the back of my place, camera and 300mm lens on my shoulder. I heard a close-by noise and looked to my left and there, not more than three metres away and at head height was a Yellow-tailed Black-Cockatoo. This bird had an agenda and was in no way concerned about my close proximity. A tall but narrow wattle tree was the focus of its attention. Half the tree had been stripped of bark and wood exposing a cavity within.

Went back to get my wife Carolyn, "Hey, you got to come and see this". We spent about 20 minutes watching as the bird diligently removed large fragments of wood and bark. There was no way I would put a finger anywhere near that beak! I stayed on another 10 minutes but had trouble lining up the perfect shot through the trees as I was a bit too close for the camera lens to focus.

Anyway, as the title says, 'persistence pays off', and the bird was finally rewarded with a fat, juicy grub. After devouring the grub the bird flew off in answer to a mate. Looking at the tree and damage, it was clear the bird had extensive knowledge about getting such treats. Based on the amount of damage required to reach the grub, plus similar damage on the other side of the trunk but lower down where the bird had initially tried to excavate, led me to believe that at least an hour had been spent in securing the grub.

Article by Tim Spencer Land for Wildlife member Upper Brookfield, Brisbane

Photo right: Tell-tale signs of a Yellow-tailed Black-Cockatoo feast - strips of discarded wood and a hollow space at the core of the tree, from which a juicy cossid moth larvae was extracted. Photo by Deborah Metters.



Photos above: An adult female Yellow-tailed Black-Cockatoo tears away bark from an Acacia sapling to extract a plump, wood-boring larvae of a cossid moth. Adult female Yellow-tailed Black-Cockatoos can be distinguished from adult males by their bright yellow ear patch, their heavily patterned tail panels and the grey orbital skin around their eyes - males have pink around their eyes. Photos by Tim Spencer.



Acting Up

PARENTING THE EASTERN YELLOW ROBIN WAY

am visiting a Land for Wildlife property on the Blackall Range. In this part of the Sunshine Coast hinterland, there is a mix of tall eucalypt forest on the ridges and poorer soils and rainforest in the creeks and gullies on the better soil. The property that I'm on has the better soils. The flatter part of the property has been cleared but the rainforest at the back of the property has been logged but never cleared. It backs onto another Land for Wildlife property that also has a Voluntary Conservation Covenant.

One of the reasons the rainforest is still here (and was not cleared) is because this part of the property is very steep and rocky. As we enter the rainforest we go downhill fast picking our way among the rocky scree. Away from the edge of the forest, the understorey thins out and it is open underneath the canopy. There are so many rocks that there is hardly any soil for seedlings to establish.

While the landowners and I are looking at plants, we notice a group of three Eastern Yellow Robins nearby. At the same time, they notice us. One of the robins starts moving in a strange way towards us chattering noisily and drawing our eye towards it. It is holding its wings out as though damaged, and it is hopping along the forest floor. It looks like it is injured, and it is certainly attracting our attention.

One of the other birds is one sitting quietly in the understorey and the other is hiding at the top of a dead Piccabeen Palm frond. This one has its back to us, sits very still and blends in with the dead palm frond. Meanwhile the 'injured' parent keeps up the noisy chatter and holds out its injured wing while continuing to move away from the other birds.

We soon start talking about how weed free the rainforest is and start to make our way back up the steep hill. We look back at the robins and all is now well. The 'injured' robin has re-joined its family and shows no appearance of an injury or sore wing. With the other adult, it is helping to feed the bird sitting on the dead palm frond. This chick is no longer sitting quietly but is now begging loudly for food! What a change from a couple of moments ago.

It seems that the adult robins decided that we no longer posed a risk to their young and had gone back to their usual behaviour. Maybe we had just gotten too close for their comfort. Maybe the chick had started begging again and they forgot about the three strangers intruding into their world. Baby birds can beg incessantly.



Animal behaviour is always interesting. I know it's not good to anthropomorphise, but it makes me think the robins were good parents distracting the potential predators. It makes sense when you think of how much effort they go to making a nest, keeping eggs warm and feeding chicks. Only about one third of Eastern Yellow Robin nesting attempts raise any young. After leaving the nest, Eastern Yellow Robin fledglings spend another two months with their parents who gradually feed them less and less until they become independent.

I hope the chick is now an independent adult and enjoying eating insects and hanging out in the rainforest at Flaxton. Maybe it too will be an excellent actor when it comes to protecting its young.

Article by Stephanie Reif Land for Wildlife Officer Sunshine Coast Council

References

Debus SJS (2006) Breeding Biology and behaviour of the Scarlet Robin *Petroica multicolor* and Eastern Yellow Robin *Eopsaltria australis* in remnant woodland near Armidale, NSW. *Corella*, 30:59-65.

YELLOW ROBINS OF SEQ

There are two species of yellow robins in South East Queensland.

The Eastern Yellow Robin (right) is found in a wide range of habitats from rainforests to open woodlands and has a bright yellow breast and slaty-grey back.

The Pale Yellow Robin (far right) is not as bright yellow and has more white on its face. It has a more restricted distribution and is mainly found in subtropical rainforests and densely vegetated creeks and gullies.

Photos by Deborah Metters.





Light Trapping Moths AT MOUNT MELLUM



Ian McMaster is a long-term Land for Wildlife member at Mt Mellum and is a keen advocate for community conservation on the Sunshine Coast. Ian and his wife, Chrissie, have taken the next step in their conservation journey to register a portion of their property as a Nature Refuge. Ian's LfW Officer, Alan Wynn, caught up with Ian recently to discuss Ian's latest passion – moths – and how he is teaching other landholders to survey for them using a light trap.

hat sparked your interest in insects?

It grew from trying to better understand the ecosystems on our Nature Refuge at Mount Mellum. As part of the process of applying for a Nature Refuge, we had to show why the land was worth protecting for future generations. So, we listed all the plants we could find, noting about half a dozen threatened species. With council support, we surveyed for birds and reptiles, and set up motion cameras to track mammals, but we knew very little about the invertebrates. So, I started to photograph and record what we could find.

At about this time, my sister came to visit us from NSW. She has a fascination with spiders, and her husband is an excellent photographer, so they started to photograph all the spiders at our place and helped me understand different spider habitats. I then found out that a friend had been photographing moths for years, and he was very generous in describing how to set up a UV light trap.

Why focus on moths?

The simple answer is that they are easy to photograph. Many of them are attracted to UV light, so all you need to do is set up a UV source when conditions are good for moths and wait for them to come to you. Once they settle, they will remain happily in place for you to take as many shots as you need.

How many moth species are there in Australia?

According to CSIRO, there are about 22,000 known species but only about half of those have been formally described and named. Many have yet to be discovered, and there may be up to 30,000 species.

Why so many?

Moths have developed a high degree of

specialisation as a result of their lifecycle. In the larval stage they are sedentary and rely on the leaves from specific plant species. Yet in the adult phase, they are highly mobile, and able to travel long distances to find mates and lay eggs on other plants of the same species. Often the adult phase is quite short-lived, with some moth species lacking mouth parts, so they rely entirely on the energy stored during the larval phase.

What do you do with all the photos you take?

I upload the good ones to iNaturalist. This is an international citizen science platform that enables others, including experts, to identify your photos. The good thing is that confirmed iNaturalist records are uploaded to the Atlas of Living Australia and contribute to our national biodiversity datasets.

Are there any moth species that particularly interest you?

Actually, I'm more interested in occurrence patterns of moths and butterflies. For example, in 2016 there were unusually good winter rains in western NSW, and as a result, there was an enormous migration of Caper White butterflies across SEQ. We saw great clouds of them coming over daily for a couple of weeks.

In 2020, we had an unusually high number of various species of fruit piercing moths. Many locals lost their entire citrus crops to their depredations. After seeing just five individuals of one species, *Avatha discolor*, in the previous three years, I saw literally hundreds of them in 2020. It fascinates me how you will see some moth species regularly, month in and month out for several years, while others only turn up once in a decade. These natural variations make it difficult to measure the impacts of broad-scale things like habitat loss and climate change.

What's the difference between butterflies and moths?

BUTTERFLIES

- Mostly active in daytime
- Clubbed antennae
- Wings not hooked
- ~400 species in SEQ

MOTHS

- Mostly active at night
- Feathered antennae
- Wings hooked together
- ~9000 species in SEQ
- 7 major groups (superfamilies) as shown on facing page

Although most moths are active at night, some are more active during the day, such as this Lydia Lichen Moth (*Asura lydia*).

All photos by lan McMaster.



Bombycoid Moths (Bombycoidea)

Mainly large, including emperor moths, hawk moths and lappet moths (~250 named species in Australia).

Curved-horn Moths (Gelechioidea)

Mainly small, including seed borers, concealer moths, timber moths, curved horn moths (~3000 named species).



Geometer Moths (Geometroidea)

Mainly medium sized, including emeralds, waves and carpet moths (~1100 named species).







Owlet Moths (Noctuoidea) Variable in size, some brightly coloured, some drab, including tiger and litter moths (~1800 named species).







Snout Moths (Pyraloidea) Mainly small, including webworms and mealworms (~1200 named species).





Tineoid Moths (Tineoidea)

Mainly small, including bagworms, case moths and clothes moths (~800 named species).







Tortrix Moths (Tortricoidea) Mainly small, including leaf roller moths (~560 named species).







Moth light trapping at the Springbrook BioBlitz in 2020. Everyone was wearing sunglasses due to the high UV light emissions.

Light Trapping Mothers

ost moths are inactive and well-hidden during the day and only active at night, which means that if you wish to take a closer look at them you need to come up with some way of attracting them to a convenient observation spot. We can use their natural attraction to light to do just this. Interestingly, it is still a mystery exactly why moths and other nocturnal insects are attracted to lights.

A quick search of the internet for 'How to make a light trap for moths?' will yield a wide variety of trap designs from the cheap and simple through to complex and expensive setups that involve fabrication and electronics skills that are beyond me. There are also a few off-the-shelf traps for the more serious entomologists.

Probably the simplest way is to leave an outdoor light on. While any light will attract some moths, more will be attracted to an unshielded fluorescent tube or compact fluorescent light (CFL). Fluorescent lights work better than other light sources because they emit some light in the UV portions of the light spectrum. You will get even better results if the light is adjacent to a white wall but if you don't have a white wall you can simulate one with a white bedsheet.

Now if this is not possible (or you don't like the idea of a verandah covered in moths) you can take the bedsheet to the clothesline and use a portable work-light. If you don't have a portable work light you can get them reasonably cheaply from your local hardware or auto store. Remember to get one that uses a fluorescent tube or CFL.

Light traps of this sort are usually attended, that is, you stand or sit nearby with your camera ready to photograph the moths that get attracted. I find the waiting is made easier by the addition of a small glass of single malt whisky, you may find other beverages



helpful. Alternatively, the light can be left on all night and inspected just before you go to bed and again just after first light the next morning. If you leave it too late in the morning some moths will fly off and will become breakfast for the birds.

You can easily upgrade this setup by fabricating a portable frame for your white sheet from PVC pipe and changing your CFL bulb or fluorescent tube for one that emits more strongly in the UV portion of the light spectrum. These are called actinic or black lights and are available from entomology suppliers such as www.entosupplies.com.au

A second kind of trap utilises a bucket or similar container with a light source over a funnel, these sorts of traps are designed to be portable and easily deployed in the field. This website from the UK shows various do-it-yourself bucket and funnel traps for moths - www.butterfly-conservation.org (search 'moth trap').

Many factors will affect how many moths are attracted to your trap, such as the kind of light source you have, moon phase, other light sources and weather factors like rain and temperature. For a thorough survey of your local moths, you will need to repeat your moth trapping regularly.

Finally, once you have 'trapped' your moths make sure you get some really clear photos using your smartphone or even better, a DSLR with a macro lens. Then upload them to iNaturalist where an active online community of moth experts can help identify your moths and contribute to a better understanding of Australia's incredible moth diversity.

Article and photos below by Alan Wynn Land for Wildlife Officer Sunshine Coast Council



Basic moth light trap - a white bedsheet on a clothes line with both 240v mains and 12v battery powered fluorescent work-lights.

Release THE ULTIMATE AIM OF WILDLIFE CARERS

Rescue, rehabilitate and release. We don't often talk about that last word but it is the ultimate aim of wildlife rescuers – to release wildlife back to where they were rescued. In some cases, it is simply not possible to release wildlife where they were rescued, particularly when possums and macropods are found deceased with tiny live joeys in their pouch. Once these joeys are ready for release, which can be many months from when they were rescued, they need to be 'soft' released into suitable habitat where there is a resident population of the same species.

ANARRA (Australian Native Animals Rescue and Rehabilitation Association) is a volunteer-run community organisation that rescues and rehabilitates injured and orphaned wildlife in the Gympie and Wide Bay region. ANARRA is fortunate to have two portable pre-release pens, one for possums and another for macropods (kangaroos and wallabies). These portable pens can be transported to a site where there is suitable habitat for the species and where the animals can be monitored by the landholders, supplementary fed if needed, and released into the surrounding habitat where they can ultimately integrate with local macropods of the same species.

Our macropod release pen has been set up on Marc and Kerrianne Russell's Land for Wildlife property at Wilson's Pocket. The Russells have spent many years revegetating their property and restoring and conserving habitat for wildlife. The pen is on a site with established rainforest species on one side and open grasslands on the other. The Swamp Wallabies are drawn to the rainforest area, the Eastern Grey Kangaroos to the grasslands, and the Red-necked Wallabies are happy in either. Three releases have taken place at this site. Eastern Grey Kangaroos, Swamp and Red-necked Wallabies from the first two releases are now out of the pen. They can mingle with the local macropods and they can also continue contact with the Russells, often returning to the pen around dusk for a catch up or following Marc and Kerrianne to the house yard. They often hop around Marc and Kerrianne when they go for walks, and over time, they seem to feel more secure and explore their surrounds further.

The third release of four Swamp Wallabies took place in February this year. Compared to other macropods, adult swampies are mostly solitary and are able to fend for themselves from a relatively early age. Lucy and Katie, international travellers volunteering with ANARRA, helped with the transport and release of the swampies, which they had been caring for up until their release.

It is a joy to see these animals released into the pen, watching them explore their temporary home, test out their incredible hopping speed, have an assortment of grasses to eat, and have the benefit of supplementary feeding if needed. The Russells enjoy their involvement in the program and the benefits that their property can provide for rescued wildlife, macropods in particular, as well as other species like possums and gliders. It is wonderful to see landholders provide this support for our wildlife.

ANARRA holds regular workshops throughout the year for those interested in wildlife rescue and care. For more information, visit ANARRA's Facebook page or email anarrawildlife@gmail.com. If you live in the Gympie and Wide Bay region and find injured wildlife, please call ANARRA on 5484 9111.

Article and photos by Deb Seal ANARRA Secretary/Treasurer





Photos from top:

One of ANARRA's macropod pre-release pens. ANARRA volunteers releasing Swamp Wallabies. A young rehabilitated Swamp Wallaby being released.

Protecting Gliders IN THE SCENIC RIM

he Wildlife Preservation Society Queensland (Scenic Rim Branch) is working on an ambitious corridor plan to link habitats across the Scenic Rim. Our goal is to restore and enhance low-altitude forests, which currently enjoy less protection than the tall mountain forests. This involves working with local landholders, Scenic Rim Regional Council, and others, to enhance habitat for wildlife while not impacting the landowners' lifestyles or livelihoods.

While the Scenic Rim is home to nearly 300 Land for Wildlife properties, they are often separated from other wildlife havens by cleared land. The Scenic Rim is an especially fragmented region, so joining Land for Wildlife properties together with wildlife corridors increases the environmental benefits for each property.

Many of Scenic Rim's most iconic lowland species (Squirrel Gliders, Grey-crowned Babblers and Glossy Black-Cockatoos) rely on our ability to join properties through corridors and 'wildlife highways'.

This project targets landholders in key areas and supports them to plant trees and to monitor wildlife. Down the track we will be installing and monitoring glider poles. These are tall timber poles, about 20m high, that are dug into the ground from which gliders can leap to other poles or to trees. Gliders do not walk across the ground, so they need trees or glider poles to move across bare paddocks, roads or other infrastructure.

Thanks to grants and fundraising from WPSQ central, Scenic Rim Regional Council and the Australian Government, we can provide free native plants, tree guards and nesting boxes to local landholders.

Why are Wildlife Corridors Vital?

Many animals need tall connected vegetation to move across the landscape. They simply cannot cross open paddocks or roads. This is the case for many reptiles, non-flying invertebrates and small mammals like gliders. Even many species of birds will not fly over paddocks.

Wildlife corridors allow the movement of wildlife and also help maintain other ecological processes like pollination and genetic exchange. Corridors also offer refuge areas for wildlife and give them a chance to flee from dangers such as fires, floods and predators.

Wildlife corridors are needed to help wildlife establish new territories, find feeding resources or to find mates. Ideally, corridors would criss-cross the landscape and would provide wildlife with access to large patches of native vegetation and protected areas like national parks. Without connections between patches of vegetation, wildlife becomes increasingly vulnerable to inbreeding and predators.

Top right: The Grey-crowned Babbler is an iconic bird of the Scenic Rim. Unfortunately, like many other woodland birds, babbler populations have declined over the past few decades. They need a 'messy' forest understorey with lots of fallen timber and leaf litter where they forage for invertebrates. Photo by Deborah Metters.

Right: Compared to a Sugar Glider, a Squirrel Glider (shown) is larger and has a fluffier tail with a black tip and large ears. Sugar Glider tails are often tipped white. Photo by Josh Bowell. Scenic Rim landowners help with a planting day in the Mt Alford-Koorabyn wildlife corridor.







If you live in the Scenic Rim, please consider helping by:

- Having native trees and shrubs planted on your property to create a corridor.
- Joining in to help plant trees on other properties.
- Join our citizen-science monitoring of Squirrel Gliders and other wildlife we will train you how to do this.
- Report any sightings of Squirrel Gliders, Yellow-bellied Gliders, Greycrowned Babblers or Long-nosed Potoroo to scenicrim@wildlife.org.au
- Recruit friends and neighbours to get free trees planted on their property.

Email scenicrim@wildlife.org.au if you are interested in being involved.

Shown here is a map of the Scenic Rim region generously created by BioGeo. It is available as an interactive online map where landholders can locate their own property in line with proposed wildlife corridors. Red lines show priority corridors. Yellow lines show second priority corridors, which will be planted as part of phase two of the project.



Photo above: Local landowners, Robert and Helen Barker, assisting with a planting day on their property in the Mt Alford-Koorabyn corridor.

Photo below: WPSQ Scenic Rim Branch Committee members (from left) Sandra Rose, Ronda Green, Darren Green and Robin Rowland.



Article and uncredited photos by Robin Rowland Wildlife Preservation Society of Queensland Scenic Rim Branch



The Yellow-bellied Glider is one of the largest gliders in SEQ. They prefer to live in forests with smooth-barked eucalypts that shed their bark in strips and flower in winter. Gliders hunt for crickets and other insects that live under the shedding bark. They also eat pollen, lerps and nectar. Most



interestingly, they create their own larder by tapping trees for sap. They make V-shaped incisions into eucalypt tree trunks and wait for the sap to run. Photo by Josh Bowell.

Have you seen or heard a Yellow-bellied Glider?

Another project being run by the Wildlife Preservation Society Queensland is trying to determine the distribution of Yellowbellied Gliders in SEQ. We are utilising reports from the public and using non-invasive survey techniques like acoustic monitoring and observations to search for, record and monitor populations.

Currently this project is focussed on surveys in the Logan region, but will later expand to all of SEQ.

If you have ever seen or heard the distinctive calls of the Yellowbellied Glider, please email glider@wildlife.org.au

To learn more about the Yellow-bellied Glider, visit the species profile on our website at www.wildlife.org.au

Ecotherapy AND MENTAL HEALTH

mmersing yourself in nature has many benefits from improving cognitive function to reducing stress. However, there is an increasing body of research showing evidence that nature can be used, nay 'prescribed', to treat mental illness. I have to be honest with you, the first time I heard this claim, at a conference about four years ago, I thought to myself, "What a load of dribble."

Between work and my personal lifestyle, I spend an inordinate amount of time in nature. On a more personal note, I am also a sufferer of bipolar disorder. I couldn't see any positive benefit that my time in nature had on my mental illness, despite overwhelming research to the contrary. I was always out in nature yet at times I still experienced crippling depression.

Urban living and contemporary lifestyles are associated with reduced nature contact. Although not causal, this coincides with increasing rates of mental illness in Australia. There is a consensus amongst the literature that there is an association between nature experiences and reduced risk factors and intensity of some mental illnesses. This includes improved sleep and a reduction in physiological measures and biomarkers for stress. Exposure to nature has been shown to strengthen personal resilience and evoke positive emotions. Time in nature has been linked with positive effects on creativity, learning, concentration and critical thinking. Research continues to investigate this relationship between nature experiences and enhanced mental health.

I had of course dismissed these findings as pop-psychology. In part, because I always looked at nature through my 'Conservation Officer' goggles. That is, I noticed every weed, every scrap of erosion and evidence of livestock damage even when I was just enjoying nature on the weekend.

Then covid-19 hit. At the height of the pandemic in 2020, National Parks were closed, people were only allowed outside for an hour per day to exercise and I couldn't undertake Land for Wildlife property visits. My daily nature-time came to a grinding halt and with it my mental wellbeing plummeted. When I pondered to my friends about why I was so miserable the same answer kept coming up, "Don't forget you're not getting your daily bush adventures anymore." At first I dismissed it, but after a couple of weeks I had completely changed my tune. Nature exposure had been an integral part of my mental illness treatment plan all along, I just didn't realise it.

Now imagine me, mid-pandemic, couped up in my tiny apartment trying to somehow replicate hours on end in the bush each day with a 60 minute exercise window. It wasn't easy but here are some ways I got the most out my nature-time in local conservation parks.

- Smell. I crushed and smelled the fragrant leaves of the Grey Myrtle (*Backhousia myrtifolia*), Broad-leaved Paperbark (*Melaleuca quinquenervia*) and Lillypillies (*Syzygium* sp.). Even weeds such as Camphor Laurels can be appreciated for their aromatics.
- Look Up. I took the time to notice the happenings in the forest canopy, the butterflies dancing, the vines intricately laced up branches, the way the sunlight trickled through the leaves.
- Sound. I closed my eyes and listened to the bird calls and cicadas, I didn't try to identify them but instead just enjoyed the changes in pitch, volume and tones.
- Touch. I'm a very tactile person and love touching the different textures of native leaves. From the leatheryness of the Native Holly (*Alchornea ilicifolia*), to the roughness of the Creek Sandpaper Fig (*Ficus coronata*), to the velvetiness of the Hairy Psychotria (*Psychotria loniceroides*). Obviously stinging trees are excluded here for good reason.
- **Draw**. I took lots of photos that I could sketch later in the evening.
- Switch Off. Turn off your bush regenerator goggles – instead of seeing weeds that need to be pulled, scats the need to be identified and old paddocks that need to be planted, take a step back and appreciate the beauty of nature without the critical eye.



These techniques use mindfulness to enhance your mental wellness by focusing on the present in a multisensory way.

Call it ecotherapy, call it *shinrin-yoku* (Japanese for 'forest bathing') whilst not a silver-bullet, nature exposure can be used as part of a holistic and rounded approach to treating mental illness. It is one of many ecosystem services that the environment provides for us.

If you are struggling with mental health, please reach out for help to a trusted friend, your GP or call Lifeline on 13 11 14. Let's end the stigma around mental health by incorporating it into daily conversations.

Article and photos by Danielle Outram Land for Wildlife Officer Sunshine Coast Council

References

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BOOK REVIEW

haven't done a book review before because I haven't been asked to, and also I haven't been moved to, until now. I have heard the name Rick Shine many times in the world of amphibian research, but this graceful, humane and humorous literary creation, *Cane Toad Wars*, is the first one I have read. I found myself awakened, delighted, seeking more and chuckling my way through this book.

As a child with several older brothers and sisters, I unconsciously joined in with cruel acts on Cane Toads in country Samford because they were there, they were ugly and it was permissible. Also because we had an air-gun rifle and enjoyed any opportunity to use it, especially on something that would reward us with a hunter's thrill of domination. Later I stumbled into my more conscious, adult 'Dettol' era. This thankfully was remarkably short-lived for reasons of horror at the sight of squirming, tortured toads, an opposite effect to what many people believed and promoted.

From an early age we all get a strange buzz out of hating something; broccoli, our hair, 'You're not my friend anymore', traffic... Cane Toads. As Rick explains, the 'disgustingness' of Cane Toads is our own making and, in other countries, people are actually fond of them. What!! They may not be what we believe them to be?!

Over the past two decades as an observer of natural processes, as a frogger, and as a rural landholder with a desire for a fair go for natives, I have reviewed the human psychology behind Cane Toad control activities. I've considered their intention and effectiveness to the point of almost being Zen at the sight of these creatures on my driveway at night and being free from anxiety over their impact on ecosystem co-habitants. I often reflect on how many toads were left to die slowly, for no apparent result, as my Dad still has them skulking under the cover of his pond overflow 50 years later. Rick puts words easily alongside my reasoning. He writes personally and relates his experiences as a field and laboratory scientist to a broader world. He provides a Cane Toad history in Australia and other parts of the world that exposes our ignorance and arrogance when we mess with species and natural processes. With kind humour he relieves us from an obsession of knowing all the answers, while providing factual insight and understanding that may help us make an informed and humane difference.

Most of us would understand that the Cane Toad has had a massive impact on native species in eastern and northern Australia due to its extremely potent poison created for defence. It's no happy sight to see a dead goanna or snake after a meal of Cane Toad. However, it's equally uplifting to hear of the myriad of animals that have been observed successfully dining on them (see list below), alongside the common emaciation of toads due to disease and parasites. I am grateful that Rick promotes the understanding that toads have placed evolutionary pressures on our native wildlife forcing them to either adapt and build resilience or perish. Thankfully, most native vertebrates have adapted to some degree. Similarly, I would agree with his suggestions that other human impacts on ecosystems are phenomenally more dramatic that this one impactful species.

To read *Cane Toad Wars* is to become more respectful and humble to the power of natural processes and to review our place in the infinite complexity around us. Hopefully, while we ponder the impact of the Cane Toads, we will also review our own. This book will go on my bookshelf as one of the fully read works that is likely be retrieved again and again for reference. Thank you Rick.

Eva Ford Land for Wildlife member Traveston, Gympie



Hardcover | 2018 | \$35 288 pages University of California Press





Who eats Cane Toads?

- Several species of spiders eat toad tadpoles
- Some water scorpions and dragonfly larvae eat toad eggs and tadpoles
- Freshwater crayfish
- Saw-shell and Krefft's Turtles
- Keelback and Red-bellied Black Snakes
- Kookaburras and kingfishers
- Crows and ravens
- Ibis, egrets and herons
- · Butcherbirds and magpies
- Giant White-tailed Rats and the Water Rat (Rakali)

A Farm Forestry SUCCESS STORY

purchased my cleared and run-down farm many years ago with the intention of turning it into what is now called farm forestry. As a consequence the landscape has been transformed for the better. Mostly, I have planted Hoop Pine (Araucaria cunninghamii), Gympie Messmate (Eucalyptus cloeziana) and Queensland Maple (Flindersia brayleyana).

When I purchased the farm, there was still a little uncleared rainforest while most of the land was weeds and degraded pasture. Some rainforest trees have been able to pioneer back into the rainforest and the former paddocks. One of the most successful pioneers is Red Cedar.

I have created an inventory of all Red Cedars on my property - all of them are natural pioneers. I think I have found all the large ones, but recruits are always being added to my register. The inventory is both a hobby and practical farm forestry. All Red Cedars on my inventory are numbered and added to a mud map to give me a chance of finding them again. They are all measured, and some receive a little silvicultural treatment around them. I have made a concession to the modern world and have been photographing them and placing the photos online and I'm up to Red Cedar number 773 so far.

Growing Red Cedar is a bit different to other trees for several reasons, one reason is that a bent tree and a live branch grows the much-prized figured wood.

To assist with my farm forestry venture, I now own a small sawmill and saw up some of the timber I grow here. I'd like to offer any Land for Wildlife members the opportunity to saw any timber for them. Logs frequently come about because of thinning requirements, tree death, blow overs and weed species.

Land for Wildlife members frequently plant rainforest species and the wood from these is often little known but the timber is usually good and interesting. I'm also a member of the International inches girth in June 2010 and 53 inches in Jan 2017. Left: I remember planting this area in 1983 and I called it The Rejects because the Hoop Pine seedlings were rejected by the forestry

Collectors Society, which encourages an understanding of

Wood Collectors Society, which encourages an understanding of timbers from little known species.

With my sawmill, I can saw down to about 5 inches in diameter, length is not so important. I can either do it for free, a donation, or for an agreed price if it is a larger quantity. Feel free to email me at forest@spiderweb.com.au about my sawmill or my online photo library.

Bob Whitworth Land for Wildlife member Cedar Pocket, Gympie



This is a photo of my daughter, her husband, their dog and me. We are standing next to Red Cedar (RC92) with RC91 behind it to the right.





This Red Cedar (RC47) was first measured in Aug 1989 when it was 23 inches girth. In March 2017 it was 50 inches.

This Red Cedar (RC84) is my fastest growing Red Cedar. This photo was taken in 2009 when it was 58 inches in girth. In Dec 2019 it was 74 inches. Red Cedar (RC575) is obviously a double leader, which is not ideal. I will cut out the poorer stem to allow the larger stem to grow faster. I'm not sure if this is one tree or two growing close together.



Red Cedar (RC317) is one of my biggest and best trees. It had a 39 inch girth in 1989, 81 inches in 2014, and 84 inches in Dec 2017. It started its life as an open paddock tree, hence its sprawling lower branches, but now my plantation Hoop Pines and Queensland Maple are growing up around it. As a result, it is casting its lower big branches and is growing straighter.



The tragic end to Red Cedar (RC21). It died and was cut and sawn in April 2020. It had a 44 inch girth and brilliant red wood. It probably died of the dry, hot weather.



Red Cedar (RC75) is growing at the head of a gully and I like the way it is holding the rock with its roots. It was 38 inches in girth in June 2010 and 40 inches in Apr 2013.



VALE EDIE SMITH (1924–2020)

You meet some pretty wonderful people doing this job. And many of them over the years have become very dear friends. So, it is with great personal sadness that I write to inform you that we have lost one of the program's longest standing members, Mrs Edith Smith of Upper Brookfield, Brisbane.

Edie and her son, John, were among the first property owners to sign on to Land for Wildlife, launched in Brisbane in 1998. Their 28 hectare property now has the full suite of voluntary protections for private properties – Land for Wildlife, Nature Refuge, General Voluntary Conservation Agreement and a Voluntary Conservation Covenant. The Smiths' commitment to nature conservation has been outstanding. Their efforts have seen over 4 hectares of farmland restored to thriving habitat. Many species, not seen on the property for decades, have returned, including many bird species, pademelons and wallabies.

Last year, a friend challenged me to enter a portrait painting competition. You had to paint a notable Brisbane identity. I chose to paint Edie who was then 95. I had to write a short bio to go with the painting. I wrote the following which sums her up pretty well...

Daughter, Wife, Mother, Farmer, Teacher, Conservationist, Baker, Maker of fine preserves. Always warm, welcoming, generous and full of good conversation, Edie Smith is one of Upper Brookfield's living treasures. Edie has spent her life nurturing others. Growing produce, teaching young children, conserving and restoring native forests on her land.

A picture, they say, is worth a thousand words, so rather than write her full history here, I will share my portrait of her with you, as it gives a little window into who she was and what she was like as a person.

In the composition I attempted to bring together a picture of Edie's welcoming, generous nature and a few snippets telling the story of Edie's life. If you look closely at the painting you may notice a collection of photographs: there's one of the rolling hills of their property; "Smith's Scrub" Nature Refuge, including a Land for Wildlife sign; the house Edie's dad built in 1917, the family home they still live in; John on his tractor; pictures of the fruits they'd produced over the years - bananas, paw paws, custard apples, avocados and mangoes; and Edie on her wedding day.

My strongest and dearest memories of Edie are of how welcoming and generous she was. If ever you went to visit, she would be there to greet you at the door with a kind smile and those gentle twinkly blue eyes. She would invite you to take a seat and then disappear into the kitchen to pop the kettle on and prepare multiple plates of home baked goodies to share. She was always full of stories and loved to talk. She had lived her entire life in the Upper Brookfield valley and loved to reminisce on the abundance of events and changes witnessed over the years.

Butcherbirds would flutter in to feast on crumbs and scrub turkeys would look longingly in from outside, ever baffled at the lack of welcome.

When it came time to leave, she would insist on you taking some freshly picked home grown avocados or mangoes, and/or a jar of homemade jam or chutney. Sparing to herself, Edie was resourceful and quick to share what she had freely and most generously.

She had a very long, very full life. A simple life. A pure and honest one. She was a rare breed our Edie. We will miss her very much.

Susan Nolan Land for Wildlife Officer Brisbane City Council

