



# LAND FOR WILDLIFE

SOUTH EAST QUEENSLAND

NOVEMBER 2019 VOL. 13 NO. 4



## INSIDE THIS ISSUE

- 2 Fraser Coast & Gympie Rejoin Land for Wildlife
- 3 Editorial and Contacts
- 4 Tree Ageing using a Resistograph
- 6 Neighbours and Nest Boxes
- 8 Veteran Trees on Land for Wildlife Properties
- 10 Stinging Trees - Plants that make you go hmmm
- 12 What is Nature Journaling?
- 13 Book Reviews
- 14 Tips for Buying and Using Binoculars
- 15 Community Driven Landscape Management in Cedar Creek Corridor
- 16 Program Highlights



**Veteran Trees of Logan, p.4**



**Ouch - Stinging Trees, p.10**

# Fraser Coast & Gympie

## REJOIN LAND FOR WILDLIFE

**L**andholders in the Gympie and Fraser Coast regions have had cause for celebration this year with the reinvigoration of their Land for Wildlife programs. Historically, the program was delivered across both regions, but stalled due to funding restrictions, leaving Land for Wildlife members with not much more than a sign on their gate.

In the Gympie region, local community groups of MRCCC (Mary River Catchment Coordinating Committee), Gympie Landcare, BMRG and Noosa and District Landcare stepped up to support Land for Wildlife members through workshops and networking. Now they have renewed backing through Gympie Regional Council's new Environment Officer role, filled by Paul Sprecher. Paul will help drive Gympie's new five-year Environment Strategy, under which Land for Wildlife is being reinstated.

On the Fraser Coast, Skott Statt has been engaged as the Land for Wildlife Officer to roll out the program, which has already received a 25% jump in membership this year. It is great to see that landholders are taking advantage of the program's return.

Promoting Land for Wildlife as an inclusive program is key for Gympie and Fraser Coast. The program has always welcomed farms that integrate nature conservation and see the financial and production benefits that flow from good land management and healthy ecosystems. Land for Wildlife can help bridge the gap between two traditionally disconnected views, production and conservation. Sustainable production and best practice land use are key drivers for engaging landholders in Gympie.

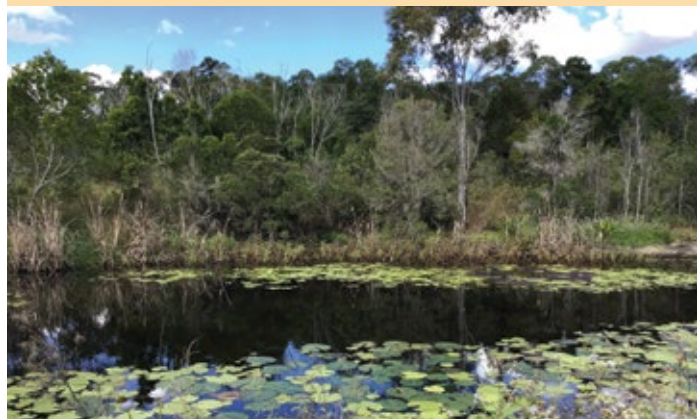
On the Fraser Coast, especially around Hervey Bay, stemming the tide of extensive development is the main focus. The region is losing its wildlife corridors and the landscape is being broken up into smaller fragments. The timing for Land for Wildlife's return to the Fraser Coast is important and may prove critical for curbing the distressing trends of Koala and other wildlife population declines. Skott is keen to develop more incentives for Land for Wildlife members such as free trees and on-ground assistance for natural regeneration. Council is also considering a new conservation agreement based on rezoning of land. Watch this space if you live on the Fraser Coast.

Gympie Land for Wildlife members are encouraged to contact Paul on 0447 051 329 or [paul.sprecher@gympie.qld.gov.au](mailto:paul.sprecher@gympie.qld.gov.au) – introduce yourselves and invite Paul out for a property revisit.

Fraser Coast Land for Wildlife members should have already received an introductory letter from Skott, but please contact him on 1300 794 929 or [skott.statt@frasercoast.qld.gov.au](mailto:skott.statt@frasercoast.qld.gov.au) if you have any questions.



Some Fraser Coast Land for Wildlife properties including views along the Mary River (top); a lagoon at Korrawinga Aboriginal Corporation property at Scrub Hill (middle); and new Land for Wildlife member Suzanne Denton on her property, Fraser Coast RV Park at River Heads, with Cr David Lewis (left) and Skott Statt.



\*Please note that these figures do not include Fraser Coast or Gympie Land for Wildlife data.

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 - 4380 copies

**Front Cover:** A Brush-tailed Phascogale taken on a Land for Wildlife property in the Samford Valley. Photo by Tom Tarrant - [www.aviceda.org](http://www.aviceda.org)

**Front Cover Insert Photo:** Land for Wildlife member John Howes leaning against a veteran tree.



[www.lfwseq.com.au](http://www.lfwseq.com.au)



[facebook.com/lfwseq](https://facebook.com/lfwseq)

# Welcome TO THE NOVEMBER 2019 ISSUE

## EDITORIAL

It has been a busy few months in Land for Wildlife. This November edition welcomes new and returning friends and celebrates the protection of nature through collaborative efforts. We welcome back Stephani Macarthur to Ipswich City Council and Dave Burrows to Noosa Shire Council. Both officers bring a wealth of program experience to their respective Councils.

We would also like to recognise the recent and devastating fires across many landscapes in the SEQ region. These fires have impacted many of our Land for Wildlife members and the wider community. As the climate changes and we experience significant shifts in weather patterns, we hope that everyone stays safe and implements suitable management plans for their properties and personal safety as the warmer summer season approaches.

As we farewell the stunning wildflowers of spring that struggled under reduced rainfall, we now enter the long, hot summer days where the weeds will no doubt continue to flourish. Whilst climate change can mean reduced rainfall, it can

also result in heavier downpours – let's hope we get just enough falling from the sky to keep our spring plantings growing in the right direction (up, that is!). As for the weeds, diligence and consistency in their management will continue to be vital.

As you may have recently read, trees in our landscape play a significant role in mitigating some of the effects of climate change, particularly for wildlife. They could be trees with hollows that are several hundred years old, a newly revegetated paddock or a patch of remnant rainforest along a creek line – all providing their unique version of habitat and creating connectivity for our local wildlife.

Trees are also a positive, long-term investment for the future. Not only do they provide food, shelter and habitat that are essential for ecological resilience in these changing times, they are also good for your health and well-being. Aside from the fresh air we all need, they also help create a sense of place and cultural connections across the landscape.

The stewardship demonstrated by Land for Wildlife members in SEQ for the protection

of trees and ecosystems is unique in Australia and is the culmination of efforts of landholders and Local Governments working together.

As always, please feel free to connect with Deborah or myself through the contact details below and join us along with LfWSEQ Officers in the networking space of the LfWSEQ Facebook page. If you have any stories you would like to share about your property or Land for Wildlife experiences, please let us know.

Thank you for joining us on this journey and for all the new and continuing conservation efforts across the region.

*Kylie*

Deborah Metters & Kylie Gordon  
Land for Wildlife Regional Coordinators



**Contributions to:**  
Land for Wildlife  
South East Queensland  
deborah@seqlfw.com.au  
kylie@seqlfw.com.au



## Your Land for Wildlife Officers

### Brisbane City Council - 3403 8888

Amanda Maggs	Northern suburbs, Kholo, Mt Crosby
Fflur Collier	Southern suburbs
Catherine Madden	Upper Brookfield
Cody Hochen	Brookfield, Kenmore Hills
Peter Hayes	Team Leader
Susan Nolan	Southern suburbs
Tony Mlynarik	Anstead, Pullenvale, Moggill

### City of Gold Coast

Lexie Webster	5582 8344
Melanie Mott	5582 8915
Saul Hondow	5582 8022
Scott Sumner	5582 8896
Todd Burrows	5582 9128

### Fraser Coast Regional Council

Skott Statt	1300 794 929
-------------	--------------

### Gympie Regional Council

Paul Sprecher	0447 051 329
---------------	--------------



Land for Wildlife South East Queensland Team, April 2019

### Ipswich City Council

Dani Andlemac	3810 7173
Stephani Macarthur	3810 6026

### Lockyer Valley Regional Council

Martin Bennett	5462 0310
----------------	-----------

### Logan City Council

Rachel Booth	3412 4823
Peter Copping	3412 5321
Nick Swanson	3412 5355

### Moreton Bay Regional Council

De-Anne Attard	0438 910 715
Nicole Byrne	0419 700 213
Wendy Heath	3883 5636
Michael Mills	5433 2799

### Noosa Council

Dave Burrows	5329 6500
--------------	-----------

### Redland City Council

Maree Manby	3820 1106
-------------	-----------

### Scenic Rim Regional Council

Keith McCosh	5540 5436
--------------	-----------

### Somerset Regional Council

Darren McPherson	5424 4000
------------------	-----------

### Sunshine Coast Council

Alan Wynn	5439 6477 Southern region
Nick Clancy	5439 6433 Southern
Danielle Outram	5475 7339 Northern
Marc Russell	5475 7345 Northern region
Michael Reif	0437 112 071 Southern
Stephanie Reif	5475 7395 Northern



# TREE AGEING USING A Resistograph

Earlier in the year I visited a property in North Maclean as part of a Land for Wildlife assessment. While wandering around with the property owner I spotted a giant Blue Gum (*Eucalyptus tereticornis*) poking out above the other trees along the Logan River. I was about 100m away but I could still tell that it was a very large tree as the top half of it had snapped off but it was still taller than the other trees around it.

Once I was at the base of the tree, I was able to see and appreciate how big it really was. With a diameter at breast height (DBH) of 2.38m it turns out to be the biggest recorded Blue Gum in the Logan region. With the top half snapped off and five large burls climbing the trunk, it certainly had a lot of character indicating, along with its DBH, that it must be old.

As a result of discovering this tree, Logan City Council thought it would be worthwhile to determine its age, along with several other large old trees in Logan. Of the five trees tested four were *E. tereticornis* and one was a Swamp Mahogany (*Eucalyptus robusta*).

A method called resistography was used to measure the age of the trees. A resistograph is a machine developed by Frank Rinn from Germany. The resistograph was originally designed

for the tree care industry to test for decay and defects that may affect a tree's health, but it is now widely used to test the structural integrity of timber structures such as power poles and bridge timbers. It does this using a micro drill bit, approximately 3mm in diameter, that enters the wood to a depth of up to 40cm. As it passes through wood with different densities, decay etc., there are changes in the resistance on the drill bit, causing the rotation speed to change. These changes in resistance are recorded by the resistograph and can then be interpreted by analysing the results on a computer.

The resistograph is so sensitive that it can accurately detect the soft and hard wood of the growth rings. By drilling the 40cm into the trunk, on either side of the tree, the arborist is able to obtain a good data set for analysis, allowing him to get an average yearly growth rate. However, as the drill bit is not long enough to reach the centre of the trunk, and growth rings aren't always yearly, the age is an estimate only but is likely to be within 10% accuracy.

As a result of the tree age testing, it turns out a much less assuming tree (Tree 2) at 2.06m in DBH, and with far less character, is the oldest at 412 years while the tree found at North Maclean (Tree 1) is estimated to be 378 years old.

## Results from the resistography testing of five trees in Logan.

	Details	DBH (metres)	Estimated Age (years)	Average Growth Rate (cm/yr)
Tree 1	North Maclean Tree 'Gandalf' Blue Gum ( <i>Eucalyptus tereticornis</i> )	2.38	378	0.63
Tree 2	Road Side Tree Blue Gum ( <i>E. tereticornis</i> )	2.06	412	0.5
Tree 3	Council Park Tree Blue Gum ( <i>E. tereticornis</i> )	1.48	274	0.54
Tree 4	Council Park Tree Blue Gum ( <i>E. tereticornis</i> )	1.68	269	0.62
Tree 5	Carbrook Tree Swamp Mahogany ( <i>E. robusta</i> )	1.01	208	0.49

**Gandalf**  
This giant Blue Gum at North Maclean is estimated to be 378 years old. Photo by The Tree Doctor.

Trees 1 and 5 are both on private Land for Wildlife properties and Trees 2, 3 and 4 are on public land. Exact locations have been kept confidential to protect these veteran trees from potential vandalism or poisoning.



John Howes (landholder) and The Tree Doctor measuring the DBH (diameter at breast height) of a veteran Blue Gum tree at North Maclean. Photo by Nick Swanson.



Top: Adam Tom from The Tree Doctor using a resistograph to measure the age of this old Blue Gum.

Lower: The hole in the tree created by the resistograph is small enough to quickly heal. Photos by Nick Swanson.

The two Blue Gums in Council parks also provided some interesting results. Although Tree 4 is 20cm larger in DBH, it is still only estimated to be approximately the same age as Tree 3.

The Swamp Mahogany was found to have a significant amount of decay and so the age estimate of this tree is just a guess. In fact, the arborist suggested that this tree is likely to fail and collapse within two years.

The different rates in growth are likely the result of the different soil types as all the trees are located in areas with similar rainfall patterns and they were all located a similar distance from water so likely had a constant water source. The area where Tree 1 is located, in North Maclean on the Logan River, is very sandy and this would likely explain why its growth rate is the highest of all the Blue Gums tested.

Tree 1 may not be the oldest, but it is without doubt the most impressive of the trees. It was affectionately given the name 'Gandalf' by the arborist based on the wizard from *The Lord of the Rings*, and it was quickly picked up by the media who promoted this as Logan's largest tree. With its 2.38m trunk, the multiple burls and half the tree missing, it has a commanding presence on the edge of the Logan River. It was agreed by the Land for Wildlife property owner that the name Gandalf was appropriate.

Although the age of these large old trees can be impressive, the focus should be on the significant environmental value they provide. Trees of this age often have many hollows providing breeding and roosting sites for all kinds of native fauna. They also help stabilise soil from erosion and create a mini micro-climate that may increase soil moisture and support beneficial fungi. They

also provide habitat in the form of food or shelter for a host of small reptiles, birds and invertebrates.

Many of these veteran trees in our landscapes are important cultural icons for Indigenous people and give all Australians an insight into historic land management. Many veteran trees are artefacts of Indigenous land use, especially the use of regular cool fires, which would have prevailed when these old Logan trees germinated.

Logan City Council hopes that by continuing to carry out age testing on other trees, it will help the community see the environmental and cultural importance of these large old trees and the significant amount of habitat they provide our native fauna. It's also a way for Council to showcase what an old tree looks like as, unfortunately, most trees people see are relatively young and some people are not aware that veteran trees like Gandalf were once common throughout the landscape.

Logan City Council plans to continue age testing and will create a register of the large old trees throughout the Logan area, with a layer to be created on its mapping system. As such, if you live in Logan and have a large old tree in your own backyard, we'd love to know about it. Please email [environment@logan.qld.gov.au](mailto:environment@logan.qld.gov.au) with a photo.

**Nick Swanson**  
Conservation Partnerships Officer  
Logan City Council



# NEIGHBOURS AND *Nestboxes*



Catherine Madden (Brisbane City Council Land for Wildlife Officer) uses a GoPro camera attached to a long pole to lift a nest box lid and discover a family of Squirrel Gliders in their tidy gum leaf nest.

The Kholo area is blessed with several Land for Wildlife properties and vast protected areas managed by Brisbane City Council, SEQ Water and Queensland Parks and Wildlife Service. The environment is hard border country (mainly Spotted Gum, Grey Ironbark open woodland), previously used for logging timber and clear-felled in parts for farming livestock. Large swathes of forest are healthy regrowth aged 60-80 years, meaning there is plenty of vegetation, but natural tree hollows are scarce.

Our property lies within a state-significant ecological corridor with excellent habitat features including structural and floral diversity, rocky outcrops and ephemeral creeks.

Several significant and hollow-dependant species are found in Kholo including Glossy Black-Cockatoos, various glider species, Powerful Owls and the Brush-tailed Phascogale. Phascogales prefer to inhabit dry sclerophyll forest and woodlands with sparse ground cover, an exact match to Kholo's forests.

Two years ago, a young female phascogale we nicknamed 'Germaine' enthralled us as we watched her produce four young (see graph on facing page showing phascogale movements over their three month use of the nest box). She inspired a nest box project in the neighbourhood aiming to assist her babies to have young of their own.

In September 2018, 16 nest boxes, generously provided by Brisbane City Council's Land for Wildlife program, were installed across 8 properties adding to 8 boxes already installed by keen landholders.

We installed nest boxes with both front-facing and rear-facing entrances. Rear-facing nest boxes have spacers that sit between the nestbox and the tree, creating a gap for wildlife to move to and from the nestbox while remaining close to the tree trunk.

In June 2019 (preceding the breeding season) our keen team began planning a neighbourhood nest box audit. Finally, the day came and what an exquisite one. The sun was out, and the wind was still, as first my neighbour Renee, then three Land for Wildlife Officers trundled up the dirt drive to our yard.

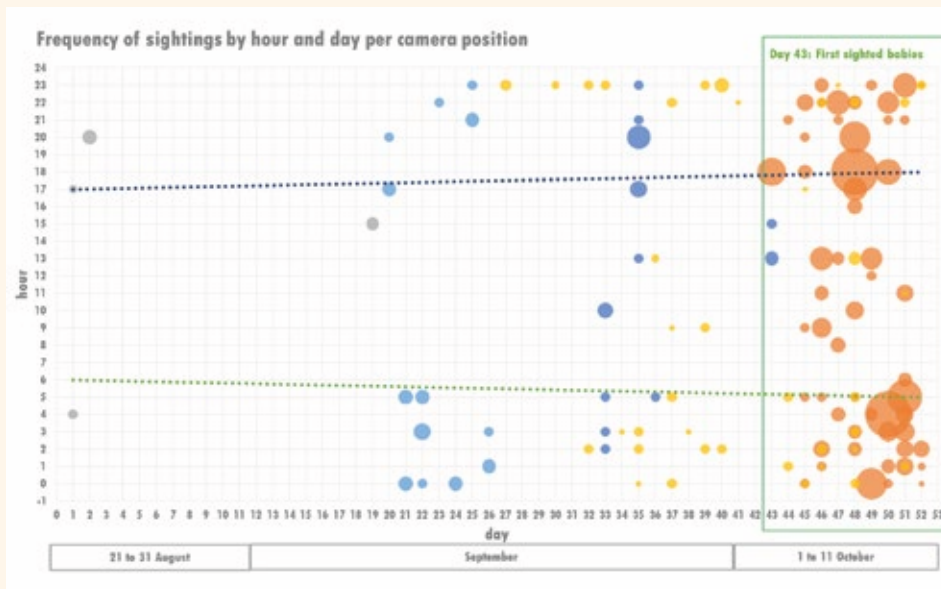
In one afternoon, we inspected 24 nest boxes on 8 properties and found:

- 17 boxes were in active use (contained nesting material).
- 4 boxes had phascogale nesting material (description below).
- 3 boxes had phascogale scats on top (taken for analysis).
- 13 boxes had Squirrel Glider nesting material present.
- 5 boxes had Squirrel Glider colonies present.

It appears that if you provide nest boxes for phascogales, gliders will move in too! Gliders are voracious nesters. They're neat freaks, using only the leaves in trees nearby and laying them carefully to form a neat cup with a delightful eucalyptus scent, often claiming more than one box.



Squirrel Gliders were quite happy to make use of the nestboxes installed for phascogales.



Using motion-sensing infrared cameras, we were able to collect data about Germaine and her young. The camera images allowed us to track their movements in relation to environmental measures such as temperature and time of day. This graph provides a basic analysis of this data. For example, it shows that Germaine preferred to move around between 10pm and 5am, that is until day 43 when the young started to move around. She also occasionally ventured out of the nest box during the day.

Phascogales however have no qualms in taking any unoccupied box and stuffing it full of smelly stuff. Feathers, bark, mattress stuffing, plastic twine, dog hair; as long as it can house a sleeping body. Phascogales have even resorted to taking up residence in microbat nest boxes and people's linen closets! Clearly, they're not fussy about where they bed down.

There is one difference in nest box preference for phascogales and gliders – size. The entrance holes are similar however gliders like a tight nest in a box with a small floor space and phascogales spread out, sometimes having different 'bedrooms' in the same box.

Some more pointers if you are thinking of installing a phascogale nest box or three:

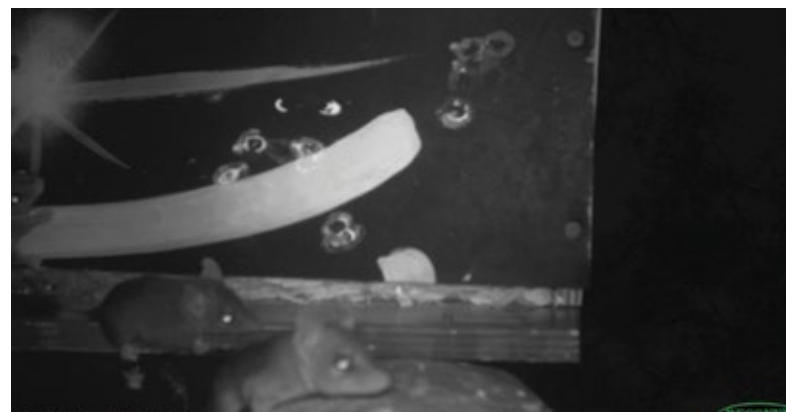
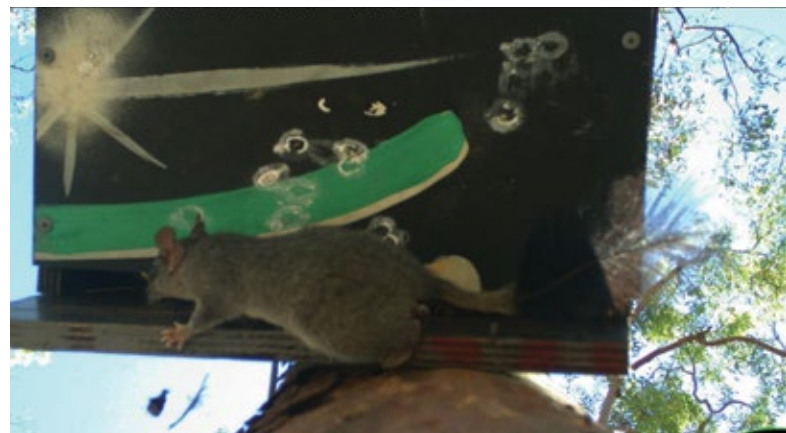
- Boxes should face east to south-east.
- Avoid exposure to artificial light or installing nest boxes near highly trafficked areas.
- Phascogales prefer rough-barked trees so install your box on an ironbark, tallowwood or similar.
- Trees with healthy canopy cover offer a level of protection for phascogales leaving their nest.

The scat analysis provided a snapshot of the local phascogale diet, which included skink, cocoon, beetle, grasshopper, ant, centipede and rat. Scats also contained phascogale grooming hairs. We look forward to seeing if and how the contents of their scats (i.e. their diet) change over time.

Resources and motivation haven't yet been found to do peer review work on the abundance and ecology of SEQ phascogales. It is my hope that our citizen science will plant a red flag as a starting point for more formal research.

**Rob Nitschke**  
Land for Wildlife member  
Kholo, Brisbane

Additional text provided by Amanda Maggs (Brisbane City Council) and Renee Chamberlin (Land for Wildlife member, Kholo)



Female phascogale 'Germaine' with her family. In the lower photo, you can see all four of her young leaving the nestbox.



Three veteran Swamp Box (*Lophostemon suaveolens*) trees near Wardell, NSW showing Indigenous container scars. Photo by Greg Siepen.

# Veteran Trees ON LAND FOR WILDLIFE PROPERTIES

**M**ost properties in Land for Wildlife have a patch of bushland, swamp or forest as the main feature. Other owners are either enhancing their bushland through weeding and natural regeneration or through planting because they love native plants generally.

However, many owners may not be aware that they may have 'veteran' trees growing on their property.

So what are veteran trees? They are very old trees that may be hundreds of years old. In a few instances, they may be closer to 1,000 years old. These trees may be old and gnarly or if growing on very poor soils, they may not have very thick trunks. If areas have been logged, then these types of trees would have been the first to be harvested. Thus, you may have slightly younger trees growing around your property. They are still valuable for the environment.

## Values of Veteran Trees

Trees of all ages and sizes provide many benefits to a property, wildlife, the broader environment and they give us lots of pleasure. Veteran trees may contain DNA of the forests that grew in Australia tens of thousands of years ago.

Like all trees, veteran trees stabilise the soil under their driplines. They provide shade, shelter, perches and breeding sites for many invertebrates, birds, mammals and reptiles.

All trees, and especially veteran trees, are very efficient water pumps. They pump water from deep in the soil to the leaves at the extreme top of the branches. In addition, they exert pressure to keep water deep in the soil to prevent salination of the ground surface. Veteran trees can even create their own ecosystems and micro-climates, and some insects and fungi are restricted to the unique soil or conditions around one tree species.

One of their key offerings is tree hollows. Hollows are essential for many native animals that play a beneficial role in keeping the landscape healthy. Hollows tend to develop after about 100 years

in many eucalypts, but researchers believe that the hollows most valued by wildlife take about 200 years. About 95 species of native mammals (i.e. possums, gliders, insectivorous bats) and about 50 native bird species use hollows.

Hollow-bearing trees, such as isolated paddock trees, in semi-agricultural landscapes provide habitats for beneficial invertebrates such as native bees which are critical for the pollination of our vegetable and grain crops. These trees also provide habitat for spiders and raptors, which eat agricultural pests like grasshoppers and introduced mice.

## Historic Values

Veteran trees may also contain marks and scars made by humans.

Veteran trees containing marks and carvings made historically or recently by Indigenous people occur throughout south-east Queensland. Traditionally, Indigenous people removed bark from old trees to make shelters, containers, shields and canoes. They made toeholds in trees to help climb them to collect food such as 'sugarbag' or native honey. Certain species of trees were used for certain purposes depending on the qualities of the bark.

The scars and carvings on trees can tell us about the tools (i.e. stone or metal axes) that were used to make them. Indigenous people strongly identify with the significant cultural trees left in today's landscape and locations of sites that once contained culturally important trees. Veteran trees were, and still are, markers in the landscape to sacred sites, waterholes and Indigenous language group boundaries. The scars on Indigenous cultural trees today provide insights into Australia's recent history and are important for all Australians.

European explorers also marked trees while traversing the continent. Few of those scarred trees remain, but where they do, they can reveal the explorers' travels and sometimes fate. Early European settlers likewise marked trees to identify paddock boundaries. They also removed bark for roofing shingles, leaving clearly identifiable marks and scars.



A dead veteran tree stump in the Brisbane Valley showing a European surveyor's mark. Photo by Dan Cole.



An Indigenous scar tree where a small canoe or shield was crafted near Wardell, NSW. Photo by Greg Siepen.



Darren McPherson looks at an Indigenous scar tree in the Redlands where a small canoe was crafted by Quandamooka People. Photo by Deborah Metters.

As trees age they grow outwards, not continually upwards, just like us in middle age. The major stem (trunk) and some of the side branches may need judicious pruning to keep the tree healthy.

### Protecting the Root Zone

The root zone of some veteran trees need management to provide the best circumstances for continued growth. Many isolated veteran paddock trees are highly sought after by stock for shade and shelter. Some trees are used as storage sites for chemicals, fencing and property management materials. Chemical leakage or soil compaction by stock or vehicles may damage the root zone and lead to the tree becoming unhealthy or dying.

If the veteran tree is in a park or garden, natural mulch from nearby bushland areas may be used to regulate soil temperature and moisture levels.

If the veteran tree is in a natural bushland area, it will self-manage, and no human intervention is required.

Controlling weeds growing at the base of veteran trees is sometimes required. However, any weed removal should be done slowly to reduce soil impacts, sunscald or dehydration due to a dramatic increase in sunlight when the weeds are removed. Low impact weeding methods such as cut-and-paste, frilling, wicking or hand-pulling are preferred, and any sprays should be avoided as they can directly damage the tree's roots and soil ecosystems.

Weed mats, geotextiles and similar erosion-control fabrics should be avoided as they can hinder nutrient recycling.

### Protection of Highly Visited Trees

Some of our ancient trees in public reserves are highly visited and risk having the soil compacted and diseases such as phytophthora introduced. In such circumstances it is best to place a seat around the edge of the tree's drip line to allow people to enjoy the tree without stressing it.

### Protection from Fences

Fence damage is usually seen with wires 'eating' into the bark of a veteran tree with the tree gradually be ring-barked. Locating fence lines and vehicle tracks beyond the drip-line enhances the ability of the tree to survive in a healthy state.

### Regeneration

Veteran trees have several survival strategies such as: crown retrenchment whereby the tree limits water to the canopy; epicormic bud growth after drought or fire; and, coppicing from lignotubers (large underground root structures). Coppicing allows regrowth of young trees identical in genetic make-up to the original tree. Examples can be seen in the Antarctic Beech (*Nothofagus moorei*) trees in Springbrook National Park where the original trees are estimated to be over 3,000 years old.

### Dead Trees

When these old veterans die, they are still valuable for wildlife if managed carefully. If the tree is located near a house, shed, road or active working area it will need to be made 'safe' by pruning limbs which are more likely to fall. Some councils have kept dead trees in their parks, made them 'safe' and created nest boxes in the ends of their shortened limbs. Many larger birds (e.g. magpies and raptors) will use these limbs as resting sites, spying the next grub or small animal.

Veteran trees may look old and gnarly, but they provide many benefits to your property, the environment and to you. They may still have many years to live and do not require extensive management to be protected. More information about veteran trees can be found via the Veteran Tree Group Australia Facebook page.

**Greg Siepen**  
Veteran Tree Group Australia  
Former Land for Wildlife Officer



Photo by Tony Mlynarik.



Tony Mlynarik  
Conservation Partnerships Officer  
Brisbane City Council



The leaves of the Shiny-leaved Stinging Tree (*Dendrocnide photinophylla*) can sometimes have visible stinging hairs (above) or may just look smooth (left). Note the clusters of developing fruit and how this tree can grow in the understorey as a pioneer plant.

# PLANTS THAT MAKE YOU GO *Hummm...*

If you're not eaten by a shark or crocodile there's a seemingly endless list of venomous jellyfish, fish, shells and octopus lined up to sting and bite. Then, if you're lucky enough to survive a dip in the water and stagger onto dry land you're sure to be bitten by at least one of the world's most deadly snakes or spiders. It's a reputation that the popular press love to promote about Australia, but surprisingly they've failed to cash in on the fact that Australia is also home to some of the most venomous plants in the world. Yes venomous, not poisonous.

These silent 'ambush' plants are found lurking in Australia's rainforests from Cape York down to the Victorian border, just waiting to envenomate the unwary. In south-east Queensland (SEQ) three species of stinging tree can be found: Giant Stinging Tree (*Dendrocnide excelsa*); Shiny-leaved Stinging Tree (*D. photinophylla*); and, Gympie Stinger or Gympie-Gympie (*D. moroides*). The latter packs the most painful sting of all the stinging trees in Australia and is ranked up there amongst the most painful of all stinging plants worldwide. Luckily it is very rare in SEQ with substantial populations not starting to appear until Gympie and then further north.

The Gympie Stinger, although called a stinging tree, is a soft, open growing shrub that typically grows to around 4-5 metres high. Unlike the Gympie Stinger, the aptly named Giant Stinging Tree and the Shiny-leaved Stinging Tree grow into substantial rainforest trees. Giant Stinging Trees top out at a magnificent 40m. To help stabilise these rainforest giants their fluted trunks are often buttressed. The bark is very soft,

smooth and is a pale brownish white. The Shiny-leaved Stinging Tree can reach 20m in its rainforest habitats.

For such large trees, the wood of stinging trees is remarkably soft, spongy, wet and stringy – 'fibrewood' is a less known common name. If you ever have the 'pleasure' of having to cut a stinging tree with a chainsaw be ready for a pulpy mess to be thrown out and for the chain to be bound up almost as effectively as the Kevlar fibres in your protective chaps. Indigenous people used these long fibres to make nets and lines, ate the fruit and even used the leaves to relieve the pain of arthritis and rheumatism.

In the rainforest, stinging trees are specialist pioneer species. They require strong sunlight to stimulate seed germination and a lack of wind for successful growth. They are particularly well adapted for colonising rainforest gaps caused by large tree falls and can come up in profusion following storm events. They are also frequently found along rainforest tracks and creek edges. The Gympie Stinger quickly becomes part of the rainforest shrub layer as 'proper' trees race for the sunlight. The Giant and Shiny-leaved Stinging Trees continue to grow to become part of the rainforest canopy and mid-stratum.

The leaves of the Gympie Stinger and young Giant Stinging Trees can be the size of a large dinner plate and are covered in a mass of stinging hairs which give them a fuzzy look, which almost invites being touched (don't do it!). The leaves are light green, soft, prominently veined, heart-shaped, regularly toothed and alternate. As well as having stinging hairs on the

leaves, the long petioles, branches and stems are also covered by them. As they mature, the trunk and branches of the Giant Stinging Tree lose their stinging hairs and the leaves become smaller (10-22cm long), less hairy and less venomous.

As its name implies, the Shiny-leaved Stinging Tree has glossy, dark green, softish leaves that are 7-17cm long. They are more drawn out and can be either bluntly toothed or entire. The stinging hairs are largely confined to the leaf veins and are also scattered over the petiole and young branches. Its leaves are not nearly



The bright pink-purple fruit of the Gympie Stinger (*Dendrocnide moroides*) stand out in the rainforest - just don't touch! Photo by Danielle Outram.



Despite their painful stings, the leaves of stinging trees are an important food source for wildlife including pademelons (above) and larvae of the Jezebel Nymph butterfly. Photos by Todd Burrows (above) and Deborah Metters (right).



as distinct as other stinging trees, so it's just as well that the shiny-leaved stinger is the least toxic of the stinging tees.

Despite being protected by stinging hairs the leaves of stinging trees are voraciously attacked by insects as shown by the large number of irregular holes chewed into them. It is not unusual to see the vast majority of leaves of Giant Stinging Trees exhibiting extensive feeding damage.

The most venomous young leaves are also blithely chowed down by Red-legged Pademelons whilst possums are known to feed on older less venomous leaves. As well as feeding on the multitude of insects attracted to the leaves, many birds as well as bats feed on the gelatinous raspberry like fruit which can be purple, pink, red and almost white. This is despite the fruit also being protected by stinging hairs. Birds and bats then disperse the small seed that they've also ingested, through the forest. Due to their colouration masses of these fruit can put on quite an impressive display.

The flowers of stinging trees are small, nondescript and greenish white in colour. They are unisexual and the plants can be either male or female.

So just what is the point of having this ferocious defence mechanism if your leaves and fruit aren't protected from native mammalian herbivores and frugivores? (The hairs offer no protection whatsoever from insect attack). Stinging trees are in the same family (Urticaceae) as the nettles and the Greek translation of the genus reflects this – 'dendros' is tree and 'knide' is nettle, so *Dendrocnide* literally translates as tree nettle. The

nettles developed stinging hairs to protect them from grazing mammals and the speculation is that the *Dendrocnide*, in a classic arms race, further refined and added to this defence due to grazing pressure from Australia's now extinct grazing megafauna.

The severity, intensity, longevity and re-occurrence of pain caused by an encounter with a stinging tree depends on a number of factors. A minor brush past can result in pain that lasts an hour or two. A bad sting by a Gympie Stinger has been described by Marina Hurley, who did her PhD on stinging trees, as:

"The worst kind of pain you can imagine – like being burnt with hot acid and electrocuted at the same time".

After blundering into a Gympie Stinger, Ernie Rider recounted:

"I remember it feeling like there were giant hands trying to squash my chest. For two or three days the pain was almost unbearable; I couldn't work or sleep, then it was pretty bad pain for another fortnight. The stinging persisted for two years and recurred every time I had a cold shower."

The secret to this pain is the delivery system – hollow, fine, silica hairs that are filled with a little studied cocktail of toxins, the combination of which probably varies depending on the stinging tree species. These hairs easily break off from the plant when touched and the hair tip then breaks as they puncture the skin. In this way they act as miniature hypodermic needles by embedding themselves in the skin and delivering their toxin. These hairs are not broken down by the body's immune

system and are extremely difficult to remove.

The toxin is also extremely stable, hence its ability to produce pain with changes in skin temperature or application of pressure to the stung site months or even years later. On top of this, new skin can grow over these imbedded needles, which also accounts for the ongoing pain associated with bad stings. This impressive toxin stability is further highlighted by pressed herbarium samples which are still capable of producing pain decades after being collected. It therefore goes without saying that dead leaves on the forest floor still pack a toxic punch. Interestingly the toxins don't cause any damage to the body – they 'just' produce pain.

There have been many 'bush remedies' touted for stinging tree stings, but none of these are effective and can even prolong the pain and suffering. The current recommended first aid treatment is the removal of as many of the hairs as possible using wax strips (don't rub the site) and then gritting your teeth as you go along for the ride.

#### References & Further Reading

Hurley M (2000) Foliage Attributes and Growth Dynamics of Stinging Trees (*Dendrocnide* spp.) in northern Australian upland tropical rainforest: implications for herbivores. *Australian Journal of Botany*, 48:191-201.

<http://capetribreserchstation.blogspot.com>

<https://phys.org/news/2018-09-worst-kind-pain-stung-tree.html>

<https://www.revolvey.com>

[www.australiangeographic.com.au](http://www.australiangeographic.com.au)

[www.saveourwaterwaysnow.com.au](http://www.saveourwaterwaysnow.com.au)



# WHAT IS Nature Journaling?

**N**ature journaling is the practice of drawing or writing in response to nature. This fun, relaxing practice helps you to connect more closely with nature, and results in the creation of your own unique nature journal. Both the practice and the end product are important.

The practice calms your mind, and increases your attention to detail and appreciation of beauty. It improves your recognition of different animal and plant species, and your understanding of where and how they live. With time, it also improves your ability to observe, to draw and to write.

A journal allows you to capture the moment (a sunset, a view, a critter, a flower, a fungus...), and recall observations which would otherwise be forgotten. The entries in your journal can give you inspiration for other creative projects, such as writing, painting, textiles, music, other crafts... the opportunities are endless. A nature journal can also be used to compile species sightings and other more scientific observations that are of great value to citizen science projects.

A journal can be anything you want it to be. Mine ranges from the personal to the scientific, from records of facts and realistic images to imagined beasts, scenes and stories. And many things in between.

Nature journals can contain carefully composed pages and finely-wrought, detailed pictures, painted with true-to-life colours. But sketches from memory – in words or pictures – can capture the essence of something, or perhaps what it means to you, far more truthfully than a carefully observed transcription at the time.

It's up to you how sketchy or finished, how true-to-life or drawn-from-memory your nature journaling will be. Perhaps an eclectic mixture of many things and approaches, each reflecting your mood at the time?

But a journal should never be an onerous chore, one that you feel under pressure to complete every day, or that you feel needs to contain only perfect pictures or writing. That's not a journal, that's a rod for your back.

A journal should be a playful, helpful, adventurous, extension of yourself. A sandpit for exploring your responses to the world. Something a bit frowsy, a bit lop-sided, a bit ramshackle at times. But at other times it will resonate with a rare quality. It might be beauty, it might be insight, it might be as simple as two lines that perfectly capture the bird you glimpsed flying by. But you will catch your breath, and be quietly amazed at what you've created. That sentence or story or picture will be yours: your unique response to the world.

Want to find out more? This is an excerpt from my book, *Make a Date with Nature: An Introduction to Nature Journaling*. You can download the free ebook from [www.paperbarkwriter.com](http://www.paperbarkwriter.com) (scroll to the bottom of the homepage).

**Dr Paula Peeters**  
Paperbark Writer



## Gully Erosion: Options for prevention and rehabilitation

John Day and Bob Shepherd

Gully erosion is a major environmental challenge for landholders across Queensland. During an intense rainfall event most landscapes will generate surface runoff. This tends to concentrate in narrow pathways between grass tussocks, animal trails and vehicle tracks. As the velocity increases, the force cuts deeper into the soil. Sound familiar? Well, you're not alone.

Gullies are considered the worst stage of soil erosion due to the permanent damage they cause. They are also a significant contributor to sediment flowing into waterways, Moreton Bay and the Great Barrier Reef. Rehabilitating gully erosion has long been a source of confusion and contention for land managers due to the complex nature of the problem.

Thankfully, this new publication gives us clear and succinct information about remediation and prevention practices. As part of an Australian Government grant aimed at the protection of the Great Barrier Reef, the Burnett Mary Regional Group (BMRG) have developed this best practice manual to preventing and remedying gully erosion. The recommendations in it are applicable and transferable to the SEQ region.

Now this may come as a shock to you, but I am not a farmer. I have never had to deal with the despair and hopelessness when a flood takes out a massive chunk of my paddock, taking with it fencing, access tracks and watering troughs. But I do visit properties suffering from gully erosion and have the role of advising landholders on remediation options, so from that perspective, here are my musings on this publication.

Every property visit I do where the landholder has gully erosion issues or wants to establish

off-stream watering and/or fencing off creek and remnant vegetation, I will be taking a copy of this manual to help inform these projects.

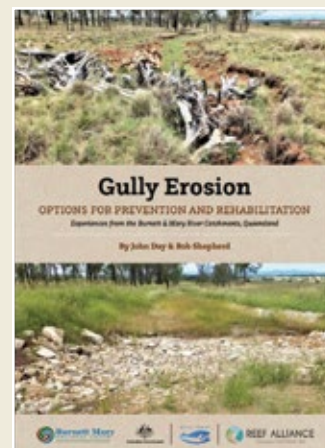
Despite my academic background and 10-year career, I still learnt a lot from reading this manual and will continue to use it as a reference for years to come. I will also be incorporating the information from this manual into my Voluntary Conservation Agreement (VCA) Management Plans and Land for Wildlife property reports where appropriate.

I really value that the manual provides clear, concise and easy to use matrices and formulas to calculate spacing, widths and depths of the various improvement options, taking a lot of the guesswork out of these types of projects. The information is justified with cost-saving and livestock health reasoning, not just environmental and water quality motivations, making it more likely to be adopted by more landholders (not just conservationists).

There are many myths around gully erosion causes and treatment options and I liked that the manual debunks a lot of these. I think the section on prevention is an absolute must-read for all rural landholders, especially those who have recently purchased a rural property.

From reading this manual my mind is spinning with opportunities, including the development of targeted fact sheets, workshops to disseminate practical information and using social media to spread erosion control tips and generate broader discussion.

Review by Danielle Outram



Published by Burnett Mary Regional Group, 2019

Download for free from BMRG at [www.bmrq.org.au](http://www.bmrq.org.au)

To request a hard-copy, contact BMRG on (07) 4181 2999 or [admin@bmrq.org.au](mailto:admin@bmrq.org.au)

## Your Backyard Birds: Understanding the behaviours, habits and needs of our brilliant birds

Dr Grainne Cleary

Initially I was worried this book would just be about bird feeding especially after reading Robyn Williams' introduction, but it is much more than that. This book goes into great detail on the behaviour of Australian birds. It mixes discussion of scientific studies with contributed stories on bird observations sent to the author. At relevant times it also includes practical information like how to keep a bird bath clean.

Interspersed through the chapters are observances and stories that members of the public have sent to Dr Cleary. For example, Emus drinking from bird baths in Longreach during a drought and wild birds entering lounge rooms to ask politely for food. The author uses these

contributions aptly to help explain the science. They also help to break up the science and make it real.

Dr Cleary is an enthusiast speaker and communicator and this comes through in the book. I particularly liked the chapter on cuckoos and the evolutionary arms race between cuckoos and their host birds. The cheating bird was also an interesting look at the ecology of fairy-wrens.

This book is for anyone interested in learning more about the behaviour of Australian birds.

Review by Stephanie Reif



Paperback | Mar 2019 | \$29.99  
272 pages | Allen & Unwin

# TIPS FOR BUYING AND USING *Binoculars*

**W**hen it comes to finding your perfect pair of binoculars it is important to get the best pair based on your needs.

My first experience with binoculars dates back to my time living in South Africa where my father and I would sit and watch the Vervet Monkeys in the treetops or straining my eyes to see White Rhinoceros through dense African scrub. My fascination with binoculars has stayed with me during my journey to Australia. It proved even more important to find the perfect pair as I soon found out that Australian wildlife is so much smaller, cryptic and camouflaged.

I have owned a few pairs of binoculars, from cheap ones to chunky ones and have my dream pair that one day I hope to own – the Swarovskis! I don't know what it is like to lose a favourite pair, but I know what it's like to lose someone else's much loved pair. I was hanging over a branch, taking part in a Platypus survey on a quiet morning. In a moment of trying to balance myself, my borrowed pair of binoculars fell into the river with a giant splash, following by me yelling 'nooo..'. Not only did I ruin all chances of seeing a Platypus, but I lost someone's favourite pair and no apology could replace them.

✓ **Tip:** Actually wear the harness or strap.

First things first – learning the terminology. Binocular jargon can be confusing, but once you understand it, you will be able to narrow your search quickly.

## **Magnification and Lens Size**

Every pair of binoculars is represented by two numbers. The first number is magnification and the second number is the size of the objective lens (the big lens closest to the object you are viewing), they usually look like this: 8x25 or 10x40. These numbers mean 8 or 10 times magnification with an objective lens of 25 or 40mm in diameter.

High magnification allows you to see further and in more detail, however it can be difficult to stabilise, especially if you have shaky hands. Magnification higher than 12x will generally require a tripod for long-period viewing.

Low magnification has a more stable image and a wider field of view. You are able to see more because you are viewing a wider area and are able to follow subjects through your field of view.

Thinking about the environment you will be viewing will help choose your magnification. Forests and woodland areas, where you are generally close to the object, might require only 8 or 10x magnification and a narrowish 25-35mm objective lens. Whereas open spaces such as the ocean would be better suited to higher magnification and a wide objective lens, such as 10x50 or 12x50 binoculars. Astronomy binoculars are generally 20x80 with strong magnification and a large objective lens.

Larger lenses allow more light into the binoculars which means you will see brighter images, especially in poor light conditions. Larger lens size also means bulkier and heavier binoculars.



Photos by Alex Proimos (top) and Santiago Medem (lower), Flickr.

✓ **Tip:** If you don't want to use your binoculars at dusk, dawn or in poor light, you won't need large lenses.

## **Anti-Fogging**

It is important to find binoculars that are nitrogen or argon purged. This means that the inside air has been substituted with dry gas and will not fog up on the inside. Fogging occurs when temperatures change quickly.

## **Anti-Reflective Lens Protection**

Anti-reflective lenses help transmit light and enhance the amount of brightness that the image has, for example, small lenses with good anti-reflection coatings can have a nicer image than large lenses that don't have many or any coatings. Fully coated or fully multi-coated lenses are the best where all the air on the glass surface has an anti-reflection coating or more than one coating.

## **Eye Relief**

If you wear eye glasses, eye relief is important to consider. Eye relief is the distance your eyes are away from the eye piece and still allow you to see a focused image. Ideally, binoculars have at least 15mm eye relief between your glasses and the eye piece.

✓ **Tip:** If you are near or far sighted, it is possible to use binoculars without wearing your glasses. Binoculars already magnify the image, eliminating the need for glasses. However taking your glasses on and off in the field can be a hassle and can reduce the time to get a clear view of a moving subject, such as a bird.

✓ **Tip:** If you have astigmatism you must wear your glasses as binoculars don't adjust your vision.

With this information in mind, it is important to think about what is your primary use of the binoculars, such as bird watching, hunting, astronomy or watching yacht racing at a long distance. My favourite is a pair of compact binoculars, they are light, easy to hold and to travel with. I use a compact 10x42 binoculars which are great for bird watching and anything that simply needs a closer look.



Stephani Macarthur  
Conservation Partnerships Officer  
Ipswich City Council

# COMMUNITY DRIVEN LANDSCAPE MANAGEMENT IN *Cedar Creek Corridor*

**C**edar Creek corridor is an integral part of the broader Pine River Catchment which supports rich biodiversity and significant environmental values for the Moreton Bay Region.

There are two regional environmental groups that work on long-term projects in this catchment – MEPA (Mount Nebo and Mount Glorious Environmental Protection Association) and PRCA (Pine Rivers Catchment Association).

In 2006, MEPA began working with Moreton Bay Regional Council, Queensland Parks and Wildlife Service and key infrastructure managers to implement a strategic weed control program along 50km of road and powerline corridors. Now, 14 years later, this partnership continues to flourish and the results have been outstanding.

This program has encouraged private landholders, including Land for Wildlife members, in the headwaters of the South Pine River and Cedar Creek to control and monitor problem weeds before the infestations become unmanageable. Significant outbreaks of Madeira Vine, Cat's Claw Creeper, Morning Glory, Singapore Daisy, Signal Grass, Molasses Grass, Green Guinea Grass, Whiskey Grass

and Mother-of-Millions – to name but a few – have been almost eradicated.

While we work at the top of the catchment, it is nice to think of all those working further along Cedar Creek. Together, we can make a difference.

PRCA have also been working on a project to manage Cat's Claw Creeper in the central and southern extent of the Cedar Creek corridor since 2012. The project aims to assist landholders along Cedar Creek with removal of Cat's Claw through the provision of advice, information, field guides, field equipment and support.

This engagement with landholders, including Land for Wildlife members, is increasing much needed awareness amongst the rural and semi-rural community on the need to manage and reduce the damaging impacts of invasive weeds such as Cat's Claw Creeper on local waterways and habitat. The participation of the landholders on Cedar Creek has been tremendous.

Over the past ten years several Land for Wildlife members have controlled Cat's Claw Creeper with the assistance of Council's Voluntary Conservation Programs annual grants. Works have included the staged removal of Cat's Claw Creeper and other exotic vines and

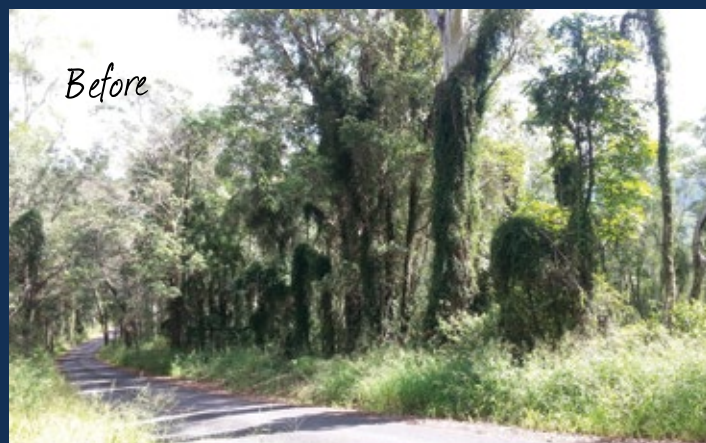
The stunning Cedar Creek at Douglas Franklin Reserve, Closeburn.

climbers, which were causing isolated canopy collapse along sections of Cedar Creek. Works also included the restoration of the endangered riparian ecosystems along Cedar Creek and targeted plantings of rare and threatened species such as the Richmond Birdwing Vine.

Cedar Creek catchment is a significant ecological corridor for fauna movement the Moreton Bay Region with a high biodiversity of both flora and fauna. The ongoing commitment from local environmental groups, catchment associations and landholders is integral to its improvement and conservation.

This ongoing project will reduce the Cat's Claw Creeper seed bank in this catchment significantly and give immediate benefit to native riparian vegetation allowing it to grow unhindered, increase canopy cover and allow natural regeneration. The long term environmental, social and economic values in these works are a considerable success for the catchment and the region.

**Dominic Hyde, MEPA Secretary and Sonya Schmidtchen, PRCA Catchment Coordinator**



*Before*



*After*

Cat's Claw Creeper control within the Cedar Creek corridor.

# LANDHOLDER WORKSHOPS

## Somerset to City

Over the past year, Somerset Land for Wildlife members have mingled with some of the nation's best natural history centres and staff at the Queensland Museum and Queensland Herbarium.

Through a series of workshops, Somerset landholders connected with experts to improve their skills and knowledge of the plants and wildlife of the Somerset region. These workshops also help to reduce rural isolation and connect people from different worlds. Geographically, Somerset Regional Council is one of the largest Local Governments involved in the SEQ Land for Wildlife program. Land for Wildlife properties are dotted throughout Somerset and include some of the most remote properties in the program. Understandably, workshops are important points of contact for rural landholders active in nature conservation.

Interaction with the Museum and Herbarium does not have to stop when the workshops are over. Landholders can always send in plant and animal specimens for identification or to add to the collections. Landholders can also make appointments to visit the Museum or Herbarium if they wish to inspect part of the collection for research or other reasons.

A back-of-house fauna workshop at the Museum is, unfortunately, one of the few times that we can see animals (taxidermied) such as Red Goshawk, Spotted-tailed Quoll and Coxen's Fig Parrot. These animals once occurred in SEQ but are now very rare or locally extinct. The differences between similar looking animals such as the Coxen's Fig Parrot and Little Lorikeet were clear to see when specimens were in the hand.

The Museum offers an insight into the not-so-distant times of early European explorers who wandered this country collecting (think shooting and trapping) wildlife. Their collection techniques were crude and cruel by modern standards but provide us with unique records of animals, some of which are now extinct.

For plant lovers, the Herbarium collection is fascinating. Not only does it show the diversity of plant and fungal specimens, but it also demonstrates how plant and fungal material needs to be suitably stored for posterity.

These workshops focussed on the threatened plants and animals of Somerset and encouraged landholders to report any sightings of threatened species. This theme will be explored further at a workshop in November when Somerset Land for Wildlife members will be able to see threatened (captive-bred) wildlife up close and personal.

All attendees left these workshops with a relevant resource, whether it be a flat pack nest box or a field guide to plants or wildlife.

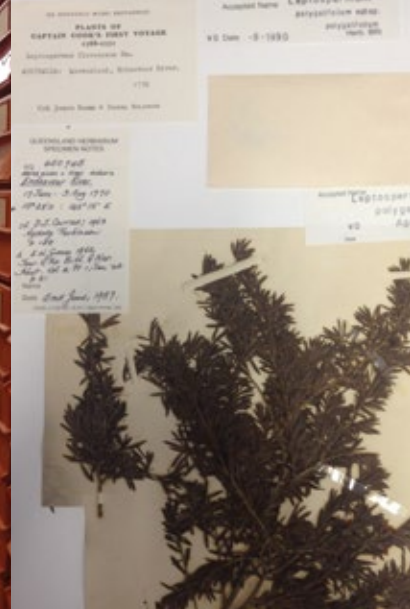
Thanks to Dr Gordon Guymer, Director of Queensland Herbarium; Heather Janetzki, Collection Manager of Mammals and Birds at the Queensland Museum and Dr Ian Gynther, Threatened Species Unit, Dept of Environment and Science for delivering these workshops.

**Darren McPherson**  
Land for Wildlife Officer  
Somerset Regional Council

Photos by Deborah Metters



Queensland Herbarium



Queensland Museum



Land for Wildlife South East Queensland proudly delivered by:



Dedicated to a better Brisbane

