

# LAND FOR WILDLIFE

SOUTH EAST QUEENSLAND NOVEMBER 2025 VOL.19 NO.4

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## Land for wildlife **SOUTH EAST**

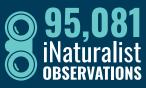














www.inaturalist.org/projects/lfwseq

To join contact your local LfW Officer

Land for Wildlife South East Queensland acknowledges this Country and its Traditional Custodians. We acknowledge and respect the spiritual relationship between Traditional Custodians and this Country, which has inspired language, songs, dances, lore and dreaming stories over many thousands of years. We pay our respects to the Elders, those who have passed into the dreaming; those here today; those of tomorrow. May we continue to peacefully walk together in gratitude, respect and kindness in caring for this Country and one another.

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Front Cover: Shining Bronze-cuckoos are often seen feeding on caterpillars, photo by Deborah Metters.

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#### **EDITORIAL**

## Welcome to the november 2025 Issue

I recently heard someone say that Land for Wildlife is active hope. A term coined by environmental and peace activist, Joanna Macy.

"Active Hope is not wishful thinking. Active Hope is waking up to the beauty of life on whose behalf we can act. Active Hope is the readiness to discover the strengths in ourselves and in others. We belong to this world and we are here to play our part." Joanna Macy

I couldn't agree more. These sentiments were also echoed in the last words of Jane Goodall.

"Every single day you live, you make a difference in the world. And you get to choose the difference that you make. Think about the actions you take each day. Because, multiplied a million, a billion times, even small actions will make for great change."

Jane Goodall

Both Joanna Macy and Jane Goodall passed away recently, both in their nineties, both beacons for a compassionate and eco-centric future. Both were role models for me in my life and career and for millions of others around the world.

I reflect on these quotes and the work of the eco-heroes on whose shoulders we stand. Collectively, as Land for Wildlife members in SEQ, our impacts are making a difference. We are bringing back threatened species. We are restoring degraded lands. We are reducing sediment loads into creeks and Moreton Bay. These are all positive actions that are making a difference. Property by property, bit by bit.

This edition showcases some of these efforts such as Ian and Dianne's journey of planting over 7000 trees in ten years to turn a degraded post-agricultural patch of land into a thriving rainforest. And the significant erosion control projects underway on Marina's property to reduce sediment from entering Moreton Bay. Plus, everyday actions that we can all do such as attaching UV coated, anti-collision stickers on windows to prevent birds from flying into them.

I hope you enjoy this edition and can feel the active hope generated by being a part of Land for Wildlife, and part of a network of thousands of landholders doing good for this world.

Thank you to all contributors and as always, I welcome any feedback or contributions.

**Deborah Metters Land for Wildlife Regional Coordinator** 

We welcome all contributions. Please send them to:

The Editor

✓ deborah@seglfw.com.au





#### Climate & Weather REGIONAL OUTLOOK



#### **Daytime and Night-time Temperatures.**

Above average daytime and night-time temperatures are very likely.



Rainfall. Above average rainfall is likely.



**Streamflow.** Median streamflows are forecast.

#### **Climate Influences**

- El Niño-Southern Oscillation (ENSO) is neutral. La Niña levels may be reached during spring but are forecast to return to neutral in summer.
- The Indian Ocean Dipole (IOD) is negative, which is typically associated with above-average rainfall in SE Australia.
- Australia's sea surface temperatures have been the warmest on record for the past three months and are forecast to stay warmer than average. Warmer oceans can increase moisture and energy, and the severity of storms.

#### Sources

www.bom.gov.au/climate/outlooks/ and www.bom.gov.au/water/ssf/

#### Weeds to Watch

Nov - Jan 2026

Some of SEQ's worst invasive climbing vines are flowering now. Patience, persistence and a strategic approach to control is essential.

**Dutchman's Pipe** produces a distinctive large tubular flower. Control it before it sets

Moth Vine produces masses of white flowers in spring. Leaves are pale underneath.

Madeira Vine produces masses of white drooping flower spikes. Leaves are fleshy to touch. Brownish warty tubers along the stems.

All these weeds can be manually controlled when small. Large infestations need to be controlled using foliar spray or stem-scrape with herbicide over several years.

Top down, photos by Greg Tasney, g\_crosby, Martin Bennett (mb\_aus), iNaturalist.









## THE Black Plum Hunt

cross SEQ, Land for Wildlife Teams are working with the Queensland Threatened Plants Network and the Department of Environment, Tourism, Science and Innovation Threatened Species Unit to support the recovery of the endangered Black Plum (*Planchonella eerwah*).

The Black Plum was presumed extinct for a large part of last century until its rediscovery in 1980 at Ivory's Knob, southwest of Ipswich. Existing records show that there are only 160-180 known individual trees left in its natural range from the Sunshine Coast, Gold Coast, Logan, Ipswich and Scenic Rim regions.

A number of surveys have recently been undertaken on Land for Wildlife properties across SEQ aimed at identifying new populations of the species and to survey the health of existing known trees and their habitats. There is future scope for genetic analysis of the populations.

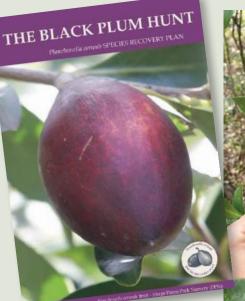
Much to the delight of landholders and Land for Wildlife Officers, a number of Black Plums have been found on the Sunshine Coast, with several mature specimens recorded in a previously unknown location!

To learn more about this species and the project, there is a great factsheet that can be downloaded from the LfWSEQ website, Ifwseq.com.au/category/plants. If you think you may have *Planchonella eerwah* on your property, please contact your Land for Wildlife Officer.

Stephanie Keys Land for Wildlife Officer Sunshine Coast Council









#### REPLACING EXOTIC TREES WITH

# Native Figs

xotic trees like Camphor Laurel and Chinese Elm dominate stretches of our waterways and can be costly to remove, both financially and environmentally. A long term, low impact and cost-effective alternative is to use native figs that strangle their host as they reach maturity.

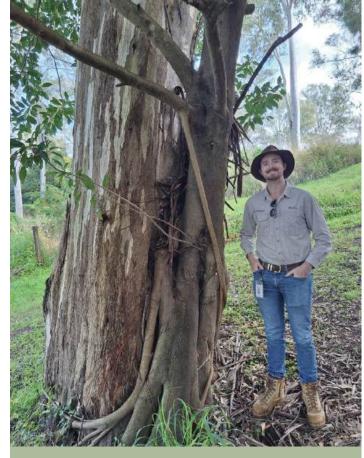
Not all figs have strangler tendencies. Suitable species from South East Queensland include the Strangler Fig (*Ficus watkinsiana*), Moreton Bay Fig (*F. macrophylla*), Small-leaved Fig (*F. obliqua*), Port Jackson Fig (*F. rubiginosa*), Deciduous Fig (*F. superba var. henneana*) and White Fig (*F. virens var. sublanceolata*).

The fruit of strangler figs are consumed by birds, possums, bats and rats, and the seeds may be deposited in the forks of trees. Accumulated biomass and a damp microclimate help germinate the seed. The seedling starts off as an epiphyte growing slowly until the roots reach the ground. As more of the roots reach the ground, they eventually enclose around the tree until all that is left

is the fig and a decaying host tree. This process can take decades and in some cases centuries however, the plan is to speed up this process.

Land for Wildlife Officers from the City of Moreton Bay have have pioneered an innovative technique that skips the slow epiphytic stage by encouraging long healthy root growth in PVC pipes. This quickly allows the roots to reach the ground and aids in the attachment of the seedling fig to the trunk of the host tree. This method allows for the grower to continue watering and providing nutrients to the fig.

The roots of figs can get very long when grown in PVC pipes.



Josh is standing next to a native fig that is starting to strangle a mature Blue Gum tree. Over many decades, the fig tree may totally strangle and replace the Blue Gum.

It is recommended that a slit is put into the back of the PVC pipe to allow expansion and removal of the pipe once the strangler fig roots are established.

This technique has shown signs of success with evidence of roots beginning to attach to the host. The hope is that this technique will see an acceleration in the process and maybe the planter will reap the rewards.

Article by Josh Pethtel Land for Wildlife Officer Ipswich City Council

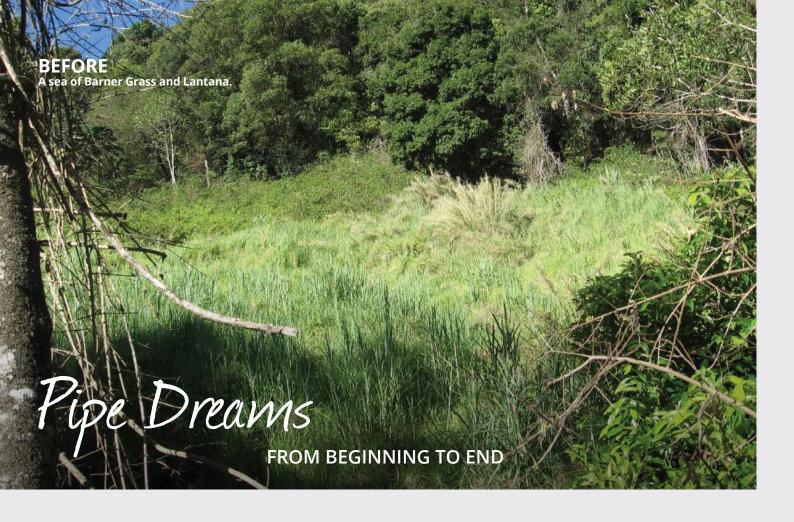
Photos by Stefan Hattingh, City of Moreton Bay

This Moreton Bay Fig started its life in a PVC pipe attached to this Chinese Elm tree. Over time, its roots have reached the ground and the PVC pipe was removed and replaced with a couple of wire supports. Stefan grew this fig from a 10cm seedling to this size in just 14 months.









n 2014 we received a small grant to start a major project – to clear and revegetate acres of Barner or Elephant Grass (*Pennisetum purpureum*) and Lantana on steep, rugged terrain. The area was highly degraded due to historic agricultural pursuits and showed signs of landslip and slumping.

Due to the size of the area and degree of difficulty we realised the project would take about four or five years. It would have been insanity and environmentally unsound to try and complete the project in one or two years.

It was not long before we realised that ten litre buckets of water would be insufficient to plant thousands of trees.

Our neighbour kindly allowed us to extract water from his spring fed dam. Our love affair with polypipe began and our dreams of rehabilitating such a degraded area could be fulfilled.

We bought two rolls of 1.1/2 inch (38mm) pipe and one roll of 2 inch (50mm) pipe. In total, that was 400 metres of polypipe plus numerous connectors, t-junctions, a fire fighter pump as well as over 150 metres of 18mm hose.

As a result of laying the pipe and hoses we were able to revegetate acres of steep, rugged and gully strewn land. We were also able to establish our nursery to feed the insatiable hunger of the revegetation beast.

By 2025, our dream of clearing and revegetating our project area had been completed with some 7000 trees planted. The project saw a degraded weed choked area turned into a new forest with canopy cover and little weed. In addition, the new forest spawned natural regeneration amongst the self-generated thick mulch. Wildlife returned to complete the cycle.

After eleven years it was now time to reassess our priorities. The days of large plantings were completed five years ago. The pipe and hose infrastructure was no longer needed.

The time had come to pull up our pipes and hoses and move on. Easier said than done! Sections of pipe had been covered in soil and tree roots had grown over the top of the pipe. Some hose had been buried by a landslip. We then had to drag the recovered pipe back onto our front paddock to be rolled up ready for collection and transfer to its new home. This is no mean feat.

But, and a very big but, in the process of removing the pipe, hose and pump we felt a great deal of nostalgia and sadness. This was tempered with the joy and delight of seeing what the infrastructure had achieved – an end to a successful pipe dream.

Removing the infrastructure brought back memories. How did we ever do this? How did we get the pipe up there? Unrolling 150m of pipe is confronting on flat ground – let alone negotiating steep slopes and gullies. We must have been younger and stronger.

Remembering how we used the pipes and hoses to water planted tubestock, we also remember the magnificent bush regeneration contractors who cleared the Barner Grass and Lantana. We have very fond memories of Jolyon Froude and the late and greatly missed Jon Edgar. In addition, we remember the huge piles of pulled Lantana and Barner Grass which have since disintegrated. Not so friendly memories are the countless hours weeding emergent weeds and reshooting Lantana and Barner Grass in the heat and humidity. Without our watering system the project would never have been completed.

The pipe dream has ended but the memories remain, and the degraded landscape is now a young forest with little or no weeds. Natural regeneration has replaced revegetation.

And the hundreds of metres of pipe, connectors and pump? They have gone to a good home – a landholder at the beginning of his own revegetation journey and his own pipe dreams. And how appropriate is it that the landholder was one of the contractors that helped us clear the project area.

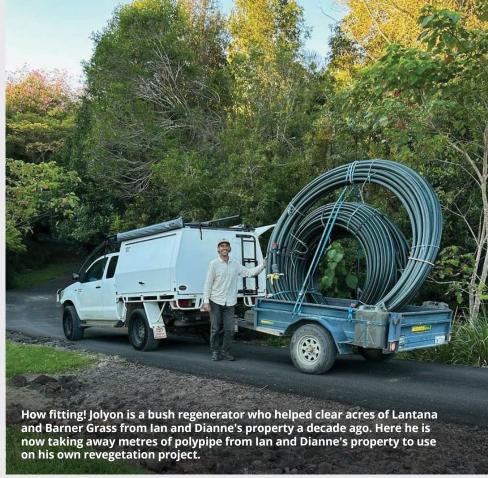
Article by Ian Webster and Dianne Lanskey Land for Wildlife members Flaxton, Sunshine Coast

















Photos of wild dogs/Dingoes recorded on properties in the Scenic Rim over the past three years.

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ver the past three years Scenic Rim Land for Wildlife property owners who do feral animal control on their land have been collecting samples for DNA analysis regarding wild dog/Dingo data. 98 samples have been sent away for analysis to NSW Department of Primary Industries contributing to the National Wild Dog Action Plan program.

We will continue to collect samples to gain a bigger picture, but the results so far are interesting. This is not an article about the pros or cons of wild dog/Dingo control, but a presentation of local and recent scientific information.

Some interesting data from the 67 samples that provided dingo percentages:

- A high number of samples (54) contained >50% Dingo genes.
- 22 samples had a Dingo percentage of >70% with colourings including: yellow/ginger/gold; black and tan; black; and black, tan and white.
- There were no pure domestic dogs.
- There was one pure Dingo (98%) with yellow/gold colours and a white tip on tail and legs.
- The lowest Dingo percentage was 37%, an old female with white and brown colourings.
- The sample that we all said 'looked very Dingo-like' was an adult male 70% Dingo.
- A very big adult male with black with white colourings was 67% Dingo.
- Four samples were sub-adults 80% Dingo.

There are 13 subpopulations of Dingoes across Australia. The Scenic Rim samples fell into three subpopulations:

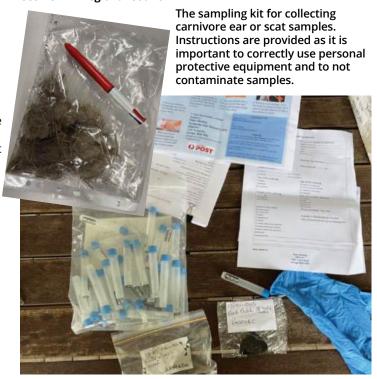
- 1 belonged to the broad eastern Australian subpopulation.
- 60 belonged to the north-eastern NSW subpopulation.
- 37 belonged to south-eastern Queensland subpopulation.

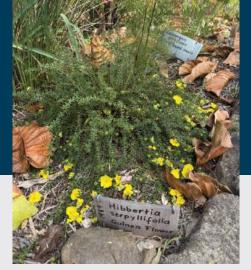
Scenic Rim Land for Wildlife members have also been collecting carnivore scat samples for analysis by Scatsabout to confirm what the carnivore had been eating. So far, 18 samples from wild dogs/ Dingoes have been analysed. The most common prey detected

was Northern Brown Bandicoot (5 samples) with other species recorded including: Long-nosed Bandicoot, introduced Black Rat and House Mouse, cow, quail, Swamp Wallaby, insects, birds and Eastern Grey Kangaroo.

Scenic Rim Regional Council will continue to support Land for Wildlife members to collect ear and scat samples for analysis. Please contact Catherine Madden at Scenic Rim Regional Council if you wish to be involved.

#### Article by Catherine Madden Land for Wildlife Officer Scenic Rim Regional Council

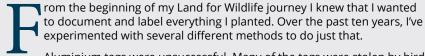








Here is an answer to Peter Biddle's quest to find plant tagging solutions for his property as discussed in the August 2025 edition.



Aluminium tags were unsuccessful. Many of the tags were stolen by birds (they are shiny, after all) and I often found them lying in the garden a long way from the plant. Branches with tags sometimes broke off and the tags disappeared. A tag nailed to a tree disappears when the tree grows up. When using wire, the wire and even the tag itself can get embedded in the tree as it grows. And attaching tags of any kind is unworkable for things like small shrubs, groundcovers, grasses and other small plants.

Plastic tags were eliminated very quickly as anything made from plastic deteriorates rapidly in the open.

The next idea was to use ceramic tiles left over from the house renovations.

I used paint pens to write on the tiles. They had to be baked in the oven for 20 mins to set the paint. I would then prop up the tile against a small rock near the plant. The paint was very durable, and all was well for a while. Then I discovered that the wildlife would scratch around the tiles, and they ended up buried under leaf litter. Because I couldn't see them anymore, I would accidentally step on them and break them and that was the end of that method.

The final solution, and the one I have stuck with ever since, was to use vinyl plank offcuts.

Again, the first ones were left over from the house renovations. When those ran out, we discovered you can find offcuts and leftovers in the skips behind some carpet shops, or you can ask nicely in the shop, and they are often happy to give away some old display stock or similar.

I use oil-based paint pens to write on the vinyl, and I've found that the Sharpie brand lasts the longest. In most cases black is the best colour, but if your vinyl is very dark you can also use white paint pens. Cheap, thin vinyl isn't worth using - it tends to buckle, becomes brittle, and the paint fades quickly. It's best to use good quality thick vinyl which I cut to size with a large guillotine.

The finished label is then given thick wire legs. These are firmly attached to the sign and are pushed into the ground. The length can be varied depending on the vegetation around the plant. Not even bush turkeys can move them around!

Placing the labels so they face south helps to prevent fading. After a few years some of them need to be touched up. Some stay fresh for many years, and I suspect it's to do with the type of vinyl being used.

If the plant dies and is not being replaced with the same species, the writing can be removed with acetone and the sign reused for another plant.

This method works for all plants, from grasses to large trees, and the size of the label can be varied to suit the plant.

> Each plant has a unique ID number which is recorded in a database and written on its label. I record where I bought it, when I planted it, and other relevant information.

Of course, there are better looking and more professional ways to label plants, but this low-cost method continues to work well for me.

And finally, my visitors can take self-guided tours through my garden without ever needing to ask, "What's the name of this plant?"

Article and photos by Maria Rosenfelder Land for Wildlife member **Palmwoods, Sunshine Coast** 









## PREVENTING BIRD STRIKE Bird us. Window

s if life wasn't already hard enough for birds - food isn't always easy to come by, cuckoos come and expect you to raise their babies, other creatures are keen to eat you and then humans come along and build their houses right in your flight paths! What a literal pain in the neck!

Bird strike is a common occurrence throughout the world and of course, more prevalent where bird populations are high and windows are plentiful. In North America, windows claim an estimated 1 billion birds per year, largely due to high rise buildings that have been built in migratory pathways.

Bird strikes occur where windows reflect the sky and surrounding vegetation, and also where it is possible to see straight through to vegetation on the other side. Birds do not understand glass, plus they fly fast and are very fragile. This can only lead to unfortunate outcomes unless you can help them avoid a collision.

#### **Assess the Risk**

You may already be aware of problematic windows but if not, take a walk around your house, both inside and outside, and look at your windows (or other glass/ reflective structures such as pool fences) with a bird's eye view in mind.

Assess the size of your windows and their reflective potential for both summer and winter months. Can you see straight through the house to the sky or vegetation on the other side? Consider likely flight paths and whether there are attractive items that will encourage birds to come near the house such as baths, feeders, fruiting trees or roosting sites.

Once you have determined which windows pose the greatest threat, you need to make your windows visible to birds. You do this by breaking up the reflection so birds can be more aware of the presence of the solid wall of glass. It may be necessary to use a combination of modifications. Here are a few suggestions.

#### **Non-Permanent Solutions**

Mark the glass. You can add your own marks to the inside or outside of your windows using various products and techniques. The main rules to follow are:

- White gives the highest contrast and is therefore the easiest colour for birds to see
- Apply marks across the entire surface of the window with the spaces between the marks too narrow for birds to fly through, i.e. 10cm gaps or less.
- Birds don't like to fly between vertical spaces narrower than their wingspan, for this reason, vertical lines are more effective than horizontal lines.

#### Here are a few DIY ideas:

Use an oil-based white paint pen that is designed to be used on glass (see your local art and craft store or Officeworks). Use a ruler to draw vertical lines 5-10cm apart. Oil based paint is long lasting and can be scraped off when necessary.

- Apply stickers / decals or film directly to the windows (there are plenty of options available online). White automotive tape is a cheap, long-lasting option that can be scraped off when necessary.
- Regularly add your own patterns with yellow highlighter pen, or paint the entire pane with tempura paint or whitewash (a good solution for garages or sheds that don't really need windows for views). These will need to be reapplied as they will fade and may wash off with rain.

#### **Semi-permanent Fixtures**

Create a curtain of dangling things such as ropes, wind chimes, CDs or hanging baskets. Soft materials such as rope or cord can be hung at 10cm intervals and attached to the top edge of the window frame to dangle immediately in front of the glass. Hard objects should be hung away from windows to prevent them from tapping on the glass when it is windy.

#### **Permanent Fixtures**

- Awnings, shutters, shade sails, external blinds, mosquito mesh against the glass or taut, fine mesh netting at least 10cm away from the window that birds can bounce off without harm.
- Replace regular glass with decorative glass with permanent patterns etched, sandblasted or fused onto the glass. Windows broken into smaller panels such as French-windows or leadlight windows also offer a safer solution.
- If you are building a new home, consider reducing the amount of glass used in the house and avoid unnecessary use of glass for things like pool fences or balconies. Also avoid horizontal cables on fences and balistrades, vertical cables are the safer option.
- Consider angling windows downward by 20 degrees to prevent reflection from occurring at all.



#### **Inside Tips**

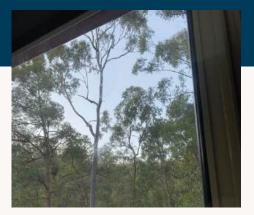
Prevent visual pathways. In areas of your house where you can see straight through multiple windows to the sky and/ or greenery on the other side, create some sort of barrier between. Close internal doors or use curtains or blinds and be conscious of keeping some of them closed or partially closed on at least one side of your house during the day.

Prevent night-time collisions. Turn lights off at night when you're not using them or close the blinds or curtains, as some nocturnal birds can get confused by or attracted to the light.

#### How to Assist an Injured Bird

- Gently examine the bird. If there are obvious injuries such as a broken wing, unusual movement, discharge from beak or eyes - immediately take it to your local vet or call Wildcare on 5527 2444 (available 24/7) to find a local wildlife carer.
- If the bird looks physically intact, see if it is able to perch on a branch, and watch it to see if it recovers enough to fly away. If it is too dazed or has been knocked unconscious, carefully place it in a well-ventilated box with a lid and place it in a warm quiet place that is safe from pets or other predators.
- Check on it regularly but don't touch it or try to feed it.
- If the bird seems to recover, take the box back outside near where you found the bird and open the box, hopefully it will fly away. If not, continue to try every 30 minutes. If after a couple of hours the bird has not recovered, seek vet/carer assistance.

**Article by Sue Nolan** Land for Wildlife Officer **Brisbane City Council** 









Land for Wildlife member, Pippa Welden (aged 10), has come up with a creative way to use window crayons to prevent bird strike.

y daughter, Christine, came up with the suggestion of applying stripes to window panes of her home to prevent birds from striking them. She tried it first on her sliding doors and it seems to have worked quite well.

Information online stated that it is better to have vertical stripes rather than horizontal ones. I think it's to do with the way birds view the obstruction. They think they can fly between horizontal ones but not vertical ones.

After seeing the success at my daughter's home, I did my own windows. It was the western ones that were the main problem. Doves and cuckoos were the main casualties including Brown cuckoo-Doves, Pacific Emerald Doves, Rose-crowned Fruitdoves and Fan-tailed Cuckoos. Most died on impact but sometimes they would stun themselves and eventually fly off. We also nursed a couple until they recovered.

The northern and southern windows don't seem to be a problem, and we have only had two incidents on the eastern windows, both Channel-billed Cuckoos. One flew straight through a glass window and landed on the floor in our bedroom. The window was on the second floor and directly opposite a very large fig tree about 30 metres away where we often get a flock of these cuckoos in the summer when the fig tree is in fruit. After giving us the fright of our lives, it eventually dusted itself off and flew back out the large hole it had created (and left for us to repair!). The second one was about a year later and flew into a window on the ground floor. Unfortunately, it died on impact. I happened to be gardening about a metre from where it hit, poor thing, it gave me a big surprise.

We applied the stripes with a grout pen. I have a nice long piece of light stainless steel which I used as a ruler. It's actually quite a quick process. As a housekeeping tip I would wash the windows first because you don't want to do a repeat job with the stripes - or delay it as long as possible! The grout will come off when you wash the window. You can of course wash the outside of the window with impunity. You can buy grout pens in any paint or hardware store, and there are a variety of brands, all of which will do the job.

Prior to painting on the stripes, we we would average about five bird strikes a year with 3-4 fatalities. In the time since we applied the stripes (about a year ago), we have only lost one Rose-crowned Fruit-dove. However, this may have come to grief on a nearby window that we hadn't painted with stripes because (a) it usually has a blind down behind it and (b) there are some bushes/golden canes quite close which I thought would be enough protection. So, it looks like the striped windows have actually been 100% successful.

**Article and photos by Colleen Watts** Land for Wildlife member **Upper Brookfield, Brisbane** 



It would seem that these vertical stripes (applied with a grout pen) have been 100% successful in reducing bird strikes on Colleen's windows.





Cuckoos and doves seem to be more prone to striking windows than other groups of birds. Shown here is a Shining Bronze-cuckoo and Rose-crowned Fruit-dove that have sadly died due to window strike. Photos by Craig Welden and Colleen Watts.







## Novel Technologies

#### LiDAR mapping by Airborn Insights shows the peak flow estimates from the catchments of the two head cut sites.

#### TURNING HEAD CUT EROSION INTO A SOURCE OF HYDRATION AND RESTORATION

iterature on contour swales, leaky weirs and check dams is easy to come by, but the term "Zuni bowl" hasn't entered the lexicon in the topic of erosion management. A Land for Wildlife member in Ipswich recently embarked on trialling novel strategies to rectify a series of active erosion gullies that formed on her property after consecutive wet years.

Marina's property was identified as a prime candidate for a Healthy Land & Water initiative through the Healthy Catchments Program. This Program aims to deliver stream bank and gully stabilisation projects in areas identified as a source of sediment load impacting the Ramsar-listed Moreton Bay. Marina's property is within the Lower Bremer River Catchment, which is a significant source of sediment for Moreton Bay.

The project included implementing small-scale gully repairs, combined with revegetating the flats with pre-clearing remnant vegetation of Brigalow and semi-evergreen vine thicket. Marina's existing commitment to conservation made this project possible as the overall outcome could be leveraged by work that had already been done on the property.

Airborn Insight was engaged by Healthy Land & Water to provide recommendations to rectify a series of head cut erosion issues along a gully that connects revegetation patches and the remnant vine thicket. Specialising in aerial data collection to devise engineering and environmental solutions, Airborn Insight uses LiDAR (Light Detection and Ranging) imagery to produce accurate contour maps, backed up by high-definition drone imagery to identify the catchment area contributing to the project sites.

Based on these assessments, two control measures were recommended by the consultant:

Head Cut 1: Installation of a hybrid Zuni bowl to stabilise the head cut and safely channel the flow to the gully floor.

Head Cut 2: concrete mat chute to reinforce the gully head cut and direct the flow to the gully floor.

Originating from the Zuni people of New Mexico, a Zuni bowl is a method of rectifying small head cut erosion (typically <1m height) by creating two or more drops (step-falls), which reduce the single drop of the original head cut. This method was considered suitable for Marina's property as the alternative options required creekbank battering five metres back through to the existing

The Zuni bowl was created by firstly reshaping the head cut to create a uniform surface on which to install rocks and timber. The head wall was cut to follow the existing shape of the head cut with 10% lean so that the materials settled back against the earthen wall. A stepped timber chute was installed with a 0.4 m fall to dissipate the energy of water.

Concrete matting, geotextile fabric and non-dispersive clay was installed on the second head cut erosion downstream from the Zuni bowl to armour the gully floor. Grass seeds were sown directly onto the works, which will eventually grow through the matting and stabilise the slope.

It's an important reminder that earthworks and engineering can play a part in land restoration projects. Small to medium scale earthworks and engineering solutions such as Zuni bowl and concrete matting may be good alternative solutions when other measures including bank battering, revegetation and coir log installation are not enough to address the scale of the problem.

Article by Ko Oishi **Land for Wildlife Officer Ipswich City Council** 

HEAD CUT 1: The headcut was reshaped and the suface was lined with geotextile fabric prior to the installation of rocks and







Rows of Vetiver Grass were planted to slow down overland flow and dissipate the erosive force of fast-flowing water.



A stepped hardwood timber chute was installed with a 0.4m fall to dissipate the energy of water. Medium-sized rocks were interlocked and mortared with quick set cement to provide stability and prevent movement. This is a Zuni Bowl.



Non-dispersive clay was used to compact in the fill. Grass seeds were sown into the works and will eventually grow through the matting and stabilise the slope.



HEAD CUT 2: Preparing the ground for concrete matting (above).

The head cut was reshaped and lined with geotextile fabric (below)







A trench was dug for concret matting (above). Rocks were installed in the trench. (left)



# Beyond Bunya Dieback

In writing this, I acknowledge the Traditional Custodians of Bunya Country, the Elders past present and emerging and their biocultural connection with this country. This relationship has prevailed for tens of thousands of years, through ice ages, sea levels rises and invasion, this connection is eternal, always was and always will be. Bunya is an English language interpretation of Bonyi/ Bonyee/Bonye, the name given by the Traditional Custodians of Bunya Country - the Jinibara, Kabi Kabi, Gubbi Gubbi and Wakka Wakka Nations.

he Bunya (*Araucaria bidwillii*) is one of seven surviving species from the family Araucariaceae in Australia. This family is made up of three genera: 1) Araucaria (e.g. Bunya, Hoop and Norfolk Pines), 2) Agathis (e.g. Kauris) and 3) Wollemia (the Wollemi Pine). These trees have existed as an evolutionary lineage for 150-200 million years. The Bunya Pine is native to Queensland with two tiny populations in north Queensland just inland from Cairns and the larger population in SEQ. The SEQ population extends from Bunya Country on the Blackall and Conondale Ranges and their surrounding catchments in the east and then to the west on the Bunya Mountains - Bonye Biar. These are the only ecosystems on Earth where the Bunya occurs naturally. They are a family of trees that were once widespread across Earth. We are all custodians of the precious remnants that remain.

#### The Depressingly Dire Disease

Dieback is a global problem and is widespread in Australia. It is a blanket term given to the mass death of trees and other vegetation from climate change, fire management change, ecological disruption and disease pathogens. Susceptible plants can be native e.g. Bunya or exotic e.g. Avocado. The cause of pathogen-based dieback is generally exotic Phytophthora species, such as P. cinnamomi and P. multivora. The condition referred to as 'dieback' is generally ascribed to the arrival/importation of an exotic species

Drone image of Bunya dieback by Kim Herringe.

of Phytophthora infecting and causing damage to plants roots. However, it appears to be more complex than this, in that there are many contributing factors that enable the arrival and establishment of Phytophthora in an area and then also add additional stresses that can lead to the death of trees.

Phytophthora is a genus of oomycetes (water moulds) that are plant pathogens. They live on and in a wide range of plant species and many are relatively host specific (i.e. we only notice them on the plants they're damaging). Species that you may be familiar with include Phytophthora infestans - Irish Potato Famine, Phytophthora agathidicida - Kauri Dieback, Phytophthora cinnamomi - Dieback affecting many natives and agricultural plants such as Avocado, and last but not least Phytophthora multivora - another dieback species found in association with Eucalypts in WA, Wollemi Pine in the Blue Mountains and Bunya (at the Bunya Mountains).

The word Phytophthora is derived from Greek 'phyton' (plant) and the 'phthora' (destroyer), so it literally means 'plant destroyer'. They enter the living tissue of the plants, feed on it and kill infected areas of the plant, generally the roots, and as a result the whole plant weakens and dies.

Research undertaken at the Bunya Mountains National Park suggests that the main species of Phytophthora thought to be responsible for the Bunya dieback

is Phytophthora multivora. It appears that Phytophthora multivora was introduced into the area by movement of soil on shoes, or on vehicles or by feral pigs. It's now over five years since we first saw the presence of Bunya Dieback on the Blackall Range. It's here and continues to spread.

#### **Multicausal Malady**

We know with ourselves, that if we are feeling run down or suffering from a poor diet, that we may be more susceptible and vulnerable to disease. It's the same with anything in nature, including trees. For example, on the Blackall Range, Bunya that are showing visible symptoms or have succumbed to dieback are limited to trees in rural or rural residential areas. Bunya have evolved as a forest organism, and although through the lens of western society we tend to view all organisms as separate entities, they are of course intrinsically, intertwined with the life they have evolved and co-operate with. In the case of Bunya, that is over 100s of millions of years.

Just like we are learning how important our gut health is to our overall health, soil health is crucial for plants. So, it is with Bunya that are surrounded by lawn or paddock, that they find themselves in a situation that they have not evolved in, their overall health is reduced, and because of this they are more vulnerable to disease. We know that lawns and paddocks reduce top-soil depth and soil biodiversity.

#### What Can We Do?

- 1. Hygiene. Reduce and prevent pathogen movement to new areas. This can be done by cleaning soil from your boots, tyres of vehicles and bicycles particularly when you've accessed an area known to have dieback trees. After cleaning and removing soil the next step you can take is to apply a disinfectant such as methylated spirits and water (70:30) or household bleach (5% active ingredient) and water (20:80). The most crucial step is soil removal, if you skip this step and just apply disinfectants, this will not prevent pathogen movement.
- **Access**. Even better than good hygiene, the best way to reduce soil-based pathogen movement, is to reduce or eliminate access to areas with dieback or areas that may be vulnerable to infection. In Aotearoa where they are dealing with a similar pathogen causing dieback in Kauri (Agathis australis), Māori communities instigate a temporary, long-term prohibition on access that is referred to as Rahui. This practice allows areas time to rest and prevent further spread. That said, access is often intrinsic to land management. Therefore, take steps to prevent mud from forming on tracks by avoiding access during wet weather or maintaining vegetation cover or using road base.

3. Soil Health. Soil health is rarely discussed with regards to dieback management in natural areas, but it is a primary method of control in horticulture and agriculture. Most if not all the hundreds of Bunyas that have died on the Blackall Range over the last five years are located on rural and rural residential properties. Soils in these areas are often low in humus and the soil life that can boost the immunity of trees and keep them healthy and resistant to disease.

Key steps here are again reduced vehicles and livestock access during wet weather to prevent soil compaction. Maintain high levels of organic matter in the soil e.g. leave the 'annoying prickly' mulch produced by Bunya under the trees. Mowing under trees removes this mulch and damages roots and increases the risk of infection. In rural residential areas to increase health of your trees you could use composted mulches and chicken manure, this is best practice management in avocado orchards to improve soil health.

#### **Beyond Bunya Dieback**

In 2024 Brush Turkey Enterprises in conjunction with Jinibara, Kabi Kabi and Wakka Wakka Peoples, bush regenerators, scientists and rangers, instigated two Beyond Bunya Dieback Symposiums. Drawing inspiration from our partners in Aotearoa (dieback problems are global), who refer to their project as Kauri Ora (Kauri Wellbeing) we decided to give our project a name that focuses not so much on the disease, but on how we look and move beyond this problem. Over 100 people attended the Symposiums with experts and knowledge holders sharing their stories from Australia, Aotearoa and across the world. These Symposiums, community engagement and advocacy to government are all aimed at addressing dieback and promoting healthy country, through sharing of knowledge, research and best practice land management. Only through working together can we all make the necessary changes to protect and regenerate Bunya Country.

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Examples of Bunya dieback on the Blackall Range. Sometimes younger paddock trees (left) do not appear to be as vulnerable to dieback as mature trees. This grove of Bunya (right) progressively died over a four-year period.





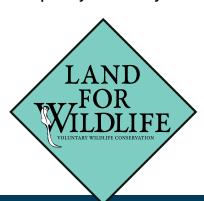
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#### THE VALUE OF

## A Pile of Logs

e joined the Land for Wildlife program in 2004 shortly after we bought out property in the Gold Coast Hinterland near Tamborine Mountain. There was an extended pile of dead trees, bulldozed down the slope to make room for the house pad by the former owner, and we were wondering what to do with it.

Our then Land for Wildlife Officer, Darryl Larsen, from the City of Gold Coast recommended to just let it be, as it would be valuable habitat for animals. The fallen timber was even marked as a feature in our Land for Wildlife agreement form. Twenty-one years later, as the timber slowly rots away, we couldn't agree more. There are many hollows for ground dwelling animals to hide and forage in. The rotting timber supports the growth of fungi and supplies food for beetle larvae and is habitat for spiders and lizards too.

We also planted some Richmond Birdwing Vines (*Pararistolochia praevenosa*) and have encouraged the vines to use some of the timber as a climbing support. The vines are now used by female Richmond Birdwing butterflies to lay their eggs on.

One particular large hollow log stands out, maybe because it's easier to attach the trail camera next to it, but it's always busy with wildlife. The Long-nosed Potoroo regularly shows interest in it, but also echidnas, Yellow-footed Antechinus, Long-nosed Bandicoots, rodents and very recently a Northern Brown Bandicoot and a Slender-tailed Dunnart. I only can assume that the bandicoots and the potoroos are attracted to the scent of fungi which might be growing inside. The echidnas might be looking for potential shelter.

With the help of wildlife cameras that record so many species, we have switched over from seeing the pile of logs as an eyesore to fully appreciating their value for wildlife. I'm sure that it will keep on giving for many more years to come.

Article by Ute Sohnrey Land for Wildlife member Clagiraba, Gold Coast





