LAND FOR WILDLIFFE SOUTH EAST QUEENSLAND MAY 2024 VOL. 18 NO. 2

INSIDE THIS ISSUE

- 2 Land for Wildlife Team
- 3 Editorial
- 3 Climate & Weather Outlook
- 3 Weeds to Watch
- 4-5 A weed? A native? Or both?
- 6-7 Beyond Your Ownership
- 8-9 Land for Wildlife from Beginning to Transition
- 10 Stephanie's Legacy
- 11 Listening for Koalas at Curramore Sanctuary
- 12 Conservation Legacy Options
- 13 Superstorm Recovery
- 14 Swales
- 15 Steep Inspiration
- 15 New Camera Angles
- 16 Stage Control of Slashed Pines

VOLUNTARY CONSERVATION COVENANT

Succession planning p.6-7

Swales p.14

LAND Your Officers FOR WILDLIFE

Brisbane City Council

Amanda Maggs	- C.	3178 6767
Andrew Wills	- C.	3407 0215
Cody Hochen	- C.	3178 1001
Fflur Collier	- C.	3178 2489
Susan Nolan	- C.	3403 6777
Tony Mlynarik	. C.	3178 4294

City of Gold Coast

Andrew Attewell	s 5582 83 📞	44
Melanie Mott	S582 89 📞	15
Saul Hondow	S582 80 📞	22
Todd Burrows	\$ 5582 91	28

Gympie Regional Council

Position Vacant L 1300 307 800

Ipswich City Council Ko Oishi **\$** 3810 6666

Lockyer Valley Regional Council Martin Bennett **\$** 5462 0310

Logan City Council

Craig Welden	5	3412 4	4975
Jennie Bacon	€.	3412	4522
Jason Creamer	5	3412	5034
Kimberley Howard	5	3412	4906
Nick Swanson	5	3412	5355
Peter Copping	S. 1	3412	5321

City of Moreton Bay

	-	
<u></u>	5433	2072
<u></u>	5433	2145
<u></u>	3094	3632
<u></u>	3480	6362
<u></u>	3883	5636
	00000	 5433 : 5433 : 5433 : 5433 : 5433 : 5433 : 3094 : 3480 : 3480 : 3883 :

Noosa Council

Dave Burrows **\$** 5329 6500 **Paul Sprecher \$** 5329 6500

Redland City Council

Maree Manby \$ 3820 1102 / 0438 776 535

Scenic Rim Regional Council Catherine Madden 🕓 0458 486 008

Somerset Regional Council Darren McPherson 📞 5424 4000

Sunshine Coast Council

Chad Oliver	C	0417 774 278
Kylie Gordon	6	0418 398 904
Michael Mills	6	0477 795 231
Michael Reif	ς.	0437 112 071
Nadia Joyce	¢,	0427 569 990
Nick Clancy	C.	0407 754 193
Rhonda Bordonaro	6	0459 737 626
Stephanie Keys	6	0408 665 826

Toowoomba Regional Council Daniel Tay Chean **4688 6514** Sandy Robertson 0415 277 145



Land for Wildlife South East Queensland Team December 2023











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.

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

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

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

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

ISSN 1835-3851 Print run - 4160 copies

Front Cover: A female Glossy Black Cockatoo, photo by Todd Burrows.

Front Cover Inset Photos: A newly made swale on an Ipswich Land for Wildlife property, photo supplied by the landholder; A Brisbane VCC sign, photo by Deborah Metters.

Editor: Deborah Metters

Proof-readers: Tony Mlynarik, Todd Burrows, Peter Copping and Michael Reif. Prepress: Kingfisher Creative Printer: Greenridge Press

www.lfwseg.com.au



.148

9,382 Tha Habitat **Ūnder**

NRA'

12.485

Facebook Followers

working towards

TIES

EDITORIAL

Welcome to the MAY 2024 ISSUE

A handful of times a year, I receive emails or calls from Land for Wildlife members who, unfortunately, have to move on from their much-loved property. This can be a very difficult time, especially when they have deeply bonded with their property and have invested decades of their time, money and effort into restoring it. They know the land and its cycles and, dare I say, moods. They see the small delights of a tree flowering or a new bird. Some may say that these are the land speaking to us and reminding us that a connection to country is a two-way conversation.

This edition looks at some of the options available to landholders who are at this crossroad. I wish there was an easy solution but there really isn't. It is good to be aware of what is available and hopeful that more options become a reality in the future.

I want to acknowledge the landholders who are in this situation and to offer this newsletter as an avenue for sharing reflections on your conservation journey with others. The insights that you have into your property, restoration and nature are incredibly valuable. They can be used by new Land for Wildlife members as short-cuts to understanding what works and what doesn't when restoring an ecosystem or managing a particular weed. A lot of knowledge can be site specific but the principles and techniques are transferrable.

I also want to acknowledge the incredible generosity of some Land for Wildlife members. There are members who have donated or bequeathed all or some of their property to the public conservation estate or to conservation organisations. There are others who give generously to conservation organisations and those who volunteer tirelessly for conservation outcomes well beyond their property's fenceline. Each Land for Wildlife member who has entered into a conservation covenant or Nature Refuge agreement are showing their commitment to a healthy environment for future generations of people and wildlife. The examples of generosity shown in this edition are just the tip of the iceberg if you consider that there are over 5,600 Land for Wildlife properties in SEQ.

On a different note, this edition looks at a bunch of native plants that can act like and look like weeds, and they are often removed because of this misunderstanding. If you don't know what a plant is, please take some photos and send them to your Land for Wildlife Officer or upload them to iNaturalist for identification. As more and more people use iNaturalist, the smarter the in-built Al identification process is, and the quicker your post is identified by an actual human. I am a big fan of iNaturalist as it is helping me to learn native plants, even if it is slowly.

As we move into autumn, we say goodbye to the summer migrants and emergents – the dollarbirds, koels, cicadas and others who may have annoyed or delighted us with their incessant sounds. We enjoy the last of the adult butterflies flying and the summer frogs calling. We look forward to the altitudinal migrants like Rose Robins returning to the lowlands. I am sure that there are botanical equivalents and I apologise to all plant folk out there.

Thankyou to all contributors and as always I welcome any feedback or content for future editions. Happy reading.

Deborah Metters Land for Wildlife Regional Coordinator

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



Climate & Weather REGIONAL OUTLOOK Apr-Jun 2024

Daytime and Night-time Temperatures.

Above average daytime and night-time temperatures are very likely with an increased chance of unusually warm autumn temperatures.

Rainfall. Below median rainfall is likely.

Streamflow. Near-median streamflows are likely.

Climate Influences

- El Niño is ending and conditions will return to ENSO-neutral in the Pacific Ocean.
- All forecasts include the influence of global warming.
- Australia's climate has increased by 1.5°C between 1910 and 2023 leading to an increased frequency of heatwaves.
- Global ocean temperatures were highest on record for all months between Apr 2023 and Feb 2024.

Sources

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

Weeds to Watch

Apr - Jun 2024

Molasses Grass flowers in autumn making it a good time to remove or spray prior to it seeding. Given its high combustibility, controlling this grass is a good way to reduce the fire hazard and fuel load. Control manually or with a foliar spray herbicide.

Easter Cassia and Arsenic

Bush are both in flower at this time of year. Their bright yellow flowers look similar as they are both species of Senna (*S. pendula* and *S. septemtrionalis*). The leaves are different shapes - Easter Cassia has smaller rounded leaflets while Arsenic Bush has large pointy leaflets.

When young, both species can be controlled manually using a lever-type hand tool (e.g. Tree Popper). When mature, herbicide will be required using the cut-stump or basal bark method. Please chat with your Land for Wildlife Officer if you need advice on weed control.

Photos by Martin Bennett and Greg Tasney.









ost of us are familiar with the saying, "A weed is a plant in the wrong place". There are many versions of this saying, but the main idea is that a weed is generally a plant that is fast-growing, often tending to spread or exclude other "more desirable" plants and definitely growing where we don't want it to.

Since Europeans came to this country there has been an ever-growing list of "weeds", but that is not the focus of this article. If we look at the role that some weeds play in the environment, then we open up an entirely different point of view. To begin with, weeds are at their best (or worst) in areas that have been disturbed. Their job is to stabilise the soil by protecting it from wind, water and sunlight and to begin the process of rejuvenation. This is clearly a good, in fact, vital role and a fast-growing, spreading plant is ideal for the job.

So, what plants filled this niche before colonisation?

The answer is that there are many, many native plants that filled this roll, and they are still doing their job today. Most of them are very cute in their own quiet way. Many are often overlooked, and unfortunately, many are mistaken for exotic weeds and removed.

If I got a dollar for every time I got a landowner excited about a plant they thought was a weed...

The point of this article is to showcase a very small selection of those native plants that, in my experience, are commonly considered "weeds". In fact, they all act like weeds according to the definition above, but they are all native plants as well. I am sure you will recognise some, and hopefully you will be inspired to find out more about the ones you don't recognise.

These few plants are just the more commonly found ones. There are many more. You can learn more by talking with your Land for Wildlife Officer and by uploading pictures to iNaturalist. You can also have a look at the iNaturalist Guide *Logan Native Plants that Look Like Weeds*, at https://inaturalist.ala.org.au/guides/16278

Article and photos by Peter Copping Land for Wildlife Officer Logan City Council



New Holland Daisy (Vittadinia dissecta)





Climbing Dayflower & Wandering Sailor (Commelina diffusa & C. lanceolata)



Nut Heads (Sphaeromorphaea australis)



Azolla Fern (*Azolla pinnata*). Aquatic floating native fern.



Cudweed (*Euchiton sphaericus*)



St. Paul's Wort (Sigesbeckia orientalis)



Devil's Needles (Solanum stelligerum)



Willow Primrose (*Ludwigia octovalvis*). Twiggy shrub near waterways and dams.



Ironweed or Vernonia (*Cyanthillium cinereum*)



Bell Vine (Ipomoea plebeia)



Spiked Sida (Sida hackettiana)



Knotweed or Smartweed (*Persicaria* species)



Monkey Rope Vine (*Parsonsia straminea*). Larval host plant for the Common Crow butterfly.



Lesser Joyweed (*Alternanthera denticulata*). Larval host plant for the Varied Eggfly butterfly.



Saltbush or Fishweed (*Einadia* species). Larval host plant for the Saltbush Blue butterfly.





BEYOND YOUR OWNERSHIP Land for Who?

hat will happen to your Land for Wildlife when your time as custodian comes to an end?

Land for Wildlife is not a legally binding agreement, it's not registered on the title deed, so it doesn't bind future owners to agree to its terms. This is sometimes voiced as a criticism of the Land for Wildlife program. However, for many landholders, Land for Wildlife provides a comfortable point of entry to a rewarding conservation journey on their property. A journey that is often filled with hard yakka, some mistakes, learning, being rewarded with some magical wildlife encounters and a high degree of satisfaction in removing weeds, watching trees grow and habitat improve.

Many Land for Wildlife members invest significant amounts of time, money and resources in improving the habitat values on their property. Activities including assisting natural regeneration, weed control, restricting stock, revegetation and ecological burning are just some of the ways that landholders help care for and restore the natural areas on their properties. Natural areas that often grow to be viewed as important ecological 'assets', that are valued alongside the more conventional assets such as the house, sheds and other infrastructure.

Have you ever stopped to wonder what the future holds for your own property? When I pose this question to landholders I am sometimes surprised by the response "oh, we will never leave here" or "we will never sell". But the reality is that none of us are immortal, and at some point, your property...your treasured Land for Wildlife, will transfer to a new owner.

Succession planning is something that is actively encouraged on properties that generate an income through primary production with some farms remaining in the one family across multiple generations. The lucky (or sometimes unlucky?) recipients get a place to live and a source of income! But for nonproduction or non-income earning land such as many Land for Wildlife properties in south-east Queensland (SEQ), succession planning is not so prevalent. This is despite the fact that the amount of ecological restoration required on many properties is a multi-generational task, as is the ongoing need to care for country. Based on my own observations, I would hazard a guess that the majority of Land for Wildlife properties in SEQ only remain in a family for one generation, and even then, often it's only for part of the owner's lifetime.

This short-term approach to land ownership and management couldn't be any further removed from the cultural kinship systems of caring for country handed down from generation to generation by First Nations Australians. While fifth-generation farmers are rightly proud of their hard-earned local knowledge, this does seem to pale into insignificance when compared to the thousands of generations of observational learnings, knowledge and lore passed down by Indigenous Australians. Generationally accumulated knowledge, specific to the local environmental conditions and seasonal variations is priceless for informing sustainable land management.

As a Land for Wildlife property owner, you are in a fortunate position that you're probably aware of many of the ecological values on your property. You've learnt what the threats are to these values, such as where to check for problematic weeds and vulnerable spots for erosion. You've also no doubt learnt a thing or two about what's required to manage your property. For a new owner, the next custodian, this is all very handy information.

Having been in this role for a while now, I have visited some Land for Wildlife properties across multiple ownerships, including some with four or five different owners. So even though the Land for Wildlife program isn't legally binding, it still seems to work pretty well as a support network for willing bushland custodians. More often than not, the new owners are keen to continue with the program.

When we undertake a 'change-ofownership' visit with the new owner of a Land for Wildlife property, we are able to pass on a lot of this useful information. For example, the location or presence of threatened species and problematic weeds, the history of revegetation projects, including species lists and old property maps and photos. We can also help facilitate networking with nearby members. This information can help inform management decisions and hopefully prevent costly mistakes, it can also save time and money for a new owner



that is only just starting their journey of custodianship on their new property.

So what does happen to your Land for Wildlife when it comes time to sell? Part of the Land for Wildlife agreement that you signed when you joined the program is that when your property sells, we as Land for Wildlife Officers will make contact with the new owners and encourage them to continue with the program. More often than not this transition is smooth, however unfortunately sometimes the new owners may not be interested, in which case we remove the sign from the property. This can be a disappointing outcome both for the former owner and for us as officers.

Some landholders are not willing to leave this process completely to chance and they decide to protect part of their property in perpetuity by means of a Nature Refuge or a Voluntary Conservation Covenant with their local council. This way they can be more certain that the bushland they have so carefully nurtured remains protected, regardless of who ends up owning it. I am also aware of a handful of landholders that have bequeathed their land to a conservation land trust. Others have established their own trusts with arrangements in place for the next generation in their family to continue the conservation work on their property.

Some Local Governments in SEQ have an environmental land acquisition program where funds raised through an environmental levy are used to purchase properties with significant ecological values and establish them as conservation reserves. A number of former Land for Wildlife properties have become council owned and managed conservation reserves after the owners approached the council with an offer to sell their land for the purposes of environmental protection. Indeed, some of the jewels of the Sunshine Coast Council's environment reserve network have been protected in this way.

If you are the custodian of a Land for Wildlife property with significant ecological values, why not talk to your local officer about what options are available to you to secure the future of your bushland before your custodianship comes to an end. Many councils offer conservation covenants for properties that meet certain criteria. Unlike Land for Wildlife, conservation covenants are a legally binding protection mechanism that can be used to protect the bushland portion of your property in perpetuity. This means that any future owners are required to abide by a set of rules outlined in the covenant that apply to the protected portion of the land. So, a privately owned protected area can sit alongside a residential area or grazing

VOLUNTARY CONSERVATION COVENANT

VOLUNTARY WILDLIFE CONSERVATION



Obviously not every property will meet the eligibility criteria for a Nature Refuge or a covenant or have the necessary attributes to become a reserve. Indeed, this is probably the case for the majority of Land for Wildlife properties.

Regardless of whether a property is eligible for a covenant, Land for Wildlife properties as a collective are protecting and managing habitat on over 5,600 properties across SEQ, and this is extremely valuable in and of itself. Within the Land for Wildlife network, there are properties that buffer National Parks and provide critical corridors between reserves. There are properties that border important waterways and provide stepping-stones for wildlife to more safely traverse through the landscape that we all share. By thinking about our conservation legacy, beyond our land ownership, we can find opportunities to secure better outcomes for future custodians and our native wildlife.

Article by Nick Clancy Land for Wildlife Officer Sunshine Coast Council



LAND FOR WILDLIFE FROM Beginning to Transition

rowing up in Yuggera country, north Brisbane, roaming and discovering the wetlands and creeks around our property, I developed a strong connection with the land, as had my ancestors before me. Our father would harvest one of the many she oaks for the annual Christmas tree and the smell of aging she oak leaves (cladodes) remains nostalgic. Little did I know what a huge impact she oaks would have on my life in later years.

Land for Wildlife Discovery

Fast forward to 2001, when, after a diverse corporate career in Australia and overseas, I felt the need to reconnect with the land and the harmony it brings. After searching for a place that felt right on the Sunshine Coast (my go to place for peace and recovery), I purchased a 36-acre property in the hills of Mooloolah on Gubbi Gubbi country in 2002.

During my travels I liked the sentiment of the lovely green Land for Wildlife signs and wondered what they entailed. Luckily, in early 2003, Barung Landcare held a week of workshops for property owners which I enthusiastically attended, soaking up as much information as possible. My questions about Land for Wildlife were answered when Nick Clancy from Sunshine Coast Council took to the stage. This was the beginning of a great connection and working relationship, development of knowledge, and conservation of my property with the Land for Wildlife team. After joining Land for Wildlife, I added a Conservation Covenant and Voluntary Conservation Agreement (VCA) a few years later. "Torulosa Terraces" Private Conservation Area was to become a well-known research site and hotspot for the threatened Glossy Black Cockatoo that I had observed visiting the property to feed on the Forest She Oak (Allocasuarina torulosa) seeds throughout the property.

During our annual VCA inspection in 2019, Nick and I and Jem Dunlop from South East Land Repair, the contractors who carried out the work under the VCA, discussed the changing habitat with the increasing numbers of rainforest pioneers in the *Allocasuarina torulosa* stands. Being steep country, use of fire is challenging, and risky with Casuarina species (as they are fire prone), so I wondered how I could conserve the important feed trees for the Glossies.

Research - Set up Future Food For Glossies Project

It seemed feasible to collect seeds from known feed trees and plant them at other sites to see if more feed trees would develop. So, in June 2019, I instigated the Future Food For Glossies Project with this aim. Barung Landcare came to my assistance to work with me to collect the seed, propagate and grow up the trees ready for planting.

Then I needed to have a place to plant them. I was concerned that if they were planted on private property, there would be the risk of the owner selling and moving on with a new owner not willing or able to conserve the trees. Despite the risk, I chose two sites at Torulosa Terraces and, with the help of my VCA contractors and volunteers from Hinterland Bush Links, planted 100 trees in early 2020.

I continued to seek additional sites and approached Ben Green from Sunshine Coast Council who needed to revegetate a site at a newly acquired tract of land, Tuan Reserve, near Kenilworth. Along came Covid-19, and the huge event planned for the planting had to be cancelled, and the 350 *Allocasuarina torulosa* trees were planted by Council contractors in March 2020. Since then, thousands of trees propagated from the seed of feed trees from Torulosa Terraces have been planted throughout the Sunshine Coast. My plan is to monitor the development of these test trees to fruition and record utilisation for feeding by Glossy Black Cockatoos. I estimate that will take up to ten years.

Research - University of the Sunshine Coast

Meanwhile, knowing that more research needed to be done to back up our action, I contacted Dr Gabriel Conroy at the University of the Sunshine Coast to find someone to do the research. As no one was available, I started an Honours research degree with Dr Conroy, with Dr Steven Ogbourne and Dr Javier Leon making up the advisory team. We conducted 13 months of field surveys at Torulosa Terraces until December 2021. We recorded feeding evidence and mapped the whole property and feed trees on ground and with drones, and we finalised the thesis in August 2022. The outcome of the research was multi-faceted and supported the possibility of propagating feed trees from the seed of known feed trees. More needs to be done to prove this, however.

The results of this work together with the submission of annual Glossy Black Cockatoo sightings and feeding activity submitted to the Glossy Black Conservancy for many years, is that Torulosa Terraces is now listed as a significant Glossy Black Cockatoo habitat, a legacy of which I am so proud and honoured to have been the custodian of this land for 21 years.

Transition

Unfortunately, due to health concerns, I became the property owner who needed to sell and move on. I would not sell to anyone who didn't support Land for Wildlife. So I sought someone who was comfortable with a conservation covenant and prepared to negotiate a new Voluntary Conservation Agreement with Sunshine Coast Council to continue the work. Luckily, we found such a person and the new owner is settling in and has committed to a VCA and is open to the possibility of Glossy research continuing.

The work of conservation will continue thanks to the Land for Wildlife program, which has resulted in so many people from all over the country, supported by Conservation Partnerships Officers, working with others to conserve this beautiful land of which we are the custodians.

Article by Janet Carew (Former) Land for Wildlife member Mooloolah, Sunshine Coast



It takes a team to conserve a property. *Allocasuarina torulosa* planting day at "Torulosa Terraces". South-East Land Repair and Hinterland Bushlinks made the work fun! Photo by Susie Duncan.



Friends Liz and Geoff Saunders volunteered to help with monitoring growth of *Allocasuarina torulosa* growth at Tuan Reserve. Photo by Janet Carew.



Orthomosaic map of "Torulosa Terraces" illustrating the distribution of female *Allocasuarina torulosa* trees.







Female Forest She Oak (*Allocasuarina torulosa*) trees have woody seed cones that open up when the seed is ripe. Glossy Black Cockatoos chew away the cone to eat the seeds inside. The chewed cones found on the forest floor beneath where they have been feeding are called "orts". Photos by Martin Bennett and Peter Copping.







Female Glossy Black Cockatoos have varying amounts of yellow on their head, which can be used to tell individuals apart. Photos by Janet Carew.

Janet Carew measuring the growth of *Allocasuarina torulosa* trees. Photo by Liz Saunders.



he best thing about working as a Land for Wildlife Officer is the incredible people that you get to meet. One such person was Stephanie Hicks. I first met Stephanie when she applied for Land for Wildlife on her property at Conondale in the upper Mary Valley back in 2003.

For many years Stephanie lived and worked in Brisbane but regularly made the trip up to Conondale on the weekends. She worked at revegetating her property that had been over-cleared and grazed for many years. She planted and nurtured over 3000 trees on her 9.5 acre block, and these trees now form a small forest.

In 2015, Stephanie retired and made the permanent move up to her Conondale Land for Wildlife property. Not satisfied with restoring just her own property, she volunteered with Barung Landcare and took on the role of secretary.

Stephanie was also a supporter of the Australian Wildlife Conservancy (AWC) and so she was keen to learn more about the local AWC sanctuary at Curramore near Maleny. After giving it due consideration, Stephanie decided to donate a sizeable portion of the funds required for the AWC to purchase a neighbouring

Planting by Barung Contracting at "Claire Reserve" in late 2023.

land parcel to expand the Curramore Sanctuary. This area, which she named "Claire Reserve" (after her daughter), has now been planted out to provide additional habitat for Koalas at Curramore (see article on facing page). It also provides some additional habitat for the incredible diversity of other native species that occur in the local area.

Sadly, Stephanie passed away in 2022 shortly after being diagnosed with pancreatic cancer. Stephanie's commitment to the wildlife of the Sunshine Coast and generosity in donating funds towards the expansion of the AWC's Curramore Sanctuary is a legacy that will keep on giving to the Sunshine Coast hinterland and beyond.

It was my privilege to work with Stephanie and many other Land for Wildlife members who demonstrate such an extraordinary and generous level of commitment to conservation.

Article and photo by Nick Clancy Land for Wildlife Officer Sunshine Coast Council

LISTENING FOR CUrramore Sanctuary

he Koala is an icon of Australian nature, but these wellknown tree-climbing marsupials can be hard to find. At Australian Wildlife Conservancy's (AWC) Curramore Wildlife Sanctuary (also a Land for Wildlife property), incidental sightings, camera trap images and scats and scratches confirm that Koalas persist, but we don't know much more.

Spending most of their time motionless high in the canopy, Koalas pose a real challenge for ecologists monitoring them, especially across the steep terrains of Curramore. Now, a new approach that relies on the Koalas' repertoire of growls, grunts and barks offers the prospect of unlocking important data essential to the protection of this endangered species.

For most animal species, conventional survey methods that use baited cage traps or camera traps are an effective means of surveying at scale. However, given Koalas spend most of their time off the ground and are not attracted to food bait, these techniques are not effective. In the past, ecologists have explored other methods to survey at scale, including spotlighting transects and working with specially trained detection dogs that sniff out fresh scat and the scent of animals up above. In 2021, four individual Koalas were observed during spotlighting transects across Curramore, which was identified as a Koala Priority Area by the Queensland Government in 2020. Detection dog surveys also picked up an increase in Koala activity on the property from 2015 to 2022.

While these surveys offer an intriguing glimpse into Koalas on Curramore, the picture remains incomplete. The AWC team is eager to establish better understanding of the distribution and population density of Curramore's resident Koalas, and to investigate any threats.

Thanks to a generous contribution from the federal government's Koala Conservation and Protection Grant, AWC is hoping to learn a lot more about its Koala populations by deploying bioacoustic monitors across suitable Koala habitat at Curramore. By high-tech 'listening', ecologists hope to conduct larger-scale monitoring of



techniques as they can be motionless and well hidden in the canopy. Bioacoustic monitors, like this Song Meter, will be used to help AWC detect Koalas at Curramore Sanctuary.

the species and establish baseline data about the presence and abundance of Koalas on the sanctuary. Ecologists will also use thermal drone surveys and compare the effectiveness of both technologies.

Andrew Howe, AWC Senior Field Ecologist who is leading the bioacoustic research at Curramore, said that although Koalas are a famous Australian species, very little is known about their ecology, distribution and threats in the northern extent of their range.

"Curramore Wildlife Sanctuary is the largest nature refuge on the Sunshine Coast and is a geographically significant habitat corridor linking habitat from Maleny National Park in the west to other nature refuges and Koala habitat in the east," Andrew explained.

"The sanctuary could potentially sustain an important population in the context of the broader region – but we need to do research to better understand local population dynamics."

In addition to monitoring Koalas on Curramore, AWC has also partnered with community-led organisation Barung Landcare to restore vital Koala habitat on five hectares of cleared land (referred to as "Claire Reserve", thanks to a generous donation by Stephanie Hicks – see article on facing page). Barung Landcare supplied local Koala feed trees and they were planted by Barung and AWC staff with the help of volunteers.

AWC will continue with the removal of lantana from priority areas across the sanctuary. Over the last decade, AWC has removed more than 50% of lantana from Curramore, with some patches being over 3-4 metres in height. Together, these initiatives will help make the 196 hectares of land at Curramore a safe haven for the iconic Koala.

Article by Genevieve Deaconos, Development Manager Andrew Howe, Senior Field Ecologist and Nahrain John, Communications Associate Australian Wildlife Conservancy



OPTIONS FOR Conservation Legacy

"I would like to see the property kept as Land for Wildlife after I have passed on or sold it."

suspect that this quote from a Brisbane Land for Wildlife member expresses the sentiment of most Land for Wildlife members. Anyone who has put time, care and money into improving the conservation values of their property wants to see that effort continue well into the future.

The article by Nick Clancy on pages 6-7 talks about this dilemma of being dedicated to long-term conservation outcomes versus the reality of our own mortality. It's not a great topic to write about, but it is worthwhile for all of us to consider our options when we have to leave our precious properties, and to know that more and more options are becoming available.

It is important to realise that there are buyers wanting to buy conservation properties. The trick is to make the link between those wanting to buy and those selling. One option is to promote your property through an environmental real estate agent, such as ecorealestate. com.au, or to shop around for real estate agents that understand or have had experience selling Land for Wildlife properties.

Some landholders specifically enter into conservation covenants as a way of ensuring continued conservation management into the future. Nick's article talks about the two main covenanting mechanisms – Nature Refuges with the Queensland Government and Voluntary Conservation Covenants with your Local Government. These options probably favour larger, high conservation value properties, but it is still worth asking the question to see if your property is eligible.

Donation or sale of land to your local council is another option. Not every

council has a conservation land acquisition program, and not every property would be a priority for acquisition, but it may be an option. The much-loved Mary Cairncross Scenic Reserve was donated to council by Mary Thynne's (nee Cairncross) daughters and is one of the most notable reserves on the Sunshine Coast attracting thousands of visitors annually.

Donation or sale of your property to an organisation that is committed to conservation may be an option. There is a rapidly increasing list of organisations and charities that buy and manage land for conservation. Before donating or bequeathing your property, it is important that you touch base with your preferred organisation. The last thing we want to see is that you donate your property to an organisation that doesn't have the capacity to manage it, so it is sold quickly on the open market.

In SEQ, there are seven organisations that manage properties for conservation and we are delighted to have them all as members of the Land for Wildlife program:

- Australian Wildlife Conservancy (AWC). This is Australia's largest private land conservation organisation that owns and/or manages more than 12 million hectares of land for conservation. In SEQ, AWC owns Curramore Sanctuary on the Sunshine Coast – see article on page 11 about some of their work.
- 2. Bush Heritage Australia (BHA). With 43 reserves across Australia, Bush Heritage is a leader in conservation and working in partnership with First Nations people. In SEQ, Bush Heritage owns a small reserve in Currumbin Valley, which was bequeathed to BHA by a local landholder.
- Queensland Trust for Nature (QTFN). In SEQ, QTFN owns two properties in the Ipswich region within the Flinders-Karawatha Corridor and the Little Liverpool Range. Aroona Station was donated to QTFN by local landholders.

- 4. Wildlife Land Fund Ltd (WLFL). The WLFL is a volunteer-run not-for-profit company that acquires and manages land for conservation in Queensland. In SEQ, the WLFL owns two properties at Witta and Reesville on the Sunshine Coast. The Witta property was donated to WLFL.
- Bulimba Creek Catchment Coordinating Committee (B4C). In 2015, B4C showed what a group of likeminded people can achieve when they purchased a property at Mount Barney for conservation.
- Australian Koala Foundation (AKF). The AKF is a non-profit NGO that promotes the conservation of wild Koala populations. In SEQ, the AKF owns one property near Kenilworth on the Sunshine Coast, which was bequeathed by the former owners.
- Greening Australia. As a national environmental organisation running for over 40 years, GA has helped restore thousands of hectares of habitat across Australia. In SEQ, GA owns one property that is managed for conservation in the Redlands.

There is an emerging market of organisations committed to returning donated properties to their First Nation owners. In time, I believe that there will be more options of co-ownership between landholders and organisations so that families can continue to have a connection with a property, while the management obligations are taken care of by a skilled conservation land management organisation. It is an interesting space to watch and I wish you all the best with your search if you find yourself in the position of having to leave your piece of paradise.

Article by Deborah Metters Land for Wildlife Regional Coordinator





Masked Owls are uncommon large forest owls that breed in big hollows in very old gumtrees. A great bird to see.



Greater Gliders are Australia's largest gliding mammal. They have long fluffy tails and big fluffy ears. They have a diet of eucalypt leaves – similar to Koalas.





SUPERSTORM Recovery

he 2023 Christmas Day superstorm damaged many Land for Wildlife properties in the Gold Coast and Scenic Rim regions with trees ripped from the ground and debris widely scattered.

As part of the damage assessment, Scenic Rim Regional Council engaged local ecologists to conduct nocturnal surveys to see how our threatened animals were faring, with a focus on trying to find Koalas, Greater Gliders and large forest owls. Potentially, these species could have been killed or injured during the storm. The gliders and owls need large hollows to shelter and breed in, and we were worried that lots of their homes might have also been damaged or blown to the ground.

The results of the surveys were surprisingly reassuring. On one severely damaged Tamborine Mountain property, a single nocturnal survey found Greater Gliders, an Australian Masked Owl, Southern Boobooks, a Koala, a Tawny Frogmouth and Sugar Gliders. Despite the decimation of some of their habitat, these creatures survived the storm and are now attempting to adapt to the modified ecosystem they inhabit.

Frogs seemed unperturbed by the storm damage and thrived in the hot and wet January weather. The spotlighting surveys observed eight species of frog on a Tamborine Land for Wildlife property including the uncommon Green-thighed Frog and Dusky Gungun. To our relief, Greater Gliders were present at two other badly damaged properties. They were found a small distance from their last known location on the properties. They were previously found along ridges lined with large remnant eucalypts, but the storm had knocked most of these eucalypts down and the surviving trees were left leafless.

Supported by the Scenic Rim Regional Council's Environmental Grants Program, several storm-damaged Land for Wildlife properties have installed large nest boxes designed for Greater Gliders. Hopefully they will provide some supplementary shelter and breeding sites while the forest recovers.

Article by Catherine Madden Land for Wildlife Officer Scenic Rim Regional Council and Greg Tasney, Consultant Ecologist Photos by Greg Tasney

WISE RAINWATER MANAGEMENT AND Swales

Shown here is a swale created along the contour on a Land for Wildlife property in Ipswich.









Mart case

ould you like to make the most of the rainwater that falls on your land instead of having it just drain away? Swales may be what you are looking for.

A swale is an excavated depression on the ground to slow, absorb and direct rainwater. A cross-section of the basic swale construction is shown in the top left diagram. The ground is dug out at 15-30cm deep, and the excavated soil is piled onto a new bank 90-120cm wide on the lower slope, forming a berm. Both the basin and the berm have a gentle landform.

When it rains, the swales slow down the waterflow of the original slope and capture the runoff by spreading it horizontally across the swale basin. This way the swales arrest the process of erosion, facilitate infiltration into the soil and reduce pollutants. There are different types of swales and they can be used in several ways.

Contour Swales

A contour swale follows the landscape's contour and all the swale basin is constructed at the same elevation level. They are useful to harvest rainwater and are popular in permaculture. Contour swales catch rainwater as it drains downhill and hold it in place along the contour until it is absorbed evenly into the ground. They look like a massive ditch with closed ends, and they trap the water as opposed to letting it flow away.

Diversion Swales

Diversion swales are constructed with a little inclination to one or both sides, so the water moves slowly towards the lower end(s). As opposed to contour swales, diversion swales don't aim to keep all the rainwater in place until it's absorbed. They are meant to slow down the rainwater movement, allow it to be partially absorbed, prevent erosion and catch sediments, while slowly steering it somewhere else like to another swale or to a reservoir.

Rainwater management is only one function of swales. Another important function is to be a tree growing system. Trees take advantage of swales by utilizing the water collected to grow and in return, they stabilise the landscape, moderate saturation levels and provide shade that will reduce evaporation. Over time, landscapes with swales will become more hydrated, making them more drought resilient.

The berm of a swale is the perfect place to grow trees and deep rooted plants. The organic matter and sediment carried from uphill are deposited at the bottom of the swale creating fertile ground. As the plants absorb the moisture from below, the soil will not become over-saturated. If swales are built at the bottom of a chicken run or grazed grassland, they will absorb the manureloaded runoff and concentrate it in a location where you can make use of the

nutrients instead of letting them wash downslope where they could become a pollutant.

Used in combination with dams, ponds and grey water systems, swales can absorb overland flows and passively release excess water to soak across the landscape.

Article and diagrams by Daniel Tay Chean Land for Wildlife Officer Tooowoomba Regional Council

STEEP Inspiration

y wife and I have been wondering for quite a while how we were going to remedy this situation of a shortish but rather slippery section of a path leading to our upper-level sheds and greenhouses. I thought the article by Trevor Sauer, *Simple Staircases for Steep Slopes*, in the November 2023 Land for Wildlife magazine would be a perfect solution to our tricky problem. The article explains in simple terms the materials required and the methods used to establish this functional staircase. Marg and I completed the project in minimal time and it has allowed us to traverse this pathway much more safely.

Lawrie Flynn, Land for Wildlife member Toogoolawah, Somerset

am a Conservation Partnerships Officer on the Sunshine Coast, but recently received a phone call from Lawrie Flynn, a Land for Wildlife member in the Somerset region. He was inspired to build a staircase based on an article written by Sunshine Coast Land for Wildlife member, Trevor Sauer.

Lawrie had lots of positive feedback about the simple and effective design, but he had a question about finishing off the staircase. So, I got in touch with Trevor, who was delighted to hear that someone had found his design useful and who had already built one so soon after reading his article!

Trevor encouraged me to share his number with Lawrie so that they could connect to discuss the staircases further and share their experiences. Trevor mentioned how great it is to be able to talk to other LfW members to exchange stories and hear about their learnings and challenges on their properties, even when separated by many kilometres. What a wonderful network we have in the LfWSEQ program.

Stephanie Keys, Land for Wildlife Officer Sunshine Coast Council



New camera angles

Ike to experiment with fauna monitoring cameras and try new techniques. On this working dairy farm, which is also a Land for Wildlife property, in the Kerry Valley I attached the camera to a tree directly above a waterhole and faced it downwards. Here are some of my favourite animals including a Barn Owl, Echidna and Collared Sparrowhawk.

Catherine Madden, Land for Wildlife Officer Scenic Rim Regional Council









staged control of Slash Pines

Here are some impressive drone images from a Land for Wildlife property at Mount Mellum where the landholders, supported by Sunshine Coast Council, are doing staged control of Slash Pine trees using herbicide applied through the drill and fill, and frilling methods over a five year period.

As the pines die back, this is allowing the natural regeneration of native plants to grow up through the midstorey and to eventually dominate the canopy. Slowly the pine trees will decay and fall to the forest floor. Nice work!



These pine trees were originally planted as a trial plantation using grafted pine trees. Their control has enabled significant regrowth of native plants because of the surrounding remnant forest and good soils.







Native trees are forming an emerging canopy through the decaying Slash Pines.