



LAND FOR WILDLIFE

SOUTH EAST QUEENSLAND

FEBRUARY 2023 VOL. 17 NO. 1

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Land for Wildlife South East Queensland Team, December 2022

Land for wildlife SOUTH EAST QUEENSLAND SNAPSHOT

 **5,378***
TOTAL
PROPERTIES

 **4,269**
REGISTERED
PROPERTIES

 **1,109**
PROPERTIES
working towards
RESTORATION

 **76,007** ha
RETAINED HABITAT

8,735 ha
Habitat Under
RESTORATION

 **11,192**
Facebook
Page Followers

21,896
iNaturalist
OBSERVATIONS


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

To join contact your local LfW Officer

*Membership statistics have declined since last quarter due to the cessation of the Land for Wildlife program in the Fraser Coast region.

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

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Front Cover Inset Photos: Shiny-leaf Coleus (*Coleus nitidus*) photo by David Masters; landslip on the Sunshine Coast, photo by De-Anne Attard.

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Conservation is often seen as an environmental endeavour, whereas in reality, it is usually a human endeavour. People are responsible for most conservation outcomes. Nature does the heavy lifting in repairing environmental damage, but humans help facilitate it. We cannot make a plant grow, but we can water it and keep the weeds at bay.

Just as we are the key to ecological restoration, nature is also the key to our wellbeing. One of the most interesting findings from the recent membership survey is that Land for Wildlife members who benefit from the program through improved health and wellbeing are also the members that report an improvement in the environmental condition of their property. Basically, if we improve the land, we improve ourselves and our quality of life.

This correlation has been found in other research including the relationship between landholders who live near the Great Barrier Reef and their sense that the health of the reef is as important as their personal wellbeing. Of course, the deep interconnected relationship between Traditional Owners and their country demonstrates that there is no separation between the health of country and human health.

These facts seem to be seeping more and more into the corporate world. Nature reporting is becoming more mainstream. In the past, we have availed nature's services with little or no accounting. This is slowly changing and new terminology like Nature Positive speaks to trying to achieve a net gain in biodiversity, rather than just band-aiding past environmental damage. The proposed national voluntary biodiversity market is another sign that nature accounting is on our doorstep. Concepts like Nature Positive point towards us not only doing the bare minimum repair work but trying to facilitate the return of healthy ecosystems.

The more we recognise that the LfWSEQ program is more than a conservation program, the better we can manage it and make it work for our members. This is the 25th year of the program and the last quarter of a century has created a network of landholders who are stewards of the land across SEQ. In addition to the collective efforts of recovering threatened species and restoring land, we also need to celebrate how the program, and our connection to nature, brings us better health and wellbeing.

Personally, I feel good knowing that I am part of a program that makes other people feel better and helps our wildlife as well.

As much as we wish to celebrate our successes, at times we need to take a step backwards. Unfortunately, Fraser Coast Regional Council has decided to step back from delivering the LfW program. We wish all our Fraser Coast LfW members all the best in continuing their conservation work despite this decision.

Enjoy this edition and I hope you take inspiration from the diversity of stories from Terry Boyle's lifetime of land restoration to progressive quarry managers working with local community leaders to facilitate nature's repair work. Thank you all.

As always, I welcome your feedback and contributions.

Deborah Metters
Land for Wildlife
Regional Coordinator

We welcome all contributions.
Please send them to:

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Climate & Weather

REGIONAL OUTLOOK Feb-Apr 2023



Daytime and Night-time Temperatures.

Above median temperatures are likely with warmer days and warmer nights.



Rainfall. Median rainfall is likely.



Streamflow. Median to above median streamflows are likely.

Climate Influences

- La Niña is active but weakening in the Pacific Ocean with forecasts suggesting a return to ENSO-neutral in February.
- The Southern Annular Mode (SAM) is strongly positive, bringing increased chances of rainfall to south-eastern Australia.
- Warm sea surface temperatures are around most of Australia.
- Australia's climate has warmed by about 1.47°C since 1910.

Sources

www.bom.gov.au/climate/outlooks/

www.bom.gov.au/water/sssf/

www.bom.gov.au/climate/cyclones/australia

Weeds to Watch

Jan-Mar 2023

Chinese Elm - a common, deciduous, weedy tree. This is a good time of year for control via stem-injection or cut stump methods. Currently fruiting. Will drop its leaves in winter, making herbicide control ineffective at that time.



Cadaghi - a widespread, tree that is native to North Qld. Large, broad leaves with rough hairs. Young plants have reddish growth tips. Adult trees have smooth greyish-green bark. Hand remove seedlings or control via stem-injection or cut stump methods.



Cockspur Coral Tree - a large shrub/small tree that has distinctive, large, bright red pea-like flowers at this time of year. Sharp thorns on stems and petioles. Reproduces via seed and stem segments. Control using cut stump method.





Brush-cutter

VS. COLEUS

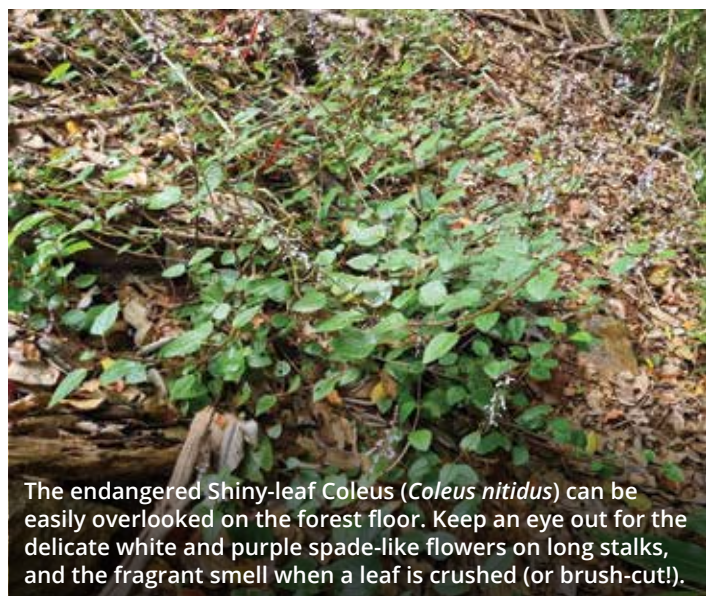
When moving onto a bush block away from suburbia I always thought it would be easy to pick up bush restoration techniques and knowledge as I go. But the actual learning and growth I have received throughout my bush regeneration project was beyond anything I could have predicted.

Let's go back a couple of years to the start of my bush regeneration project on my property. I was a few years younger, a few kilos heavier, I had several less lantana related forearm scars and I was blissfully unaware that I didn't know what I was doing.

One fine day while pointlessly brush-cutting lantana above the ground, I was moving through a sheer rocky slope like a mountain goat under a beautiful ancient fig tree. I came across a mystery plant which to my untrained eye looked a lot like all the other lantana I was happily brush-cutting paths through, except that when the blade hit the mystery plant it burst into dozens of little pieces. Being curious about the splatter this plant made, I had a closer look that showed me this wasn't lantana but instead was a very fleshy, sweet-smelling plant with a bright purple underside and a delicate flower spur.

As my Land for Wildlife Officer had coached me previously, I took a small sample back to the house to dry and send off to the Queensland Herbarium to help identify if it was a friend or foe.

I must have done an expert job drying the sample, as when the herbarium returned the results, they also prompted me to look into the "correct" preserving procedure for future samples and gave me some wonderful education pamphlets to read. None the less after this helpful feedback about my drying efforts, I



The endangered Shiny-leaf Coleus (*Coleus nitidus*) can be easily overlooked on the forest floor. Keep an eye out for the delicate white and purple spade-like flowers on long stalks, and the fragrant smell when a leaf is crushed (or brush-cut!).

found out that my mystery plant was in fact the federally-listed endangered Shiny-leaf Coleus or Shiny Plectranthus (*Coleus nitidus*).

After some quick research on Google to become a subject matter expert in front of all my neighbours, I went back to have another look at the remnants of the Coleus I had pruned several weeks earlier only to find that the one plant had turned into several dozen seedlings from all the bits that I sent flying around the rocky slope. I had inadvertently managed to successfully propagate the Coleus with my newly minted brush-cutter propagation technique and the small patch was now flourishing without the cover of the lantana.

My initial success however quickly turned sour as some overzealous spray drift landed on my new seedlings and as quick as they came, they disappeared. I learnt a valuable lesson about spraying on windy days and from that moment on it was weed removal by hand only in the patch, luckily no one else knows about that embarrassing mistake.

After several more days in the patch manually removing weeds, I found that there was around 50 plants hiding under the thick lantana cover just waiting for a bit more sunlight. Fast forward a few years now that all the lantana has been carefully removed "by hand", the *Coleus nitidus* is thriving in this little safe haven valley and can be left alone to enjoy its existence free from me and my brush-cutter.

Article and photos by David Masters
Land for Wildlife member
Mount Nathan, Gold Coast

Solved!

THE MYSTERY CALL

On the warm evenings of summer 2021 we would go out to collect pesky Cane Toads that were attracted to our dam, and it was then that we started hearing a very faint but persistent noise off in the bush. Difficult to describe, we spent quite a few evenings discussing what it could be. Was it an insect? Was it a frog? A nocturnal mammal or bird? It's location never seemed to change, and we would hear it for hours nearly every night.

We managed to record these calls and send them to a few groups for ideas. The Australian Museum Frog ID Project confirmed it wasn't a frog, they suggested an insect. iNaturalist provided no hints. Bird groups couldn't help either. All we could do was listen and ponder.

In January 2022 our mystery noise suddenly got louder. Still coming from the same direction but quite loud and we now decided it was probably an owl. But what owl would stay in the same spot all night every night? We tried spotlighting but the bush is thick in that area, and we didn't want to go crashing in at night and disturb whoever had taken up residence there.

By early March the calling had changed tone a little and finally changed location. So late one night we went out determined to finally solve our mystery. Armed with red and white spotlights, binoculars, cameras and a sense of adventure, off we went.

By now the calls were coming from high up in an old Blackbutt tree and then we caught a set of large eyes in the spotlight looking down upon us. We needed the binoculars to see more than just shining red eyes. Not only were we thrilled that our mystery was solved but WOW it was solved in the most spectacular way. High above us was a beautiful Sooty Owl fledgling.

He (we actually don't know its gender but using the pronoun 'it' feels diminishing) paused for a while to stare down at us and then decided his dinner was more important and started calling again. We promptly named the fledgling "Junior", and we spent a while in the dark just enjoying the moment.

Over the next few weeks, Junior got more mobile and we would hear him calling each night from different trees. Some nights he would be in trees close to our house calling for his supper. His calls continued to mature over time, but they were still quite different to the adult calls we were used to hearing. Occasionally we are lucky enough to hear the parents feeding Junior – his calls become more frantic and higher pitched followed by gobbling sounds.

It has now been over nine months since we first started hearing Junior. We believe the initial faint calls were Junior in his nest hollow. We still hear him calling but his range has expanded and some nights the neighbours have him visit. Being able to observe the growth of this Sooty Owl fledgling has been extraordinary and we are amazed that he is still dependant on his parents over this length of time. The parents have been working hard to feed themselves and Junior for close to a year now.

As the year progresses, we are not sure how much longer we will have the pleasure of hearing Junior calling for his supper. It will be bittersweet when we hear him no more. We feel very privileged that Junior and his parents have given us this experience and that we are able to provide the habitat they have called home.

[As a footnote, Junior finally left home in mid-November - the parents spent a year raising this chick].

**Article and photos by Sharon Evans and Bill Sullivan
Land for Wildlife members
Ilkley, Sunshine Coast**



Sooty Owl habitat - dense forest with large, old trees with big hollows in which the owls can breed.





Broad-palmed Rocket Frog



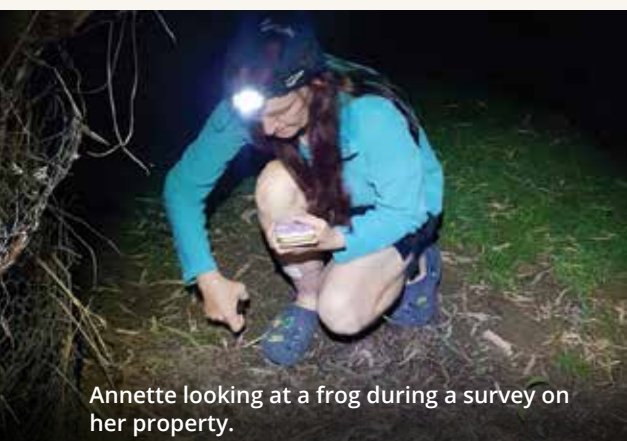
Ornate Burrowing Frog



Great Barred Frog



Desert Tree Frog



Annette looking at a frog during a survey on her property.

After Five Years

THE FROGS ARE FINALLY BACK

November 2022 was the latest frog survey and toad cull on my 14 acre property. Most of my property is natural bushland and I entered into a conservation covenant with Logan City Council to ensure that it was dedicated for wildlife.

Brett Malcolm, from Queensland Frogs, recently visited to do a survey of what the resident amphibian population was doing and to remove as many Cane Toads as we could find on the night. It was only hours following a shower and we didn't have long to wait until the place lit up like a Christmas tree with frog calls.

The first find was the most exciting for me, an adult Scarlet-sided Pobblebonk (*Limnodynastes terraereginae*). I have owned this property for 23 years and never seen one here. She was a gorgeous healthy female and this was a very cool find. I have seen her on a few occasions since. I now check where she is before I let my dogs out for their last walk of the night (they are all inside at night to allow the wildlife to come and go unimpeded).

This property has four dams and, in addition, I have two large turtle and Water Dragon pond areas for pre-release rehabilitating reptiles, complete with running and filtered water. We looked in the rehabilitation ponds and found some Striped Marsh Frogs (*Limnodynastes peronii*). I have also seen Eastern Sedge Frogs (*Litoria fallax*) and Stony Creek Frogs (*Litoria wilcoxii*) in here, but none were seen this night. We saw one Graceful Tree Frog (*Litoria gracilentia*) as well.

On the first dam we inspected, we were lucky to locate 14 frog species with numerous individuals of both male and female, and of course, Cane Toads. We also heard but could not locate Copper-backed Toadlet (*Pseudophryne raveni*) and Eastern Sign-bearing Froglet (*Crinia parinsignifera*).

The most abundant species on the night were Broad-palmed Rocket Frogs (*Litoria latopalmata*) and Ornate Burrowing Frogs (*Platyplectrum ornatum*). I never saw one during the five-year drought but the past season or two has been kinder to them and they are here in numbers. It is amazing how they 'burrow in' for inclement weather and then just appear when conditions suit them. Some nights, the noise is deafening.

The most exciting find for Brett was four Great Barred Frogs (*Mixophyes fasciolatus*) and we easily found juveniles to adults. We also found Green Tree Frogs (*Litoria caerulea*), Slender Bleating Tree Frogs (*Litoria balatus*) and Desert Tree Frogs (*Litoria rubella*).

The other two large dams had numerous Broad-palmed Frogs but little else. The sheep are not permitted in this area and the grass is very long. The long grass is probably inhibiting access by frogs (and toads) to these dams. These large dams should be providing better amphibian habitat, and I will do some work to reduce the weedy long grasses to correct this issue.

We removed 181 toads over two visits and will keep on top of this over the next few months. They were all humanely dispatched. We made and uploaded four recordings onto the FrogID app to document our observations. This is a free app that can be used to identify what frogs you have in your local area and is a great research tool. All shoes, boots and equipment were disinfected at the end of the survey.

Article by Annette Bird
President, Reptile Rehabilitation Qld Inc.
Land for Wildlife member
Jimboomba, Logan
Photos by Brett Malcolm

Frog Identification Resources



FrogID App

Created by the Australian Museum. Android and Apple. Free

Queensland Frogs Facebook Group, facebook.com/groups

Leaving THE RAT RACE BEHIND

We decided to buy land in Queensland during a trip here in 2013. At that time, we were living in The Netherlands as partly retired professionals who were sick of the rat race.

When back in The Netherlands we started an internet search that included all properties of about 10ha or more between the NSW border and Bundaberg. Armed with about 80 properties to look at we came back in 2016 and spent five weeks looking at what we had chosen on the internet and also other properties that we found through land agents. We were very quickly disappointed. Property prices were low, so most farmers were holding onto their good land until better times. What was for sale were the dregs.

At the last moment, after nearly five weeks here, the sale of a good piece of land in Kilkivan fell through and we were lucky enough to be next in line. This land was much bigger than we needed, and a bit further from the coast than we wanted, but it ticked all the rest of the boxes.

We bought this 106.5ha property without much further thought thinking "so what if we have too much land, we get more nature!" We were very happy with the idea that we had a piece of naturally forested and hilly Australian bush that had nothing on it but a power pole, a few dams and a header tank.

We went back to The Netherlands happy with our purchase, sold everything there and moved here in September 2018.

That was when the real work began as we discovered that the

land had weeds that had to be removed and that cattle did not want to stay on their side of the fence. Getting rid of the lantana will also keep us busy for a few years. An expensive and tiring spraying and fencing program followed. Eventually we had managed to keep the cattle from trampling any regrowth!

What ensued was the building of an all-weather road, 6km of walking paths, a shed, a house and two Eco-Villas. We built the two Eco-Villas ourselves as most tradies took off to the coast to take advantage of the covid-related building boom.

As we are not farming the land, we needed the Eco-Villas as income. That income was slow in coming, and not helped by the floods, so we decided to add six off-grid camping/RV sites that are gaining in popularity.

We have lots of wildlife that is helped by the fact that we are between two National Parks. We recently discovered that we even have a Koala, and that makes us really happy. To encourage them, we have started a project that will get water up into the treetops where they can drink in safety. Funding for this comes in part from the 10 cent bottles and cans that guests leave behind.

We welcome any Land for Wildlife members who want to visit this part of the country and we will happily give you a 10% discount. Visit us online at neureumpark.com or follow us on socials.

Mark and Ina
Land for Wildlife members
Kilkivan, Gympie
Neureum Park Luxury Eco Villas





REFLECTIONS ON NEARLY 50 YEARS OF

Bush Regeneration

In 1975, my wife and I bought a ten acre block of land at Bald Knob. It, and a number of nearby properties, had been sub-divided and cleared of vine scrub in the early 1920s. At an elevation of 400m with rich volcanic soil and a north-east aspect, it was considered very suitable for growing bananas and vegetables. However, the hopes of many settlers ended with the Great Depression, the spread of bunchy-top disease and the occurrence of significant land slips.

When we bought the property, we wanted to plant a forest. By doing so, we hoped to rehabilitate this eroded and slip-prone land. The grassland areas had a thick matting of kikiyu. Steep slopes and rocky patches were a mixture of Molasses and Blady Grass. Fencelines were a thicket of Broad-leaf Privet, while gullies were an impenetrable thicket of lantana, Wild Tobacco, Easter Cassia and Cockspur. This growth had become rampant in the early 1970s when there had been numerous owners and no-one in residence.

A neighbour had agisted his cows on the block during those years and we continued this arrangement for some time.

Did we have a clear plan? Did we know how and where to begin? No, not really. I wish I knew then what I now know.

What we had was a few ideas and some skills and experience in propagating plants from seed and cuttings. We had a strong desire to repair the damage and to create a forest where, in living memory, one had existed. This idea was strengthened in 1976 by a visit to our place made by the 90 year old brother of my paternal grandfather. He told me of how, 70 years earlier, he had worked for Joe McCarthy, and using only an axe, a springboard and practical know-how, he and others cleared scrub in the Maleny district for the sum of 30 shillings an acre.

So where to begin? The first plantings were near the significant land slip. My aim was to repair this damage. Over the next 45 years, we did so, but not

in an orderly, predictable manner. We actually established upwards of a dozen smaller, discrete plantings. Their size and location were determined by a number of factors including topography, the ability to exclude cattle, time required to prep and plant a given site, plus our increasing knowledge of what and how to do things.

We initially planted trees in a grid, six metres apart, believing they would require this much space to grow with health and vigour. This is approx 250 trees per hectare. In time, we came to appreciate the desirability of establishing edge closure and a canopy as soon as possible. This required pioneer species to be planted at a density of 1,000 per hectare, plus the planting of understorey species at a similar density. As the canopy became established, many original rainforest species have naturally regenerated.

Would we go about things the same way today? No. We were vaguely aware of the presence of a few endemic species that had managed to regenerate along gullies and fencelines, such as Red Cedar, Red Bean, Sandpaper Fig and Tamarind. We were quite unaware of native grasses, ferns and vines, and in our ignorance, we failed to nurture their growth.

Were we to begin our project today, we would seek out and treasure any such natural regeneration, considering each a gem. They would be our starting point, and their survival and growth would be our primary focus.

Our first major planting was in 1976. It was late spring, early summer. The weather was hot and dry. Cattle had reduced the grass to stubble. We arranged for a local farmer to build some internal fencing to exclude cattle from the planting area. The ground was bare and compacted.

My wife and I prepared each planting site using only hand tools, namely, a pick, crowbar and a spade. The thick latticework roots of kikiyu were difficult to cut through. It was slow, hot work. However, time was on our side. We would not start

planting before the wet season arrived.

In the meantime, we turned our attention to what to plant. Our first thought was to contact the Qld Department of Forestry. An officer visited our place and advised that the soil and location would be suitable for the growing of Hoop Pine. However, a monoculture plantation was not quite what we had in mind. We next visited a number of plant nurseries. Only one or two stocked any rainforest species, and even then, the range was limited and expensive. We made our purchases and planted - only to realise years later that most were endemic to other regions, in particular, North Queensland. For this first planting, we transplanted a few dozen Tallowood seedlings from the home of my maternal grandparents in Palmwoods. Today, these *Eucalyptus microcorys* are graceful giants in excess of 80cm diameter.

Our losses from this first planting were few and it is amazing that so many survived given our inexperience and the difficult conditions. Four months after our first planting, the seedlings were lost under a blanket of metre-high kikiyu grass and we had to find our young trees.

Henceforth we purchased bundles of 'tomato stakes' from a local timber mill, and used one to mark each planting site. Later, we standardised this process by always placing the stake on the southern side of the young tree. By this means we tried to minimise accidental damage by whipper-snipper, and the stakes helped me locate the plant when I was hand-weeding. A later refinement was to place two stakes - one north, one south.

The planting of a tree - the digging of a hole, placing the tree in the ground, watering it in - this is the work of minutes. The short, easy part of the process when compared with the years of effort of caring for it, of nurturing its survival and growth. We found that hand-weeding needed to be done 6-8 times a year for the first few years after planting. With each successive planting, the weed maintenance workload

increased. Given that weekends and holidays were the only time available to us to do this work, we had to limit new plantings to about 150 trees each year. This became the pattern of our land stewardship for the next 15 years.

We experimented with a number of different strategies to minimise our losses and learnt a few things not to do, namely:

- Placing rotting vegetation at the bottom of every hole as a way of increasing the level of soil organic matter seemed to attract bandicoots and echidnas. They uprooted many of our plantings, presumably to get the insects.
- We placed layers of newspaper or cardboard around young trees to suppress weed growth, but when it dried out, it was easily torn, blown away by wind or displaced by wildlife.
- We spread out rolls of weed matting and planted through this material. It reduced the growth of grass and weeds, but it also inhibited germination of native plants through natural regeneration.

We also learnt a few good lessons such as:

- Greatly reducing the spacing between planted trees accelerates the development of a canopy.
- Placing a halo of mulch around each plant is an effective way of keeping in soil moisture and reducing weed growth.
- Using a wheelie bin to cart water to our trees made the job of watering in seedlings a bit easier. Once in the ground, our plantings were wholly reliant upon rainfall for their survival.
- Autumn is the best time of year to plant when daytime temperatures are falling and soil moisture levels are high.

In the 1980s, we began hiring contractors to slash the weeds around our plantings. However, I continued to do all hand-weeding and site preparation. From memory, 2002 was the first year we paid contractors to help with planting. Innovations were many and transformative. They included pre-prep spraying of a designated planting area, the use of a mechanical post-hole digger and effective herbicide control of lantana and privet. We were now planting hundreds of trees at a time rather than dozens!

To this day, I continue to do all close hand-weeding of young trees, using a few simple tools that include secateurs, a pruning saw, and a long-handled screw-driver. I refer to it as "my hand-held crowbar". It makes me very proficient in the removal of deep-rooted vines, privet seedlings, lantana and a host of other woody weeds. I am unable to use power tools such as a motor mower, brush-cutter or chain saw, or to use chemical sprays. It is probably a good time to say that I am blind.

I rely on other senses, especially smell and touch, and refer to my fingers as "my eyes". Avoiding injury from thorny weeds and jumper ants can be challenging. For me, wearing gloves is a bit like being blindfolded. I also rely on my wife to inform me and prioritise what needs to be done, such as removal of windfalls or weeds that are smothering young plants.

Closer settlement came to the area in the mid-1980s after the sub-division of the adjacent dairy farm. Fortunately, one new neighbour, then a second, began planting trees on their block. In conjunction with our project, this is helping to establish a green corridor on this section of the Moolooloolo River headwaters. Connectivity is essential in the re-creation of habitat in which wildlife can flourish.

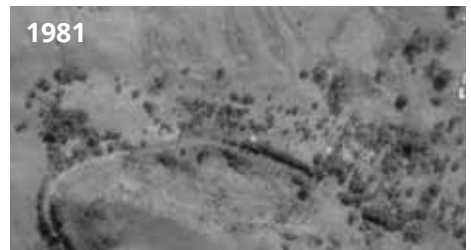
Today, there are a number of schemes and publications which promote the kind of work we have been doing. A remarkable program in this regard is Land for Wildlife, which we joined in 1998. We have learned much through attending LfW field trips, workshops and forums, and through meeting like-minded landowners. We have received invaluable advice and guidance from Conservation Partnership Officers on visits they have made to our property. On a number of occasions, we have also received financial assistance from Sunshine Coast Council through their Landholder Environment Grants, which have enabled us to accelerate our rate of planting and to link discrete plantings.

Barung Landcare is both a pioneer and a leader in the promotion of environmental awareness and action. Its nursery raises thousands of endemic plants and has become a major source of supply for us.

In 2011 we contacted the Queensland Government about establishing a conservation covenant. Two officers from Gympie made a visit and we were duly informed that our property did not satisfy the eligibility criteria as it did not contain remnant vegetation mapped as a Regional Ecosystem. In 2020, after a year-long process, we did achieve our goal, and we now have a conservation covenant with Sunshine Coast Council covering approx 60% of our property. This is registered on title and will be in place for future owners.

As a friend of mine has often remarked, "There's a hard way and an easy way to do most things". You would have to agree that we tried a few hard ways to do the things we've done. I have had no sight for over 50 years, and for 40 of those years was employed full-time as a qualified social worker. However, working on my property has been a pleasure, a labour of love, and an 'occupational therapy' that sustained me personally, and enabled me to have a demanding professional career.

**Article by Terry Boyle
Land for Wildlife member
Bald Knob, Sunshine Coast**



1981
First plantings and some regrowth.



1988
A year before joining Landcare.



1997
A year before joining Land for Wildlife.



2003
A forest is starting to form.



2021
Almost completely forested.



Terry Boyle (right) with Sunshine Coast Council Mayor, Mark Jamieson.

Industrial Landcare

IN ACTION

About ten years ago, a neighbour to the Holcim Quarry in Kurwongbah approached the management of the quarry to ask if there was a possibility of doing some weed management in the quarry grounds. The quarry manager supported this, and so began a unique partnership between community and industry, with mutual benefits for both groups. This innovative arrangement eventually led to the company registering 40 hectares of bushland under Holcim's care with Land for Wildlife in 2015. With the help of a core group of volunteers, who have regular working bees to control weeds, record wildlife sightings and prevent erosion of the waterways, the site has truly transformed into a native bushland oasis.

Already a dedicated volunteer of Moreton Bay Regional Council's Bushcare program, Janice Ridley slowly built a relationship with successive managers of the quarry site. Site managers came and went over the years, but all were supportive of removing environmental weeds and supporting natural regeneration of the buffer zone surrounding the quarry operations site. (Most quarries are required to retain 'buffer' vegetation in order to mitigate air quality and visual impacts from quarry operations).

Holcim went a step further. They prepared a weed management plan and engaged a well-regarded local bush regeneration contractor (Alan Carter) to aid Janice with some of the more arduous tasks. They sponsored Janice and fellow bushcarer, Janet Mangan, to purchase a set of butterfly posters to help educate and encourage the local community to plant host plants on their properties. Furthermore, Holcim also provided the printing for a local environmental weed information fact sheet called *Weeds of Whiteside / Kurwongbah*.

Moreton Bay Regional Council wanted to showcase the work done by Holcim, and with Janice and her band of volunteers, council held two workshops at the quarry in August 2022, attended by 55 Land for Wildlife landholders. The event was hosted by Holcim Quarry's Site Manager, Bob Boss.

Workshop attendees were first taken to an extensive Eucalyptus woodland with superb ground cover. After ten years of spot spraying and hand weeding, the ground cover has resulted in a picture of native grasses. Amongst the Kangaroo and Barbed-wire Grasses are native lilies and a plethora of groundcovers. Attendees were lucky to see colourful ground orchids, yellow buttons and native violets. Council Environment Officer, Stefan Hattingh, gave a talk on the value of the large habitat trees with one having over a dozen hollows, which are home to microbats, cockatoos, reptiles and owls. The tree acts as a 'time share' apartment block, with some animals sharing the same space over the span of the seasons. Careful clearing of the weeds in this area gives the next generation of hollow-bearing trees the opportunity to also be a fauna hotel one day.

The second site highlighted what happens when the weeds that smother everything are carefully removed. Originally covered with Creeping Asparagus, Lantana, Singapore Daisy, Snake Weed and other nasties, the area now showcases successful native regeneration. Weeds were left in situ to break down and herbicide use has been restricted to assist the natural regeneration that is possible on such a resilient site.



Looking up: workshop attendees discuss the values of this huge habitat tree. Looking down: a Slender Hyacinth Orchid was found in the healthy native understorey.



Bushcarer, Janice Ridley, talking about the works conducted on Holcim quarry land.

Now, ten years later and under a canopy of Eucalyptus species, the site is home to a smorgasbord of native trees, shrubs and vines. Importantly it's now a natural breeding ground for native butterflies with many host plants. The only planting in this area has been *Lomandra hystrix* and *L. longifolia*, a variety of sedges and some Broad-Leaved Paperbark (*Melaleuca quinquenervia*) trees around a small waterhole, which is part of an ephemeral wetland.

Our third site of the day was a gully once over-run with Singapore Daisy, Broad-leaved Pepper, Easter Cassia, Camphor Laurel, Chinese Elm and many more weeds. This is the one site where planting, not just natural regeneration, was deemed appropriate. Selected areas within the environmental weeds were cleared and the pepper and camphor trees were drilled over several years. This allowed for a gradual transition from weed-infested gully to what is now developing into a beautiful rainforest area. Hundreds of native rainforest tubestock, some Acacia and occasional Koala habitat trees have been planted.

All green waste has been processed back into each site where possible and allowed to decompose naturally. Hand or mechanical removal of weeds many months after herbicide treatment makes this work much easier.

The Holcim - Volunteer partnership is not a common story, but neither did it just happen. Many years of exchanging ideas on how to best tackle the natural resource issues present on the site, flexibility, and genuine compromise by both parties led to the site's current condition. And as with most good stories, it started with someone who had a great idea.

Moreton Bay Regional Council would like to acknowledge Holcim's commitment to bush restoration and the support they provide Janice at their quarry in Kurwongbah, and for being part of the Land for Wildlife family. They have shown that Industrial Landcare can espouse so many positive environmental and social outcomes.

A fitting bookend to this story is that at the end of the workshop, as we were closing the gates, we saw a Koala near the entrance to the quarry. We took photos, logged it on iNaturalist, and closed the gates with the wholesome feeling that this little patch of bush is well-cared for and increasingly home to many native critters.

**Article by Adam Richardt (Team Leader, Conservation) and Janice Ridley (North Pine Bushcare Group)
Moreton Bay Regional Council
Photos by Adam Richardt**



Posters showing the butterflies of the site help encourage the local community to plant and protect butterfly host plants.



A formerly eroded and rubbish-filled gully is now stabilised with native species planted by quarry staff and bushcare volunteers.



This site at the Holcim Quarry was designed for plants that prefer wetter soils and are butterfly host plants.



A WALKING

Meditation

May I invite you to come with me on my walking track into the untamed wilds at the back of my farm? Past the old, abandoned dairy, turn left, across the gully and into my Hoop Pine plantation.

Here we enter the uncivilised jungle by means of the civilising and comfortable flat and narrow path. An unusual spherical rock is seen, placed here by me and my landscape art. On this I draw a map of Australia and invite my visitor, if from overseas to respond and draw their country on this makeshift globe.

We walk past the hut and its warning sign that says, "The Edge of the Known World". A cairn marks the place where we turn left, up the hill and over a pile of large boulders, taking care not to tip over the balancing rock as it is stepped upon along the path. We pass through a tunnel and to the entrance of a bat cave. Here sometimes live thousands of bats. A visit is possible if they are not home but to reach the bottom of the cave is truly a claustrophobic experience into the nether world below.

Someone even came all the way from the US just to camp in the rainforest cave and briefly return to the wild. We go down the hill and past the impressive Strangler Fig wrapped around a Giant Water Gum of 26 feet girth and then across the gully and onto my jungle shrine. I discovered a cow bone here when I was planting a tree and it became the basis of my shrine. It is a memorial to the past when incredibly this land was cleared for bananas and the grazing of dairy cattle. Visitors are invited to take to the dais and confess their jungle thoughts.

The track now turns up the hill to complete the circumambulation. A lookout is reached with a view over the valley below. A bit further on is a Japanese character saying so I'm told, "thank you". On past the rock in the shape of a severed head, over an enormous log, cut when the forest was cleared now weirdly all planted around by my young trees. What is it that possess humans into such conflicting actions? The struggle to fell the giant tree and the even greater struggle to re-establish the forest again.

I love my forest path and taking the occasional visitor for a walk. May I recommend, instead of domestic gardening, the jungle path and landscape art.

Bob Whitworth
Land for Wildlife member
Cedar Pocket, Gympie

An Ode to Parsonsia

With strangling, tangling, twisted trunks, grows a vine many despise,
You would almost swear it's creeping right in front of your very eyes,
In the absence of fire it dominates, climbing high to reach the skies,
But as a vital larval food plant, it makes for thousands of butterflies.

It has an opposite pair of green leaves, milky sap and purple veins,
And grows in every habitat: forest, creek and boggy drains,
It sprouts tiny green flowers, attracting too many bugs to name,
And when the smooth, green pods split open, millions of silky seeds they rain.

Have you seen a drift of Common Crows? It's truly a sight to see.
Dozens fluttering around you wherever these vines scramble up the trees,
Chocolate brown and spotted white, true marks of local beauty,
Without Parsonsia to feed on, the clouds of crows simply would not be.

It makes me sad to see dead stumps where people didn't know their worth,
These vines are natural habitat features, evolved for this patch of Earth,
They form shelter for small birds and mammals of which there is a dearth,
And you can cut the small vines back if they're behaving like a curse.

These vines are the start of a food web, without them species won't cope,
To seem them thrive, when the bush is so dry, still gives me some hope.
When people ask if they're a horrid weed, I smile and tell them "Nope!"
Please make some space on your land, and in your heart,
For our tumbling, humble Monkey Rope.

Fflur Collier
Land for Wildlife Officer
Brisbane City Council

Rocks and Landscapes Book Series

Edited by Warwick Willmott

Viewing the world through a geological lens can be difficult given the millions of years involved. However, it can help make sense of the landscape in which we live and geological processes, like erosion, that we see occurring around us today. We are lucky to have a series of books that describe the geological processes that have created the landscapes of SEQ.

All of these books are edited by Warwick Willmott. Some of you may have been fortunate enough to have done a geological workshop with Warwick, such as those detailed on pages 14-15.

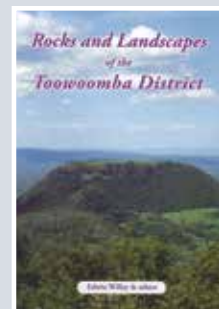
These books not only explain the 'recent' volcanic activity (18-27 mya) that formed the Great Eastern Ranges and our rich basalt soils, but also the complex geological processes that formed the Australian continent. Explanations are reinforced with diagrams to show processes like subduction.

In addition to explaining geological processes, these books cover soil formation and types from the black cracking clay soils of the Darling Downs

to the shales and sandstones around Withcott. These books make sense of why some soils are more prone to erosion and landslips. Groundwater systems are also discussed, explaining how aquifers are formed and recharged.

One of the best things about these books is their local relevance. These books are a field guide to the landscapes of SEQ. Extensive referencing of local landforms make up the bulk of these books. Specific directions to geological features are provided using roads, creeks and mountains as landmarks to help navigate the reader to locations. One could easily plan a day out to look at the Toowoomba lava pools, the Helidon natural springs, the fossil rich shales of Ipswich, the Aspley mudsprings, the Helidon sandstone buildings in the Brisbane CBD, ending with a cup of tea overlooking the volcanic plugs of the Glasshouse Mountains. If you want to know more about the ground under your feet and the hills around you, these books are a must have.

Review by Deborah Metters



Brisbane and Ipswich | 2012
Gold Coast Hinterland | 2010
Sunshine Coast | 2007
Toowoomba District | 2020
All \$11 each + postage

Published by Geological Society of Australia,
Queensland Division - www.gsa.org.au
Also available via the Qld Museum shop

A Walk in the Mountain Forests

Paula Peeters

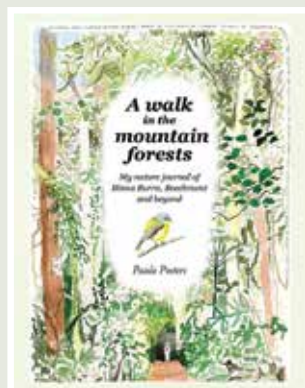
A Walk in the Mountain Forests is a collection of nature journal drawings and writings by wildlife illustrator and ecologist Paula Peeters. It explores the beauty and richness of the Beechmont and Binna Burra mountain forests from 2017 to 2021, including the devastating bushfires of 2019.

There are over 196 full-colour original illustrations that convey Paula's deep curiosity and love of the natural world. Each page is vibrant with her detailed and often playful observations of wildlife, plants and fungi, capturing her thoughts and heartfelt feeling that comes from the deeply immersive and often meditative experience of nature journaling.

This book is bound to inspire and delight and will fire your own curiosity and imagination to explore the wonder and beauty of the natural world.

Review by Amanda Maggs

Paperback | 2023 | \$32
206 pages | 17 x 22cm
Published by Paperbark Writer
www.paperbarkwriter.com



Inviting Nature to Dinner

Helen Schwencke and Dick Copeman

Starting out with a wide angle, this book introduces readers to the web of life and explains how invertebrates make up the majority of animal life on Earth and why they are in decline globally. The focus is then narrowed into practical actions that we can do to support invertebrates in our backyards.

About one-third of the book details 13 native plants that are both edible and butterfly hosts. The appendix furthers this with an extensive list of edible native plants of SEQ that also support butterflies and other wildlife.

Overall, this book is an interesting cross-over between wildlife-friendly gardening, environmental education, edible bushfoods and butterfly field guide. It is a credit to authors that they have condensed complex ecological topics into one enjoyable book.

Review by Deborah Metters

Paperback | 2020 | \$32
116 pages | 15 x 23cm
Published by Earthling Enterprises
www.earthling.com.au





ROCKIN' AROUND THE *Hinterland*

A tour of the Sunshine Coast Hinterland with Warwick Willmott

It is early November and a cool breeze hits my face as I look out at the rolling hills, the rugged peaks of the Glasshouse Mountains to the south and Mount Coolum and Mount Eerwah to the north. It is difficult to imagine the violent and turbulent history that formed this country we walk on today and I am grateful that my guide on this journey is none other than Warwick Willmott. Warwick is an expert geologist with over 30 years' experience working across the Sunshine Coast and SEQ region. He is leading a three day workshop series for Sunshine Coast Land for Wildlife members and is about to take us on a journey through time.

We start day one at Howell's Knob, Reesville. Looking to the west we see the oldest rocks, complex meta-sediments, formed over 300 million years ago. These rocks were formed during an episode of intense deformation of deep-water sediments on the then ocean floor. The deformation of these sediments hardened and recrystallised many rocks into what is known as 'meta-sediments' (formed through this process of deposition and solidification of sediments). Some molten magma was generated, and forced up in granitic bodies, which can be seen as large granite boulders on rocky slopes of the upper Mary River Catchment and found in the geologies known as the Booloumba and Amamoor Beds

On top of these old meta-sediments are the marine sediments and some lavas accumulated to form the Cambroon Beds and

Cedarton Volcanics. We can see these younger volcanics on the ridgetops from Peachester to the colourful stones that line the creek beds of Booloumba and Little Yabba Creek at Kenilworth. Warwick explains with a wry chuckle that, at this point in history, the coastline as we know it was facing to the south of the continent. I look around to see the spellbound crowd, like myself, try to recalibrate their internal compass.

The most recent volcanic activity that formed the geology of the Sunshine Coast occurred in the middle of the tertiary period (~20-30 million years ago) and is evident from the rich basalt soils on the Maleny Plateau.

As we walk down the Obi Obi Creek at Gardners Falls, the striated flows of rock and large basalt boulders strewn on the banks of the creek appear almost frozen in time. Warwick picks up a small dark brown rock and cracks it open with his pickaxe. He explains that to identify a rock, you must break it open as the colour and texture on the surface is often weathered and not a good indicator of rock type. The inside of this small basalt rock is dark brown with whitish-grey crystals (see photo below). These basalt rocks weather over time into fertile red or chocolate soils and we can see in the remnant rainforest that fringes the creek, this fertile soil provides the perfect growing material for the lush and diverse rainforest that extends across the Maleny Plateau.



Basalt slabs at Gardners Falls provide a perfect seat for workshop attendees. These slab are slowly weathering into the fertile soils that line this creek.



Basalt rock is dark brown in colour with semi-translucent brown crystals of plagioclase feldspar (white to grey in colour). Basalt weathers over time into fertile chocolate or red soils.



Warwick demonstrates how to use a geological pickaxe to crack open rocks. The outside of rocks are often weathered and hide the true diagnostic features of the rock.



Workshop attendees listen in as Warwick explains how the basalt flows are visible behind him in the striations of the rock at Gardners Falls, Maleny.

Our final stop on this whirlwind tour is Simon and Sue Gedda's Land for Wildlife property that sits at the head of the Mary River Catchment. This property was historically cleared for grazing and like many properties, has multiple slips exposing dark red soils on steep terrain. Warwick explains that landslips occur on these soils due to:

- Long-term weakening of the internal strength and cohesion of the soil due to natural weathering.
- Bulk strength of surface soils are reduced due to vegetation clearing. Large trees manually help bind the soil together with deep roots, but also draw out water from the soil, making the soil 'lighter' and not as prone to slipping downhill.
- Loss of effective strength possibly caused by groundwater pressures developing within the soil.

Warwick highlights the importance of revegetating cleared areas and planting species selected for their water uptake ability (e.g. Hoop and Bunya Pines) as well as their capacity to withstand some soil movement. As we walk down a steep track, we can see areas where a large slip has left a big orange scar and Bunya Pines are standing tall but on a slight lean, indicating movement of the soil below.

As we sit down to wrap up day one of our geology tour, I hear the buzz of excited voices explaining the challenges of managing landslips and the management tools that have worked well to stabilise slip areas. There are a variety of management practices that have been tried and tested in landslip areas on these basalt plateaus including installing leaky weirs, re-directing water flows on steep slopes and revegetation. However, I notice one common theme between all the stories and learnings shared throughout the workshop. There is a resilience and adaptability that extends beyond the restoration of a single patch or property. It is the adaptability and knowledge-sharing between experts, neighbours and new friends that is the highlight.

The following two days of workshops continued this journey through our rocky geological past. In the end, I was left standing in quiet reflection on top of that same hill where our story began. Although this three-day journey was but a speck of sand on the geological time scale, the knowledge shared, and connections built in the community will be shared for years to come.

Article and photos by De-Anne Attard
Land for Wildlife Officer
Sunshine Coast Council

Reference

Willmott W (2007) *Rocks and Landscapes of the Sunshine Coast*. Revised Second Edition. Geological Society of Australia, Brisbane.



This red scar and leaning trees are an indication of several things. Firstly, here are rich, red, basalt soils resulting from the weathering of volcanic lava flows that occurred 20-30 million years ago. Secondly, the land in the foreground has slipped (dropped) down the slope. The trees survived the large slip, but moved with the slip and are now leaning.

The cause of this landslip is likely due to past vegetation clearing as well as above ground and below ground water flows.



Another small landslip that resulted from previous vegetation clearing and modification of the landscape. This slip is on an existing access track and the group is discussing the possible remediation options for this area.

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A Spotted-tailed Quoll visiting a baited camera trap at Goomburra in January 2022. Photo courtesy of Quoll Society of Australia.

Recent Quoll Sightings IN THE SCENIC RIM

Over the past few months, there have been two separate sightings of the endangered Spotted-tailed Quoll in the Scenic Rim. This is very exciting news as quolls are rarely seen in SEQ. Their populations have declined dramatically since colonisation and they are shy, elusive animals.

The first sighting was of a quoll crossing the road adjacent to the Kokoda Army Barracks at Canungra. The Department of Defence owns significant tracks of bushland in SEQ, providing large, relatively undisturbed habitats for wildlife. Quolls need large contiguous forests to survive. They are a top predator so need large areas to hunt. They also require numerous places to den and rest such as large hollow fallen trees, rocky outcrops and other animal burrows. They like to move across the landscape following densely vegetated creeks and protected gullies.

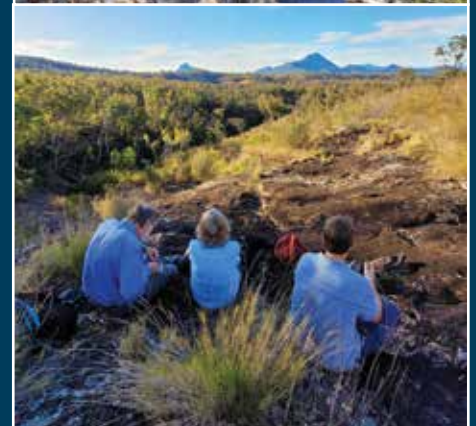
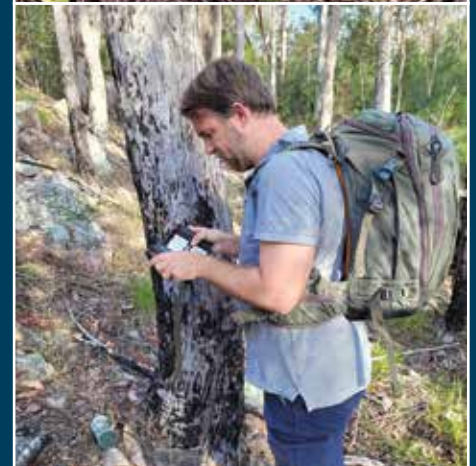
The second sighting was by a bush regenerator who was doing weed control work on a Land for Wildlife property at Tamborine Mountain. In response to this sighting, Scenic Rim Regional Council has installed baited infra-red camera traps on this property in the hope of capturing

footage of this quoll. Baited camera traps use a chicken carcass enclosed within a sturdy cage to entice carnivores to the site. The nearby camera will be triggered in response to any movement near the trap.

Both of these sightings come less than a year after a confirmed quoll record in the Goomburra section of Main Range National Park in early 2022. This individual was caught on a camera trap during a survey by the Quoll Society of Australia.

Spotted-tailed Quolls are a native marsupial about the size of a domestic cat. They only live to 3-4 years of age so therefore need to find a mate and successfully reproduce quickly. Given that they will hunt domestic chickens, they have unfortunately been heavily persecuted in the past. They also hunt small wallabies, bandicoots, birds, rats, reptile and will climb trees to take possums and gliders.

If you own a property in the Scenic Rim that contains potential quoll habitat and you are interested in having your property surveyed for quolls, please contact the Scenic Rim Regional Council Land for Wildlife Officer, Catherine Madden (details pg 2) to discuss.



From top: Catherine Madden installing a baited camera trap. Paul Revie from Wildlife Queensland installing a camera trap for quolls. Taking a rest during quoll surveys in remote country in the Scenic Rim.