

SPRING 2021

E-News





Noosa Landcare would like to acknowledge the traditional owners of the land we work on and lands this E-News may extend to. We pay respect to the Elders past, present and emerging.



This E-Newsletter is proudly supported by Noosa Council

Front photo: Sap harvest marks by Yellow Belly Glider in Cooloola National Park.

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Learn about coastal habitats and explore a local rock pool near you to play nature bingo! Fun activities and interesting facts.



Landcare Linkup

UPCOMING LANDCARE LINKUP
ECO-CONVERSATIONS

LANDCARE
LINK-UP
WORKSHOP
SERIES



Glorious Gliders - survey and volunteer information night

16th September 5-7pm

With Queensland Glider Network, Department of Environment and Science, Queensland Government and Noosa Landcare

Learn about our new innovative Glider program as part of the Landcare Led Bushfire Recovery Grants Program in partnership with Queensland Glider Network and the Queensland Department of Environment Science.

The night is an opportunity for people to sign up as volunteers to help with Greater and Yellow Glider surveys in the area. Survey training, including Glider ID, survey methodology and site outline will be shared with participants.

WHERE

Rural Futures Centre
65 Pavilion St
Pomona, QLD

ONLINE BOOKING ESSENTIAL

Visit <https://noosalandcare.org/events/>

Enquires: Jaymie
(07)5485 2155 or
office@noosalandcare.org

COST

FREE for Noosa Landcare
Members & Bushlandcarers
\$10 for other attendees

**More workshops coming soon for
October and November.
Sign up to our mail list or follow us on
Facebook to get updates.**

DO YOU WANT CLIMATE ACTION?

Hear from a range of speakers and participate in sessions that provide actions you can do!

Trial e-bikes and scooters and view a range of exhibitors.

Join our Noosa Youth Climate Summit and let's map the future we want to see !!

This half day event will be led by students for students

Come make your voices heard !!

Sat 9th Oct

9 - 2pm

Good Shepard Lutheran College Hall

Fully catered event

Free entry

THE OUTCOMES OF THIS SUMMIT WILL BE PRESENTED TO COUNCIL & STATE GOV BY NOOSA YOUTH ADVOCACY GROUP

PROUDLY SUPPORTED BY:

For more info and to register go to:
noosaeehub.com.au



Poster Art by Jolie May

When:
Saturday
9th October

Where:
Murdering Creek,
Peregian Springs

Time:
9AM - 12NOON

Landcare Australia Bushfire Recovery Community Planting Day

**with OzFish Noosa Chapter
& Noosa and District Landcare**

Join us to help restore important wildlife corridors along Murdering Creek, home to threatened species like the Oxleyan Pygmy Perch and Glossy Black Cockatoo, which were damaged in the bush fires of 2019.

Lunch and refreshments provided

Registration essential:

<https://ozfish.org.au/event/murdering-creek-bushfire-restoration-works-tree-planting/>

Enquires contact Noosa Landcare Project Officer,
Jen - projects6@noosalandcare.org, (07) 54852155.





Securing habitat for wildlife

Australia's Black Summer of 2019/20 saw over 17 million hectares burnt across NSW, Victoria, Queensland, ACT, Western Australia and South Australia.

In response to the significant fires that occurred in Peregian, Weyba, Cooroibah and Cooloola of the Sunshine Coast area in late 2019, Noosa Landcare teamed up with Noosa Council and Queensland Parks and Wildlife to install nest boxes within these fire affected areas to provide much needed nesting habitat for tree hollow loving wildlife lost during the fires and support the reestablishment of these species back into these forests.

The boxes installed targeted nationally significant fire affected species, such as Greater Gliders, Yellow-Bellied Gliders, Red-browed Tree Creepers, Glossy Black Cockatoos, and Powerful Owls. Locally significant species, Microbats, Sugar Gliders, Feather-tail Gliders and Pale-headed Rosellas.

Nest boxes were installed during April and May of 2021 across four sites that had lost habitat trees. Site included, Weyba Downs, Cooroibah and Cooloola National Park.

Funding for the purchase and installation of the boxes was kindly provided by WIRES and Landcare Australia as part of the Wildlife Relief & Recovery Grants 2020 program.

Top photos: Project nest boxes and installation.

Bottom photos left to right: Greater Glider, nest box being installed, sap harvest marks by Yellow Belly Gliders in Cooloola National Park.



MAY D.I.Y DAY

What a great morning it was at our Nest Box Building Workshop presented by Hollow Log Homes for our May DIY day on the Saturday the 22nd of May of this year.

The drills were out and buzzing away after a presentation on the values and successful take-up of nest boxes by a large number of species across Australia.

In the end, 25 Nest Boxes were built and headed home to the workshop participant's properties. We would like to thank everyone that came along and hope their enthusiasm and passion for our local wildlife continues.

Look out for our next May DIY day in the new year.

This workshop was supported by WIRES and Landcare Australia through the WIRES – Landcare Wildlife Relief & Recovery Grants 2020.



We stock a range of
Hollow Log Home
Nesting Boxes at our
Hinter Hub.

For more information feel free to drop
in to the Hub and see Belinda and the
team or shoot them an email at
hinterhub@noosalandcare.org





Noosa Biosphere wins prestigious UNESCO MAB award

By Noosa Biosphere Reserve Foundation



Photo: Sharon Wright (NBRF Executive Coordinator) and Phil Moran (Noosa & District Landcare) with letter of congratulations from UNESCO.

The Noosa Biosphere Reserve has been awarded the coveted UNESCO 2021 Michel Batisse Award for excellence in biosphere reserve management.

Noosa Biosphere Reserve Foundation (NBRF) Executive Coordinator, Sharon Wright and Noosa Landcare Staff prepared the application in January this year, putting forward the Keeping it Kin Kin project as an exemplary case study of people living in harmony with nature. The application was endorsed and submitted to UNESCO by the Australian Man and the Biosphere National Committee.

"We are incredibly proud to have won this international accolade. It is a first for Australia and highlights the Noosa community's dedication to improving and protecting our natural environment," Ms Wright said.

The Noosa Shire was awarded UNESCO Biosphere Reserve status in 2007 and is one of over 700 Biosphere Reserves globally and just four in Australia. "This award is the highest UNESCO accolade for biosphere reserve management and truly represents what makes Noosa special – our people. The award recognises the importance of community groups, governments and individuals working together to find local solutions to the global challenges of sustainable development."

Keeping it in Kin Kin is an erosion remediation project improving agricultural productivity, waterway health and water quality within the Noosa Catchment. "I would like to thank Phil Moran and the wonderful team at Noosa & District Landcare who implemented the Keeping it Kin Kin project, and project partners Noosa Shire Council, Healthy Land & Water, Noosa Parks Association, The Thomas Foundation, Kin Kin Community Group, Noosa Integrated Catchment Association and Country Noosa," said Ms Wright.

"It is this multi-stakeholder effort that drives the NBRF to continue to facilitate big ideas for the future protection of our special place."

Noosa Mayor Clare Stewart said the international award recognised the efforts of everyone involved.

"It's a great achievement. Congratulations to everyone who helped make the Keeping it in Kin Kin project possible, and all of our community groups, their volunteers, and other agencies that readily work together to enhance our environment and make Noosa such a special place to live and visit," said Mayor Stewart.

Noosa & District Landcare Group General Manager, Phil Moran, says they are very pleased to have played a leading role in this outstanding project. "The number of partners involved reflects the community and organisational buy-in the project has attracted. We commend and congratulate the Noosa Biosphere Reserve Foundation for supporting the project, and receiving this recognition," said Mr Moran.

The Foundation will launch its inaugural Noosa Biosphere Awards program this month to celebrate excellence in sustainability as part of the 50th anniversary of the UNESCO Man and the Biosphere Programme. Winners will be recognised at the Noosa Biosphere Gala on 2 November 2021.



A snap shot of some of the Keep it in Kin Kin projects completed.
Supporting healthy soils, biodiversity and community!

CATCHMENT CARE

June this year saw the end of its third year of the Lake Macdonald Water Supply Catchment Protection Program in collaboration with Seqwater.

So far we have worked with many wonderful landholders with the common goal of creating a more sustainable and resilient catchment for our community.

The Lake Macdonald Catchment, 42 squared kilometers in size, stretches from Eumundi out towards Ridgewood and Tinbeerwah. Largely private land, the catchment's waterways flows through a mosaic of rural residential, suburban and agricultural land.

As one of our local drinking water catchment it is important that we work together - community, businesses and government - to ensure the lakes waterways remain healthy.



The photo above is a revegetation project we undertook in the first year of the program on a property in near Cooroy Mountain close to Eumundi.

This tributary was once open to cattle and had limited riparian vegetation. Through the program we helped control cattle access to the tributary with the installation of permanent fencing and a water trough for the livestock and planted 2000 groundcovers and trees along the waterway.

Just over 2 and a half years later the planting is starting to take shape ...of a healthy forest!

Expressions of interest are now open for the Lake Macdonald program. Please contact Project Officer, Ilana at projects4@noosalandcare.org or (07) 5485 2155 for more information or submit your interest.



Dangerbridge Nature Refuge Koala Carbon Habitat Restoration Project



As you walk along the stretch of Kin Kin Creek and through the remnant patches of rainforest and Eucalypt forests, you can see the magnificent wilderness it once was prior to settlement in the area. The bird chorus singing loudly in the tree tops, kangaroos and wallabies grazing by the edge of the forests and loud frog calls by the edge of the creek puts a smile to your face and gives you a sense of ease knowing that nature is healing.

Dangerbridge, a 279 ha ex-Macadamia and cattle farm located along Kin Kin Creek, was dedicated to wildlife by becoming a nature refuge in 2010. Owner Jenifer wishes to restore the property near to its original vegetation communities and for it to become a safe haven for wildlife within the region, including threatened species like the Koala and the Richmond Birdwing Butterfly.

Jenifer's vision for the property is bold and inspiring. Over the years she has been working towards her goals, having revegetated many sections of the property and has been involved in the captive breeding program of the Richmond Birdwing Butterfly.

The start of 2021 saw many of Jenifer's dreams for the property come true with the commencement of the *Dangerbridge Nature Refuge Koala Carbon Habitat Restoration Project*. In partnership with Greenfleet, Queensland Trust for Nature and the Queensland Government, Noosa Landcare began the transformation of 72 hectares of bare paddocks into a forest. Over 130,000 trees were planted in just 5 months by Noosa Landcare's Project Officer, Tamara Kubica and her team.





Koala populations are under threat in many areas across Australia. For South East Queensland habitat loss, car strikes, dog attacks, bush fires and disease is putting immense pressure on Koala populations. The Dangerbridge Nature Refuge restoration project will help provide significant habitat areas with excellent prime koala food tree diversity.

While there is evidence of Koala occupation on the property, the population was boosted recently by the addition of one beautiful young dispersal age Koala. Little 'Billi' was found in an urban area of Boreen Point after dispersing from her mother.

After a thorough check-up at the Australian zoo Wildlife Hospital, she was released on the Dangerbridge Nature Refuge to start a hopefully long life amongst the new and older trees.

Check out the small clip below about Billi's release

<https://fb.watch/82homfb4E1/>

Photos:

Page over - Aerial photos of planting sites on Dangerbridge Nature Refuge.

This page - Noosa Landcare planting crew and Billi the Koala release at Dangerbridge.

IT'S
**WILDFLOWER
 SEASON**



Fringed Lily
Thysanotus tuberosus



Weeding Bush
Ricinocarpos pinifolius



Wild May
Letospermum polygalifolium



Hibbertia linearis var. obtusifolia



Dog wood
Jacksonia scoparia



Purple pea bush
Hovea acutifolia



Acacia hubbardiana



Native Iris
Patersonia glabrata



Wallum Bottlebrush
Melaleuca pachyphylla



Fish habitat Bushfire Recovery Project

Words adapted from OzFish media release

Murdering Creek is home to the honey blue-eye fish and Oxleyan pygmy perch, which are important, native, small bodied (and very cute) threatened species.

Unfortunately, their habitat was severely degraded by the devastating bushfires that tore through the area in 2019.

OzFish Noosa have partnered with Noosa District Landcare to restore this key fish habitat.

Earlier in the year the two groups worked together to remove threatening weeds from a section of stream bank and have planted a variety of native sedges and trees to improve the riparian buffer and reinstate the lost food sources for the perch and honey blue-eye.

A series of community working bees will be occurring to extend this work along the fire effected areas of Murdering Creek, with our first event hosted on Saturday the 9th of October. For more information and registration please visit ozfish.org.au/event/murdering-creek-bushfire-restoration-works-tree-planting/

This project is supported by the Australian Government's Wildlife and Habitat Bushfire Recovery program and



Follow OzFish Noosa on Facebook @OzFishNoosa to find out what other great fish friendly projects are happening in our region.

Roving Restorers, creating community & protecting biodiversity

The Hinterland Bush Links Noosa Chapter began July last year through the partnership of Noosa Landcare, Hinterland Bush Links and Noosa Council. This saw the formation of the Noosa Roving Restorers volunteer regeneration group run by Noosa Landcare Project Officer, Tamara Kubica.

The program sought out to help protect and enhance native bush land health and biodiversity with in our region. Over the past year the enthusiastic and hardworking team has helped many local landholders with weeding and planting projects on their properties. Though the most valuable aspect of this program has been the connection with our community. It has been very rewarding to see the friendships made and the transfer of knowledge amongst the group.

We are very proud to announce that the Roving Restorers will be running again for another year, with Noosa Council committing support to the program in their recent Environmental Projects and Alliance Grant release.

We thank all our hardworking volunteers and Project Officer, Tamara, for making the first year such a success. We look forward to sharing all the wonderful projects and bush land areas with you all over the coming year.

Sign up to our mail out list or like us on Facebook to find out when our next Roving Restorers day is on.



NOOSA
BIOSPHERE
awards

Celebrating Environmental & Sustainability Excellence

**ENTRIES OPEN
FRIDAY 13 AUGUST 2021**



A troublesome truth

by Phil Moran

I have been a devoted tree hugger for quite a while. I have worked with Noosa & District Landcare for over 20 years...Our property was the first Nature Refuge declared in the Noosa shire. And, I like butterflies. I have been a member of the Richmond Birdwing Conservation Network for many years too.

In this role, I try to educate people about this wonderful, vulnerable butterfly [*Ornithoptera richmondia*]. We grow and distribute the larval food plant [*Pararistolochia praevenosa*], conduct workshops on the life cycle, and talk about threats to its existence.



Pararistolochia praevenosa flower



Pararistolochia praevenosa leaf and fruit



Pararistolochia praevenosa leaf and Richmond Birdwing Butterfly larvae

Historically, the main threat has been habitat destruction of its food plant for housing and commercial development. We have had some wins, with many Birdwing vines being planted by enthusiastic, like-minded souls. You do not need 5 or 50 acres; a suburban block will suffice. They can be planted on fences, trellises and in large pots too.

Another major threat is the planting of the exotic Dutchman's pipe [*Aristolochia elegans*]. Its a bit like 'mistaken identity'. Thinking it is *Pararistolochia praevenosa*, the Richmond Birdwing Butterfly will lay her eggs onto the leaf of the Dutchman's pipe and when hatched the larvae will eat the leaf of the vine and die.

Dutchman's pipe was planted a lot in the 70's...One of the authors that got me into gardening, and eventually into tree hugging was Harry Oakman, via his book *Tropical and Subtropical gardening*. In it, he says of the Dutchman's pipe..."A vigorous climber...is seen at its best from under a trellis roof from which the purple blotched flowers can hang gracefully down, showing themselves off perfectly".

In the bush at home, I had noticed one or two very small plants that looked like the dreaded Dutchman's pipe [*Aristolochia elegans*]. Yes, the Birdwing killer. Here I am, evangelizing about this wonderful butterfly, and I am growing this nefarious thug!



Dutchman's Pipe Flower



Dutchman's Pipe seed pod open



Dutchman's Pipe leaf

Filled with shame, I set about trying to find the 'mother lode' or parent plant. Like most bush blocks, I have some good areas, and plenty of weedy areas. Some areas I have left the Lantana and other weeds grow – they are providing habitat, creating shade, and producing leaf litter, and I just did not prioritise these areas.

It took a while, but eventually I saw the 'purple blotched flowers...hanging gracefully down' in our bush!!!

The Department of Agriculture and Fisheries [DAF] have a good fact sheet on the scoundrel which can be found at :

https://www.daf.qld.gov.au/data/assets/pdf_file/0004/68701/dutchmans-pipe.pdf

Dutchman's pipe is a restricted invasive plant under the Biosecurity Act 2014. The fact sheet and I agree on the ways to treat this weed. After rain, you can often pull it out and hang it up in a tree to die...slowly. You can also use the 'Cut& Dab' method using rates and product outlined in the fact sheet . Be sure to read the herbicide label and use appropriate Personnel Protective Equipment [PPE].

When trying to ID this plant, it has a very distinctive smell when the leaves are crushed – it stinks – a smell you are unlikely to forget. Be careful when treating larger specimens as the corky stem can be similar to some of our native vines. Scratch the stem with your secateurs and smell – it stinks too; if no smell – no cut!

So, I have 'outed myself! But I hope this is a good learning for all of us....If you have Dutchman's pipe, consider removing this vine to help protect the vulnerable Richmond Birdwing Butterfly. And as I always stress, **early detection and rapid response!**

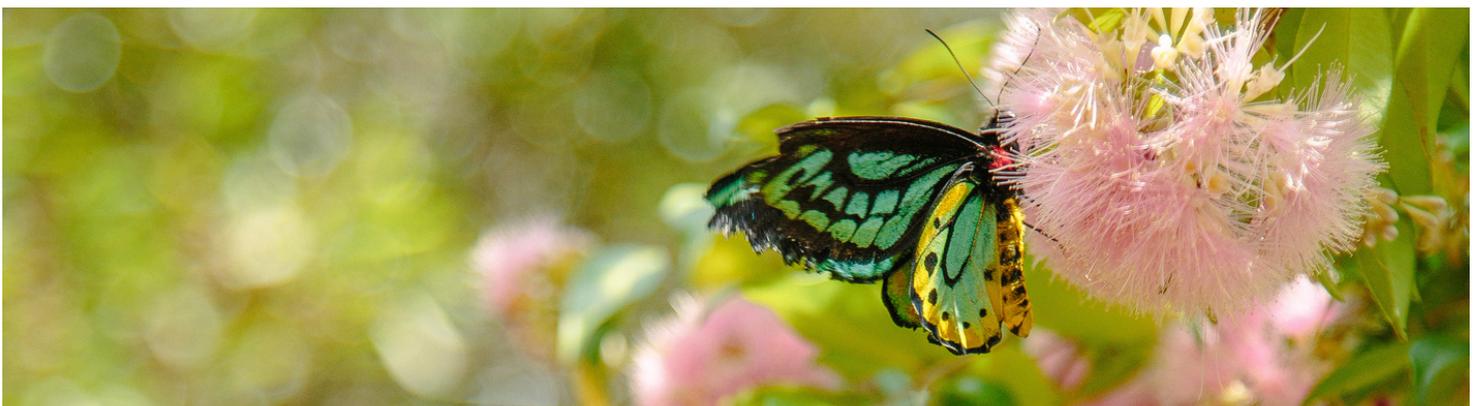


Photo: Jazzy Connors



Native Plants & Gifts Outdoor inspiration Information

6 Station Street, Pomona

8:30AM-3:30PM Mon- Fri

8:00AM-1:30M Saturday

Hinter Hub contact - (07) 5485 2468
hinterhub@noosalandcare.org



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

Available through:



Visit - www.lfwseq.org.au/



Country noosa

Promoting a sustainable rural future

COUNTRY NOOSA CONNECTS, PROMOTES AND SUPPORTS SUSTAINABLE RURAL ENTERPRISES

<https://countrynoosa.org/>

BECOME A MEMBER





So what is Regenerative Agriculture?

By Ilana Kelly



As you may be aware, many conventional and industrial agricultural practices are currently depleting nature's resources, including soil, biodiversity, carbon, and water. With increasing understanding of these negative impacts of modern conventional agriculture on our environment, health and the sustainability of the industry, the regenerative movement has really pushed forward and gained traction across the globe.

The term 'regen ag' is thought to have been first coined by Robert Rodale, who in 1984 in California identified the need for an alternative approach to the food production system, which would improve the resource base rather than sustain the conventional and dysfunctional practices of that time. In Australia, it was around this same time that many farmers were beginning to question their conventional farming practices too, seeking alternative ways to farm having come out of a pretty brutal drought.

In simple terms, regenerative agriculture are agricultural practices that seeks to improve and replenish the resources it uses, rather than destroying or depleting them. It aims to restore balance in ecological systems through a whole farm approach, where the farm system works in symbiosis with the natural systems on the farm. Just think of nature as your business partner.



Photo: Australian Story: Greg Nelson

Charles Massy, farmer, ecologist, and a leading voice for regenerative agriculture, states it is a "*shift from a mechanical mindset, where we view the earth as a resource from which to extract profit, to an organic mindset, where we view ourselves as an inherent part of nature and its cycles, not separate from it.*"

Regenerative agriculture also incorporates and values the human or 'culture' component of agriculture. It is generally guided by a holistic decision making framework allowing farmers to support their individual and family's well-being on the farm. Reduced financial burdens further supporting happier and healthier farming families. It also enables food security amongst communities, fosters stronger and more authentic relationships with consumers and vice versa, encourages cooperation and supportive networking amongst producers.





Regenerative agriculture includes a diversity of land management and production practices from all sides of agriculture – cattle and sheep grazing, dairy, poultry, cropping, market gardens, orchards and many more.

Regenerative practices generally focus on integrated management of soil, water, vegetation and biodiversity and becoming more efficient in the use of natural resources.

Some of the key farm practices unifying the regenerative movement include:

- **Keeping soil covered – no bare soil,**
- **Minimal or no disturbance of the soil,**
- **Keeping living roots in the soil,**
- **Encouraging diversity, both biologically and with business,**
- **Low input methods – pesticides, fertilisers etc., and**
- **Landscape restoration.**

These practices and others help support the self-organising processes of nature, building resiliency within your farm system. This is particularly important with our current predicament of a changing climate.

I should highlight here that there is 'no one practice fits all' when it comes to regenerative agriculture. General principles can be used across regions and countries, however, the specific practices someone will use changes from farm to farm.

Excitingly, we all have a role to play within this regenerative movement. As a consumer we can help support our local farmers and the great things they are doing and encourage transition towards regenerative practices more generally. Whether you choose to join a food co-op or Community Supported Agriculture (CSA) business, buy direct from a producers, encourage your favourite cafe to source more locally grown produce or even volunteer at a local farm, it all helps build a healthy, resilient and localised food system.

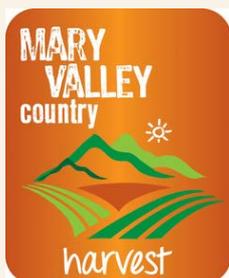
There is so much great information out there and some leading innovators within this regenerative space. To dip your toes, I highly recommend exploring the work of Charles Massy and his revolutionary book *Call of the Reed Warbler*.



Some legend farmers leading locally



Forage Farms,
Kyborg



Mary Valley Country
Harvest



Bunya Grove Produce,
Amamoor



Shambhala Farm,
Doonan



K2 Beef,
Kandanga



Banyan View Farm,
Pinbarren

www.foragefarms.com.au

www.maryvalleycountryharvest.com/

www.bunyagroveproduce.com.au/

www.shambhalafarm.com.au/

www.k2beef.com.au/

www.banyanviewfarm.com.au/



Native animals or introduced animals: whose poo is harming our water quality?

By Kate McKenna

[Click here to read](#)

Warning if you have just eaten lunch! Contains many faecal-related words.



LAND FOR WILDLIFE
South East Queensland

Enchanting world of Fungi

Article by Maree Manby
Conservation Partnerships Officer
Redland City Council

[Click here to read](#)

support platypus
conservation

ADOPT A PLATYPUS

this #platypusmonth





Threats in Moreton Bay significantly contributing to the global decline of shorebirds

A report outlining threats to Moreton Bay's migratory shorebirds has recently been released, expressing concern of observed interruptions to shorebird feeding and resting through human disturbance and habitat loss through development and vegetation encroachment in the region. This could further exacerbate the global decline of migratory shore birds globally.

[Click to read full article](#)

Have you read a good book, listened to an inspiring podcast or stumbled across a useful app lately?

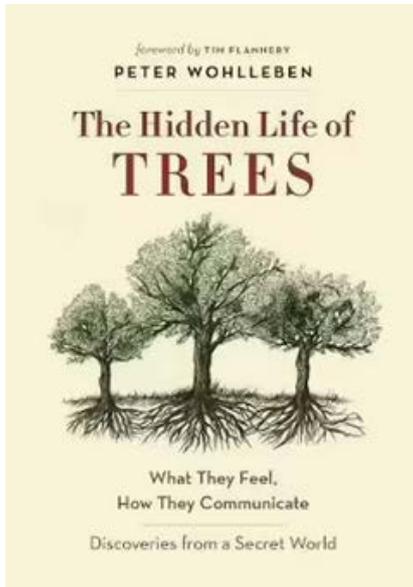
Why not send us your review!

Send to

projects4enoosalandcare.org

REVIEWS

*Books, podcasts, apps
and equipment*



The Hidden Life of Trees

Book by: Peter Wohlleben,

The Hidden Life of Tree shares the wonders of plant life and the world beneath a forest floor!

Pete Wohlleben presents the science behind the communication ability and support networks of trees. Like human families, tree parents live together with their children, communicate with them, and support them as they grow, sharing nutrients with those who are sick or struggling and creating an ecosystem that mitigates the impact of extremes of heat and cold for the whole group. As a result of such interactions, trees in a family or community are protected and can live to be very old. In contrast, solitary trees, like street kids, have a tough time of it and in most cases die much earlier than those in a group.



Stocktake CLM

App by: FutureBeef and Meat & Livestock Australia

App now available on iPhone and Android devices.



It will be your new best mate in the paddock!

The app will help you monitor and record stock and paddock data, including land condition, pasture yields, short term carrying capacity, and allow you to develop reports for you to analyse and monitor your pasture and grazing management effectively.



EUCLID Eucalypts of Australia

App by: LucidMobile

EUCLID provides complete descriptions of 934 species and subspecies of Angophora, Corymbia and Eucalyptus plus an interactive identification key using Lucid software. It covers all Australian States and Territories. Over twelve thousand images are used to assist interpretation of species features and the species themselves as well as their geographic distribution.

A useful app for where ever you are in Australia.

Check out LucidMobile's other great ID apps.



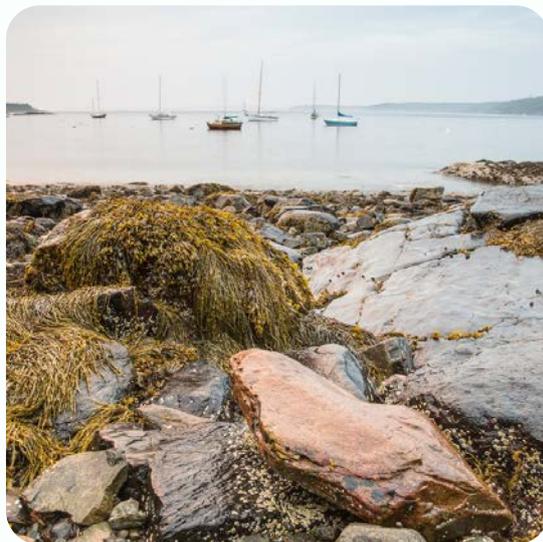
JUNIOR LANDCARE

NATURE PROFILE:

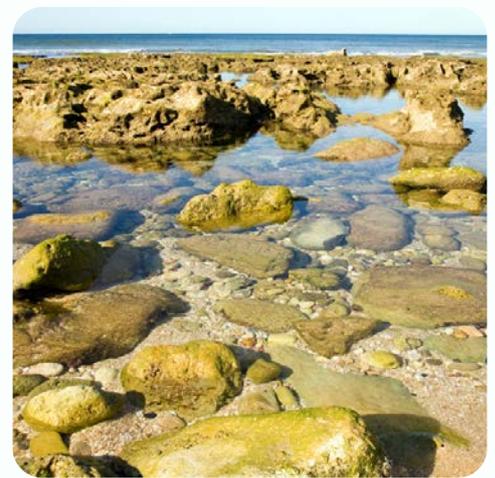
Rocky shores

Rocky shores are found where the sea meets the land. At the edges of rocky outcrops, protected bays and cliffs along the coastline, you will find a wonderful world of barnacle encrusted rocks, carpets of seaweed and chains of rock pools filled with fish, star fish, crabs and even the odd coral.

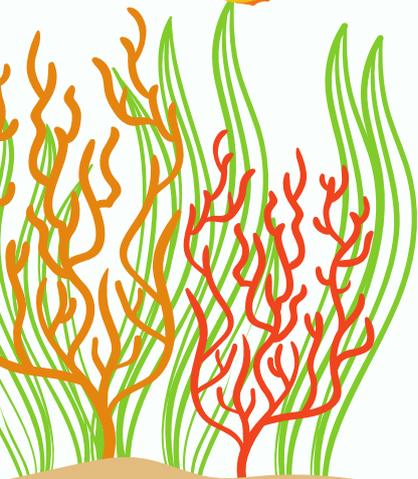
These environments can be harsh at times, experiencing pounding waves, sun, fluctuating tides, wind, salt and rapid temperature changes. This has shaped a diverse community of animals and plants from birds to seaweed that have adapted to survive and thrive in such conditions.



Rocky shore

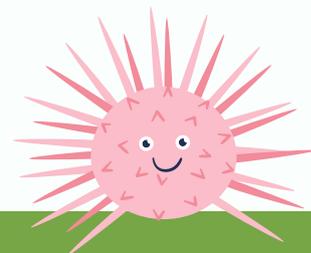


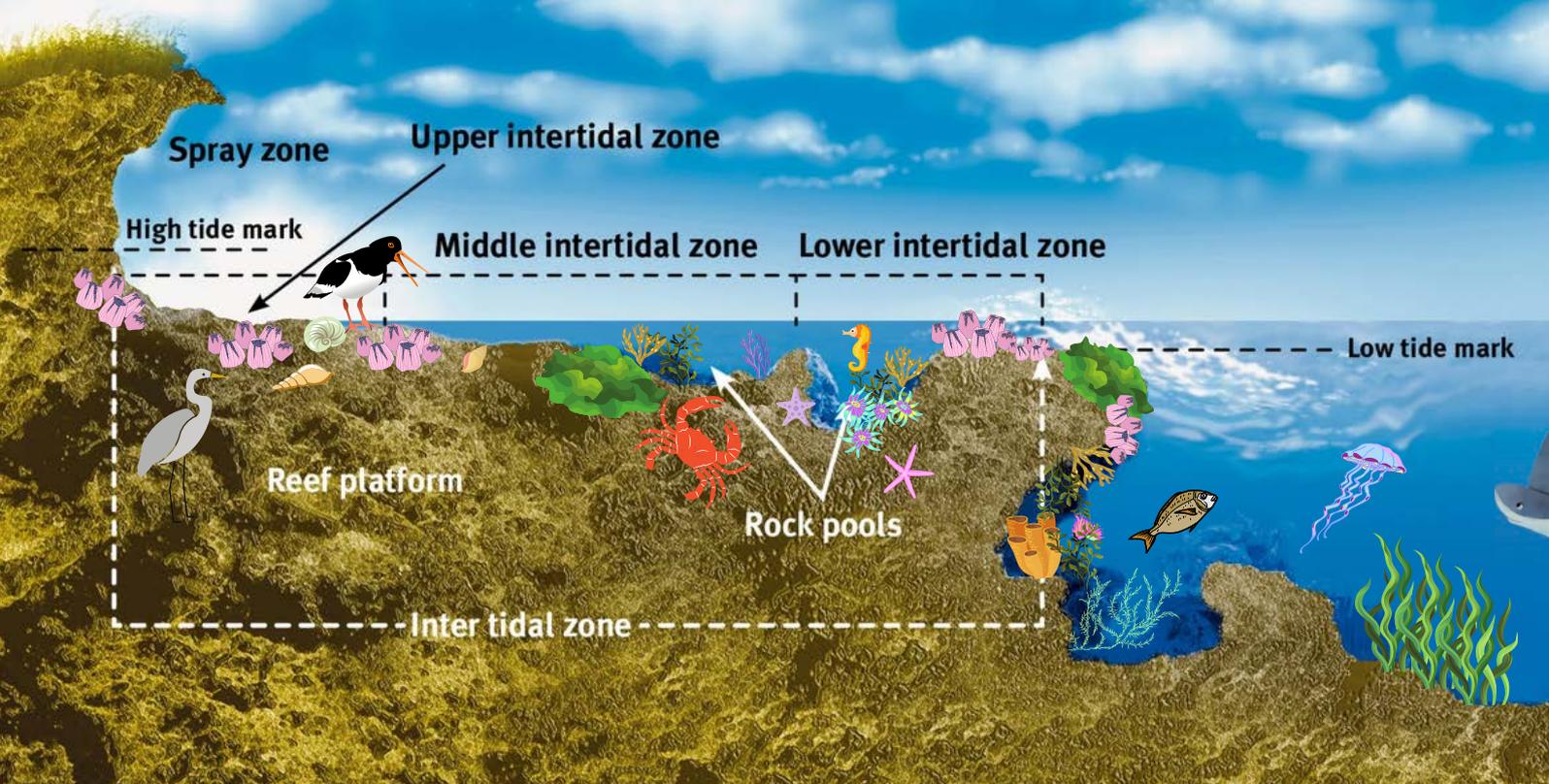
Rock pools



Rock pool locations to explore:

- Coolum Bays
- Alexandra Bay, Noosa Heads
- Shelly Beach, Caloundra
- Point Arkwright, Yaroomba





There are several habitat distinctions on the rocky shore.

These are based on tidal levels and can be broken into three general zones: the lower littoral zone, the mid littoral zone and the upper littoral zone. In some areas, these zones can be distinctly identified by the animals that live there, while adaptations of the animals correspond to how they are able to survive in those locations.

The upper littoral zone

Periwinkle, barnacles and other hard shelled animals are especially adapted to the harsh conditions of the dry upper littoral zone. They are able to trap water inside their shell to prevent moisture escaping, and cling to the rock face while the tide is out. When the tide is high, they move around or let out their tentacle like feeding arms feeding on tiny plants growing on the rock surface or tiny plants and animals in the water column.



The mid littoral zone

This zone is frequently dominated by the white tube worm (*Galeolaria* spp.) which needs access to the water yet has the ability to lock water into the tube by closing its operculum so that it can survive the low tide. When the tide is high, the worm feeds on tiny plants and animals which it filters from the water. Many creatures that occupy this zone have similar adaptations.



The lower littoral zone

Cunjevoi (*Pyura stolonifera*) are common animals in the lower zone. These animals are filter feeders and play an important role in cleaning the ocean's waters. They retain water inside them at low tide to prevent them from drying out. Most species in this zone need to be constantly covered by seawater and cannot survive for long if exposed to the sun for an extended time.

Dangerous animals!

There are also some animals on the rocky shore that should not be touched, as they are quite dangerous, such as the cone shell, the sea urchin and the blue-ringed octopus. It is important to know what they look like and to AVOID THEM!!!



Sea Urchin



Blue-ringed octopus



cone shell

WORD SEARCH

Searching in the sand

P Z T I D E N O Y S T E R I L
 H I C R E T A W T L A S I N Z
 S U N A D N A P S I P I P B W
 P J K C I G D I K C L G I P H
 I N T E R T I D A L Z O N E O
 Y C U N A M A E R B C Y J A Z
 K H S M A J B R O S V J J G M
 R X I E L S L O O P K C O R Z
 A A I G J H P F X Q Y D N A S
 M V L X H Y J H S T E P M I L
 O Y S T E R C A T C H E R C D
 E L C A N R A B E L W C G Z O
 L F T R V R N Y R I X A M N I
 T M P D U N E S N N H F F O G
 R B A G N O G E B B O W D L Q

- | | |
|----------------|-----------|
| BARNACLE | MARK |
| OYSTER | SALTWATER |
| LIMPETS | ROCKPOOLS |
| PIPIS | DUNES |
| OYSTERCATCHER | |
| TERN | |
| WOBBERGONG | |
| BREAM | |
| SANDY | |
| PANDANUS | |
| PIG | |
| FACE | |
| INTERTIDALZONE | |
| HIGH | |
| TIDE | |

What did the ocean say when it saw the beach?

Answer: Nothing. It just waved.

BEACH BINGO



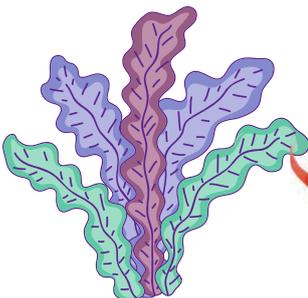
Barnacles



Shell



Pied oystercatcher



Seaweed



Crab



Fish

BANDED WOBBERGONG

Orectolobus ornatus

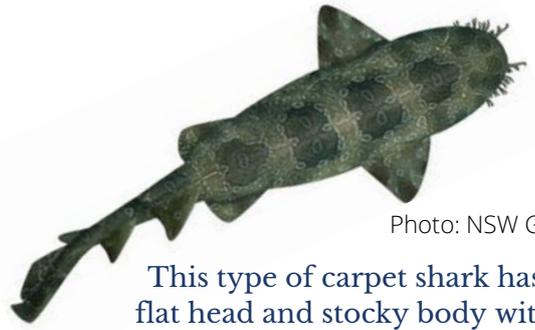


Photo: NSW Govt.

This type of carpet shark has a flat head and stocky body with a stout tail.

A nocturnal hunter, it prefers bays and shallow rocky reefs nearshore rummaging through seaweed to find fish, crustaceans and molluscs.

The banded wobbegong uses a sit-and-wait ambush strategy that relies on its camouflage coloration pattern and lure of its dermal flaps to trick potential prey into its range. When a prey item does come within range, the wobbegong ambushes it with a quick snap of its jaws.

PYRAMID PERIWINKLE

Nodilittorina pyramidalis



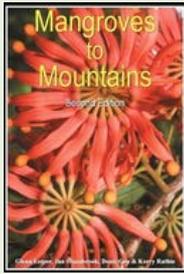
This small periwinkle is one of several species that commonly live on our rocky shores.

It grows to about 20 mm in length, and is very common in the high intertidal zone, found most frequently on vertical rock faces. The Pyramid Periwinkle forms clusters in crevices on the rocky shore, to shelter from the sun thereby preventing drying out during extended periods of exposure.

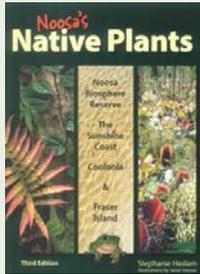
Photo: Wild Guide to Moreton Bay



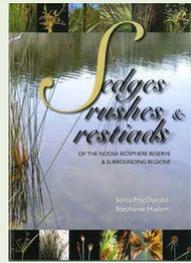
BOOKS FOR SALE



Mangroves To Mountains
\$65
Glen Leiper, Denis Cox, Jan Glazebrook, Kerrie Rathie



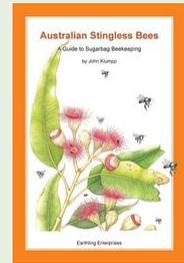
Noosa's Native Plants
\$45
Stephanie Haslam



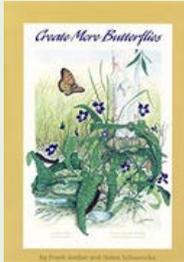
Sedges, Rushes & Restiads
\$40
By Stephanie Haslam & Sonia MacDonald



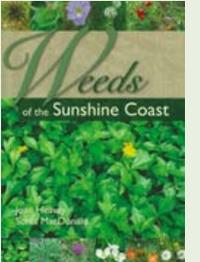
Snakes Of The Sunshine Coast Region
\$30
Mike Donovan



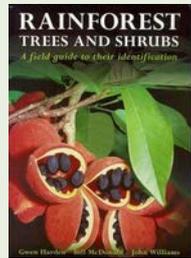
Australian Stingless Bees
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A Guide to a guide to sugarbag beekeeping by John Klumpp



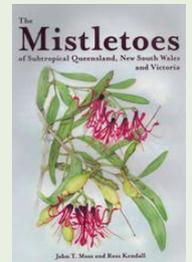
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A guide to 48 butterflies and their host plants of SE Qld & northern NSW. By Frank Jordan & Helen Schwenke



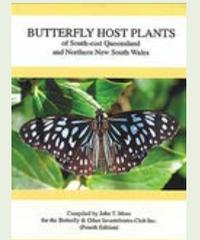
Weeds Of The Sunshine Coast
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By Joan Heavey & Sonia MacDonald



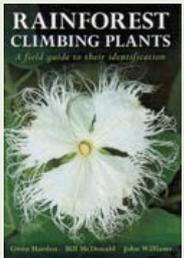
Rainforest Trees And Shrubs
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By Gwen Harden, Bill McDonald & John Williams



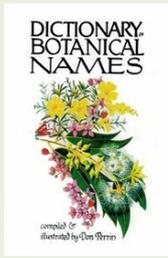
The Mistletoe Of Subtropical Qld, NSW & Victoria
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By John T Moss & Ross Kendall



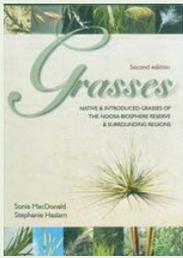
Butterfly Host Plants of SE QLD & Northern NSW
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By John T Moss



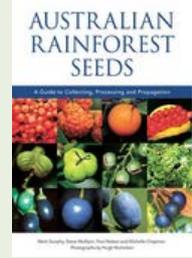
Rainforest Climbing Plants
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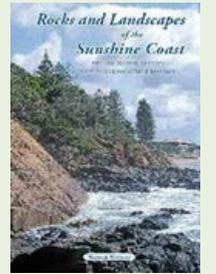
Dictionary Of Botanical Names
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By Don Perrin



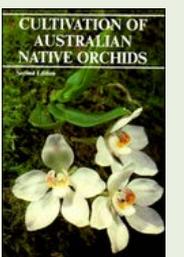
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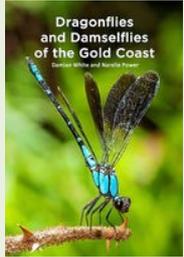
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A guide to Collecting, Processing and propagation



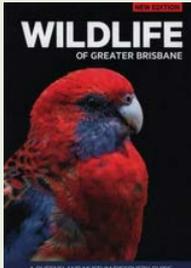
Rocks And Landscapes of The Sunshine Coast
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By Warwick Willmott



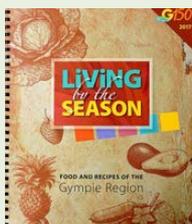
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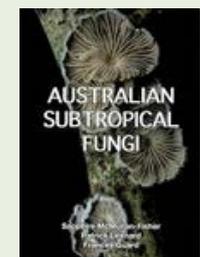
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Wildlife Of Greater Brisbane
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A Queensland Museum Guide



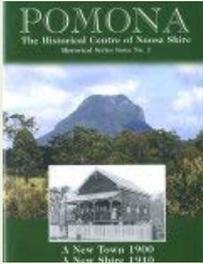
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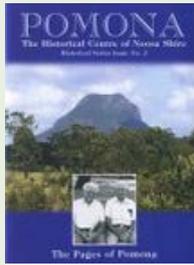
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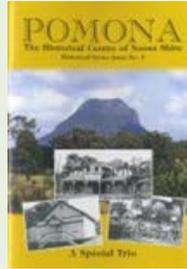
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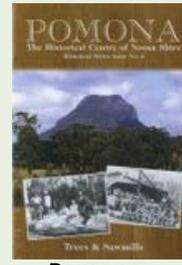
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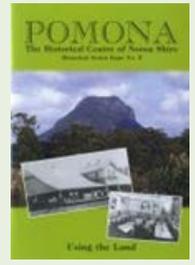
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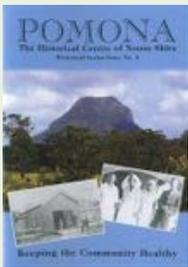
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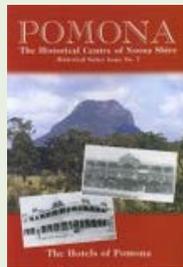
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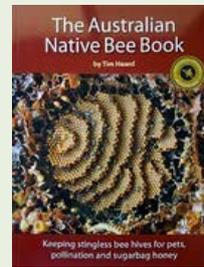
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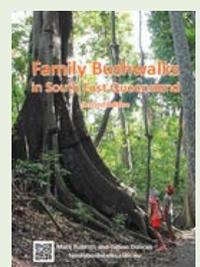
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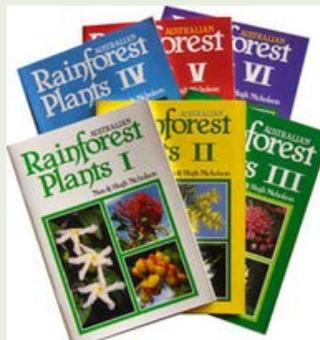
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By Mark Roberts & Gillian Duncan



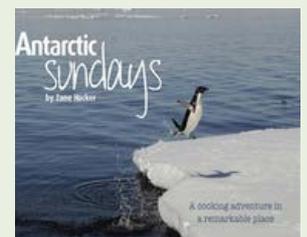
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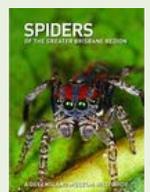
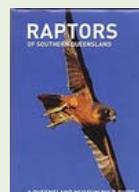
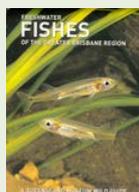
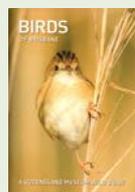
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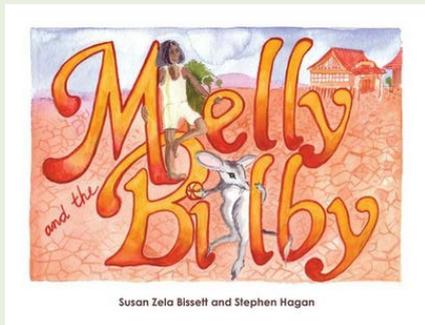


CHILDRENS BOOKS FOR SALE



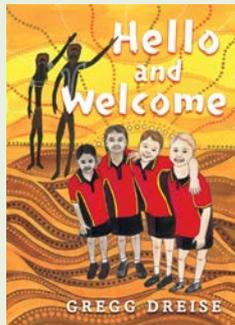
Quirky's Christmas Tree
\$15

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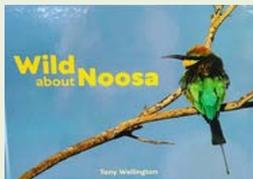
Melly And The Bilby
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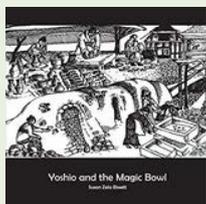
Hello & Welcome
\$28.60

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Wild About Noosa
\$50

By Tony Wellington



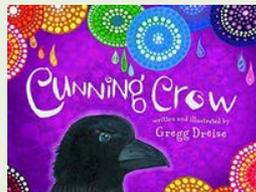
Yoshio And The Magic Bowl
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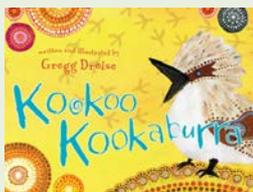
Karla The Coolest Koala in Noosa

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Cunning Crow
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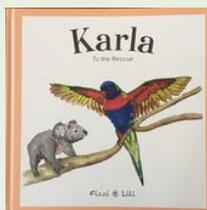
Kookoo Kookaburra
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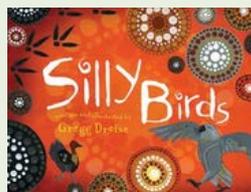
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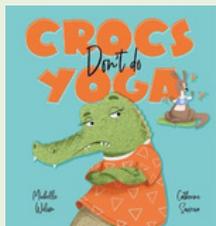
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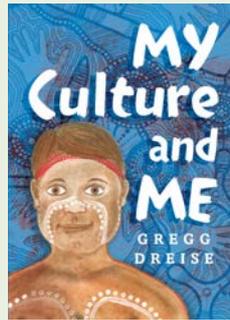
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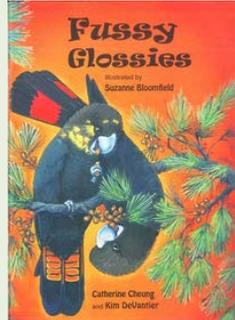
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We have registered for the
'Containers for Change' recycling program.

Funds raised will go towards our Threatened Species Programs and other various programs of Noosa Landcare.

Bags can be collected from the Hinterhub located on Station St, Pomona.

Fill each bag with 50 recyclable items and return back to Envirobank deposit station at 5 Johnson Court, Cooroy.
Use Containers for Change ID **C10147043**

Become a Member

Join us by becoming a member of Noosa and District Landcare today.

We offer a selection of membership packages for you to choose from.

Our most popular membership at the moment is the **Gold Membership**. This is a 3 year membership, which includes a property visit, 20% Plant Discount, 5% discount on labour costs by Noosa Landcare contracting services, free book, gloves, hat, and access to our Landcare Linkup!

Only **\$325**

Your membership helps go towards the protection and enhancement of our local environment.

Thank you!

[Click here to check out membership packages and become a member.](#)

Check out our Native Plant Stock List

Our new and improved Native Plant Guide shows what we currently have in stock, and with just one click, you can view information on every species.

[Click here to access](#)

Rural Futures Centre

65 Pavilion Street, Pomona QLD 4568

(07) 5485 2155

info@noosalandcare.org

Hinter Hub

Station St, Pomona QLD 4568 (Opposite the Pub)

(07) 5485 2468

hinterhub@noosalandcare.org

www.noosalandcare.org

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