

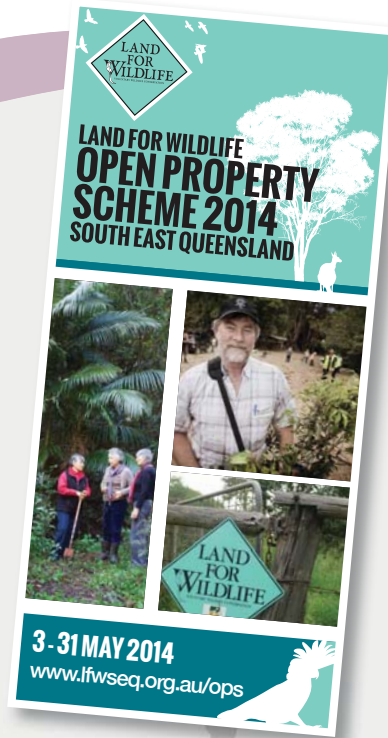


## Join us at the Open Property Scheme next month

We are delighted to offer Land for Wildlife members the opportunity to participate in another Open Property Scheme in May this year. The first was held in 2008, and for those of you who have joined the program since then, the Scheme is a great way to catch up with other landholders, and Land for Wildlife Officers, while visiting unique and interesting properties across SEQ. Land for Wildlife members told us in the survey last year that they relish the chance to meet other members and to see what they are doing on their properties. We received great feedback from the last Open Property Scheme and hope that this one will again inspire and connect members, and provide them with the opportunity to share their land management skills with one another.

There are nearly 4000 Land for Wildlife properties across SEQ so our membership is diverse. We invited a range of properties to participate in this Open Property Scheme to hopefully cater for the differing land management interests of our membership. We have included grazing properties, small lifestyle blocks, a school and remote, large Nature Refuges. Some have high altitude remnant rainforest while others are protecting lowland swamps. All are managing or restoring our natural assets to enable future generations to enjoy them and to prosper from sustainable land management practices.

The Open Property Scheme will be showcasing weed management, pest animal control, revegetation, natural regeneration, sustainable grazing management, erosion control, wildlife rehabilitation, water quality monitoring, threatened species recovery and environment education. There is



25 Land for Wildlife properties across SEQ are available for you to visit.

something for everyone.

Please find enclosed the Open Property Scheme program with descriptions and general locations of 25 properties. We are encouraging registrations through our website at [www.lfwseq.org.au/ops](http://www.lfwseq.org.au/ops) but we appreciate that not all our members have easy internet access, so SEQ Catchments is offering phone bookings if required. We envisage that all properties will be booked out, so we encourage early registrations. I look forward to seeing you in May.

Article by Deborah Metters

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I would prefer a paddock full of weeds to a bare paddock



# editorial

My thoughts this week have been turning over the opposing concepts of extinction and speciation (the arising of new species). It is largely due to the compelling book I am reading, *The Sixth Extinction* by Elizabeth Kolbert.

As Elizabeth says, we can probably all find signs of a current extinction event in our own backyards. To avoid depressing readers, I won't recount the statistics here, but I will say that this book is probably the most fascinating and surprisingly enjoyable account of the Earth's history that I have read.

The book's themes are echoed on the facing page, through the 'discovery' of the highly specialised Black-tailed Antechinus, which was previously thought to be a slightly odd-looking Dusky Antechinus, as well as the brief discussion on page 11 about the probably extinct Australian Fritillary butterfly. Discovery and loss all at once in our own backyard of SEQ.

Humans have been driving species into extinction for arguably tens of thousands of years. However, we equally have the capacity and will to conserve species and to help bring threatened species back from the brink. I see this intent and hard work in the pages of this newsletter. And for that, I am heartened.

I hope you enjoy this edition, especially the article about indigenous cultural heritage of SEQ and the legal responsibilities of landholders to protect this heritage. In addition, there is a valuable botanical account of the native violets of SEQ written by respected botanist and author, Glenn Leiper. There are also the ever-inspiring property profiles and some enjoyable stories of our interactions with furry, and also hissing, wildlife.

I hope you can make it to at least one Open Property event in May. Please have a look at the enclosed program and visit our website to book. I look forward to this chance to catch up with some of you and to meet new members while visiting amazing Land for Wildlife properties.

Finally, I would like to congratulate Danielle Crawford on securing a position with the Land for Wildlife team at Sunshine Coast Council and to welcome Melanie Mott to the Logan City Council team.

Happy reading!



Deborah Metters  
Land for Wildlife  
Regional Coordinator  
SEQ Catchments

## Landholder Registrations, Land for Wildlife SEQ - 1/3/2014\*

Registered Properties	Working Towards Registration	Total Area Retained	Total Area under Restoration
2974	743	54,472 ha	4,807 ha

\* Note: due to a new data management system and a 'clean-up' of records, some figures have declined since last edition.

Forward all contributions to:

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North & South Burnett,  
Bundaberg and  
Baffle Creek Regions**

For all regions contact the Burnett Mary  
Regional Group, 4181 2999

# fauna vignettes

## New species of antechinus found at Springbrook



We have always been aware we live somewhere particularly special but when a new species of antechinus was found just up the road you know your job to look after what you have becomes even more important.

Dr. Andrew Baker *et al.* published an article in *Zootaxa* in February 2014 outlining the discovery of *Antechinus arktos*, the Black-tailed Antechinus. This antechinus was previously thought to be a northern outlier of the Dusky Antechinus but the research done by the team found many differences including significant genetic differences. They are much bigger, scruffier-looking and colourful. As with all antechinus, the Black-tailed will have a mating frenzy in late August early September after which all males will die leaving only pregnant females.

Unfortunately they also discovered when going back through old records that the distribution of this new species seems to

have considerably shrunk. Old records had found it on other well forested and protected peaks in the Tweed Caldera but recent trapping has only come up with a small number on the high, heavily forested, wet parts of Springbrook. Climate change has been implicated in this decline as the other usual threats. I can only hope that these parts of Springbrook remain protected.

The last State Government, with great foresight, bought up large tracts of this high country to add to Springbrook National Park so that it could become a last refuge for many species threatened with climate change. Local residents can also play an important part by conserving and restoring habitat on their properties and controlling their pets.

**Ceris Ash**  
Land for Wildlife member  
Springbrook, Gold Coast

**Introducing the Black-tailed Antechinus (*Antechinus arktos*) recently discovered at Springbrook. Its body is covered in shaggy fur with long guard hairs and its black tail is short and differs in colour from the orangey-brown colour on its rump. Photo courtesy of Dr Andrew Baker, taken by Gary Cranitch, Queensland Museum.**



### PRIZES!

SEQ Catchments is giving away a set of three copies of various Queensland Museum pocket guides (RRP \$30) to three selected Land for Wildlife members who contribute published articles in 2014. Limit of nine free books per newsletter edition. Please send your article and/or photographs to the Editor (details pg. 2)

## What's been sleeping in my bed?

Something has been sleeping in my bed. I know because it leaves its droppings behind. I've been trying to find out what it is for a couple of years. We have a bush cabin (see photo below) in the Sunshine Coast hinterland on our 15 hectare Land for Wildlife property and go there whenever we can. Each time I go into my small cabin I find droppings on the carpet, in the bed and on the window ledges. The droppings don't smell. They are long and brown/black and there are lots of them.

I took photos and emailed them to the Queensland Museum. They suggested that I crush the droppings to see if there were signs of insect parts in them. I did this and there were bits of glistening wings in the droppings. So I knew whatever it was ate insects. I've never seen any animals inside the cabin and I have no idea how they get in. I was worried it might be a snake so I started researching animal droppings on the internet and I also borrowed a book about scats and tracks.

I had a slight problem when I accidentally gave the matchbox containing droppings

to a restaurant with candles and a birthday cake for my son's birthday dinner. They bought the cake out at the end of the meal and we all sang happy birthday and he blew out the candles. Afterwards they gave me the left over cake, candles and the matchbox in a bag. I didn't discover the mistake for some weeks and was amazed they didn't say anything at the time. I wonder what they thought!

I found my best clue on the internet by a writer who found his culprit in his linen cupboard one night. He identified it as an antechinus, a native carnivorous marsupial. He was amazed that for an animal that appears to eat so little, it can poo so much.



He described the antechinus poo as long and with a rough surface, just like the ones in my cabin. I learnt these small marsupials could flatten their heads to get under doors and windows.

I don't know what type of antechinus I have, but I take clean sheets each time I go to the cabin. On the positive side, I don't have to worry about cockroaches or spiders or other insects. Maybe one night I might be lucky and come face to face with one of these beautiful little creatures.

**Roz Glazebrook**  
Land for Wildlife member  
Eerwah Vale, Sunshine Coast





# fauna profile

## Little Furry Christmas Guests

On the eighth day of Christmas we received a present we did not want or need. A mother antechinus abandoned her litter of seven little ones in our house. We first noticed one creeping along the lounge room floor and over the next two days found another six (one already dead) in various places such as the bedroom wardrobe, the shower recess and even up in the kitchen sink. We presume this last one was carried up there by its Mum as it could barely crawl by itself and certainly couldn't climb yet.

These little ones were the size of baby mice, only just furred and eyes open but not yet weaned. This meant that my wife Maureen had to teach them to lap drops of special marsupial formula 'milk' from the palm of her hand. This is very tricky, holding the fragile, squirming little creatures while keeping their tiny noses out of the liquid because inhalation of the fluid almost invariably means death.

This painstaking procedure took about 90 minutes per feed-time, repeated every 4 hours or so. Exactly what you need with five adults and five very young kiddies arriving from overseas and interstate for Christmas holidays, and as is the case with kids, even grown-up ones, expecting Mum



Yellow-footed Antechinus cleaning its whiskers. Illustration by Janet Whish-Wilson, Land for Wildlife member, Yandina, Sunshine Coast.

to do everything. Exhaustion became the normal state for Maureen.

Antechinus belong to the Dasyurid family which includes all the other carnivorous marsupials, including quolls and Tasmanian Devils. They look like mice, but have a longer snout, shorter tail and daggy ears.

They breed once a year and litter sizes can be as large as a dozen babies. Preferred nest sites are hollow logs and, it seems, behind our dishwasher. The females have a rudimentary pouch but we don't know how that could possibly accommodate up to twelve young. They apparently drag the babies along attached to their nipples.

Even more unusually, in all antechinus species, every year after a bout of frenzied mating, all the males die from a stress related condition, apparently having expended their energy level and depressed their immune system. This saves Mum and the kids having to compete for food. Very noble! The ladies at work think it's a great example and should be mandatory.

Our 2001 edition of *A Field Guide to the Mammals of Australia* by Menkhorst and Knight showed two species of antechinus recorded locally – the Yellow-footed, *Antechinus flavipes* and the Brown Antechinus, *A. stuartii*. We identified ours as the Yellow-footed.

We note that the Brown Antechinus in this area has been re-classified as *A. subtropicus* since year 2000 (our book had not caught up) and the recent discovery and classification of the Buff-footed



*"Preferred nest sites are hollow logs and, it seems, behind our dishwasher."*

These *Antechinus* babies (shown left) are either the Yellow-footed Antechinus or the recently discovered Buff-footed Antechinus. It is difficult to tell them apart when they are young.

Above right is an adult Buff-footed Antechinus.

*Antechinus, A. mysticus* means our ID could be incorrect and our little guests were the latter species. It is difficult to tell, especially with very young animals. We also have a few juvenile antechinus visiting every night and making a mess: these have been identified by the Queensland Museum as Buff-footed Antechinus.

From the outset, three of the babies seemed to be better feeders, with the other three not putting on much weight. Sadly, one by one they succumbed. After five weeks the remaining three showed they were ready for solid food. We introduced them to mealworms but almost every time these combative critters would fight over the one worm although there were a dozen more in the cage. Once they were able to catch crickets we knew they were ready for release and able to hunt spiders, hoppers and other insects, even geckos, to survive.

Antechinus are very swift and aggressive nocturnal terrestrial hunters who can also climb well and run at speed along slender branches. But they also have predators out there, so we wish them well but *do not* want them coming back with their own babies.

Article and photos by Kon Hepers  
Land for Wildlife member  
Verrierdale, Sunshine Coast



The Common Rhinoceros Beetle - an adult male shown left and a larvae shown above. Photos © Jeff Wright, Queensland Museum.

# fauna profile

## Star Wars in the Beetle World

The topic of the Common Rhinoceros Beetle (*Xylotrupes ulysses australicus*) came up over dinner with friends recently. I'm not sure how the conversation started but I was soon telling tales of growing up in Townsville where there always seemed to be plenty of them about. My brother and I used to collect them and encourage them to 'fight'. I know – weren't we awful?! Their tell-tale hissing and heavy, shining black armour reminded us of Darth Vader, and we thought that was great.

Having provided such happy childhood memories (I don't think there was ever any serious damage done), I got a little nostalgic about these beautiful beetles, renowned for their large size and prehistoric appearance, and realised I hadn't seen any for what seemed years.

Then I saw one the very next day (or its head at least), and then two days after that (this time it was just the body – I don't think they belonged to the same animal). Maybe I hadn't noticed them of late simply because I hadn't been looking for them. After all, it doesn't seem appropriate to conduct beetle warfare in the office lunchroom, particularly given the environmental inclination of my colleagues. With a little research though, I realised the other likely reason for seeing them comparatively less frequently around Brisbane and the coast is because down here, they only come out in summer. In North Queensland, they're about all year.

In South East Queensland they come out in summer because it's the season in which they mate, from late December to the end of January or even early February. They're attracted to bright lights so can sometimes be found congregating below street lights. Males can also be seen in large gatherings

on the trunks and branches of trees, particularly Poinciana trees (*Delonix regia*) where they enter into what is thought to be a pre-mating ritual, knocking other males off the branch over the scent of a female's pheromones.

It's their horns which give them the means and strength to do this, not to mention their name. The males have a double-pointed, curved horn on their head and a heavier one on the front part of their thoraxes. Relative to its body weight, this insect is considered to be the world's strongest animal. Females are less notable; they lack horns, are smaller and are seen less frequently.

Having mated, the female lays approximately 50 white eggs in rotting wood and organic matter where they take three weeks to hatch. Once they have emerged, the larvae live in and feed on organic material for approximately two years as they grow to full size. As I remember the larvae were common residents of our compost bin. They're enormous, and can reach the size of an adult's palm. Like all other members of the Superfamily Scarabaeoidea (commonly known as scarab beetles), the larvae are termed 'curl grubs' because they curve in a half circle. At full size the larvae make a cell in the soil, recycling their faecal matter to provide a waterproof barrier. One month on, they emerge as an adult, which lives for only 2-4 months.

As adults their diet is somewhat more varied and can include the bark of young shoots, sap, rotting fruit, carrion and dung. They're able to detect strong-smelling food from some distance away and can triangulate its direction by spreading their antennae, which have flattened 'leaves' attached to the end of each stalk. The inside of these leaves are covered with minute smelling organs which, when opened like a fan, can detect strong-smelling food from far away. These antennae are typical of all scarab beetles

and can be folded flat when the beetles are burrowing, to protect their delicate sensory organs.

The Common Rhinoceros Beetle isn't the only rhinoceros beetle living in Southeast Queensland. *Haploscapanes australicus* is rare but can be distinguished by its two short horns on the thorax, as opposed to *Xylotrupes ulysses australicus*, which has just one. Across Australia there are nearly 200 species of rhinoceros beetle, most of them smaller in size but just as impressive in structure. Unfortunately there is one intruder who has infiltrated its way into the Australian group; the African Black Beetle (*Heteronychus arator*) is about 15 mm long, has no horns and is a serious pest of lawns and pastures in New South Wales and Queensland.

As for that hissing noise they make when disturbed, well it turns out that it's not Darth Vader reincarnated but, in fact, the sound of one part of their abdomen rubbing against the ends of their forewings (elytra). Unfortunately for them, their bark is certainly worse than their bite and whilst their hissing squeaks are meant to act as a warning to enemies, they're actually incapable of defending themselves against serious attackers.

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- <http://bugs.bio.usyd.edu.au/learning/resources/Entomology/internalAnatomy/imagePages/rhinocerosBeetle.html>



Article by Lexie Webster  
Land for Wildlife Officer  
City of Gold Coast

*"Relative to its body weight, this insect is considered to be the world's strongest animal."*



# cultural heritage

## Indigenous Cultural Heritage of SEQ

The occupation of Australia by Aboriginal people has been estimated to be more than 50,000 years.

Over this time changes in natural environment and sea levels saw the population of Aboriginal people living along the eastern seaboard increase, supported by diverse and flourishing natural resources. Along with the increase in resources and population, there was the increase in the social and ceremonial activities undertaken by Aboriginal people. With activities being at the centre of daily business, there were significant numbers of increase sites, occupation sites and general evidence of occupation across the region.

The oldest sites have become covered with soil that has been moved and relocated through various flood events and changes in sea levels. Over the last 240 years the South East coast has been subject to enormous change. Sites and cultural objects that are presently on the surface show evidence of 3000 years of Aboriginal occupation, with the majority of the oldest and untouched sites believed to exist below the surface.

South East Queensland has some of the most diverse and plentiful Aboriginal sites in Australia. There are over 200 Bora (ceremonial rings) sites recorded, significant cave etchings and paintings, scarred trees, fish traps, burial sites, Aboriginal quarries, grinding grooves, hearth sites, multiple dreaming sites, deity sites and story lines, dispute rings, massacre sites, old mission sites, camping sites and large concentrated areas of stone tools within manufacturing sites. Some Aboriginal cultural heritage sites occur on Land for Wildlife properties.

There are sites recorded in South East Queensland that have been carbon dated to more than 3000 years ago with some

being continually used up to the 1930s. There are examples of such sites around Ipswich and within now-existing rail corridors. A site at Springfield, recently excavated by Jagera Daran and Turnstone Archaeology, produced a carbon date of approximately 2948 years ago.

A site recorded within SEQ has been dated as having been developed and used from some 22,000 to 10,000 years ago.

In recognition of the need to protect such unique heritage, the Commonwealth and Queensland Governments have enacted legislation that is designed to ensure that Aboriginal Heritage is preserved.

The Commonwealth legislation is the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the Queensland legislation is the *Aboriginal Cultural Heritage Act 2003* and the *Torres Strait Islander Cultural Heritage Act 2003*. The *Aboriginal Cultural Heritage Act 2003* promotes the importance of the local Traditional Owners as the 'knowledge holders' in identifying their cultural heritage and in communicating appropriate management recommendations.

At the centre of the Queensland Acts is the principle of the 'duty of care'. As a duty of care, landholders and land users must take all reasonable and practical measures to ensure that their activities do not harm Aboriginal cultural heritage. This includes cultural heritage located on freehold land regardless of whether or not it has been identified or recorded in a database. Duty of Care Guidelines have been developed to help individuals and organisations meet their cultural heritage duty of care. The Guidelines can be downloaded from the DATSIMA (Department of Aboriginal and Torres Strait Islander and Multicultural Affairs) website.

The second significant principle of the *Aboriginal Cultural Heritage Act 2003* is the concept of 'agreement' between the local Traditional Owners and the organisation or individual that is undertaking an activity that may harm Aboriginal cultural heritage. This agreement is referred to as a Cultural Heritage Management Plan. The DATSIMA website also provides guidelines to assist in the development of a Cultural Heritage Management Plan.

In South East Queensland, Aboriginal cultural heritage may exist around the following types of landscape features:

- Large and small sandstone outcrops (housing, storage, burials, processing sites)
- Watercourses, lakes and springs
- Ridgelines and terraced areas
- Stone sources such as silcrete, chalcedony, chert, basalt or granite
- Alluvial soils
- Large trees (scarred trees, marked trees).

Examples of the types of cultural heritage sites commonly found are:

- Fish traps (both salt and fresh water areas)
- Scarred trees (usually not far from water sources)
- Stone tools
- Bora rings (earth mound rings)
- Dispute rings (stone ring arrangements)
- Manufacturing sites (mass manufacturing of stone tools)
- Trade areas (characterized by significant numbers and diversity of stone tools)
- Burials (both in sandstone caves/openings and below the surface)
- Camping sites.

There are also unseen or intangible sites that exist in South East Queensland. Some of these sites have been recorded, but the majority are known only by the local Traditional Owners.



Examples of intangible sites are:

- Birthing sites
- Dreaming sites
- Story lines
- Taboo areas
- Men's and Women's areas.

The *Aboriginal Cultural Heritage Act 2003* allows individuals, such as landholders, to register Aboriginal cultural heritage sites and objects on their property. Individuals can submit information for inclusion on the Aboriginal Cultural Heritage Database. The purpose of this database is to assemble information about Aboriginal and Torres Strait Islander cultural heritage in a central location. The database is not publicly available; however, DATSIMA can provide information from the database to Aboriginal parties with responsibilities to the area, land owners and/or land users to help them satisfy their duty of care.

Guidelines and a Deposition Form for adding information to the database can

be obtained from the DATSIMA website. The form will require information about the nature of the site, location and local government area. Please be aware that Section 29 of the *Aboriginal Cultural Heritage Act 2003* states that a person cannot submit information if they know it is of a secret or sacred nature and the relevant Traditional Owners have not agreed to the information's submission.

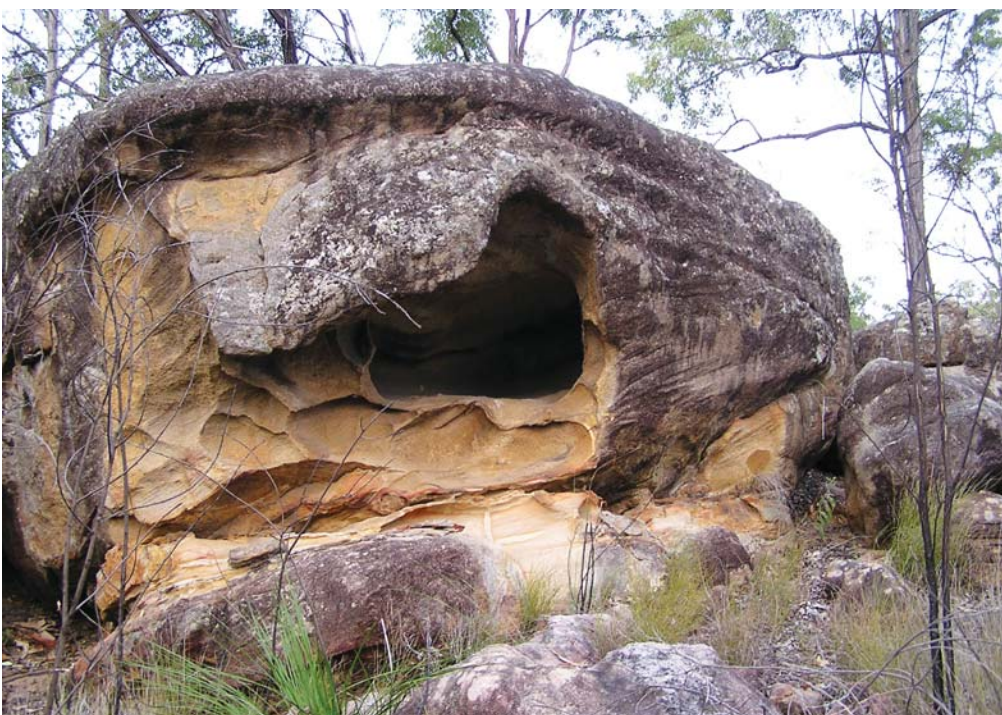
Consultation with the relevant local Traditional Owners will help with understanding the management of the site registered. For more information, contact the Cultural Heritage Coordination Unit on (07) 3405 3050.

Please remember that all Aboriginal cultural heritage sites and objects located within your property are *your* responsibility to protect under the Act.



Examples of Aboriginal cultural heritage sites in South East Queensland include (from top clockwise): grinding grooves, stone arrangements, waterholes, scar trees and sandstone caves.

All photographs by Jagera Daran Pty Ltd.



**Article by Madonna Thomson  
Jagera Daran  
Cultural Heritage Consultancy**



# flora profile

## Native Violets of SEQ

*Viola hederacea*

The South East Queensland (SEQ) region has a number of pretty native violets that are often overlooked until flowering when all of a sudden there's a splash of purple and white standing up above the leaves amongst the leaf litter on the forest floor. Violet flowers are one of the most easily recognizable in the world with their two upper petals, two lateral and one large lower petal, with myriad colours.

In this article I'll describe the five local species – *Viola banksii*, *V. hederacea*, *V. perreniformis*, *V. silicestrus* and *V. betonicifolia*. The first four species are closely related and reproduce vegetatively by runners (stolons) which take root in soil and amongst leaf litter or humus, but also reproduce by seeds. All five species are perennial herbaceous plants.

The four species with runners can be distinguished by the shapes of their mature leaves and by the colour of their flowers.

*Viola banksii*, *V. hederacea* and *V. perreniformis* can be easily confused as their leaves in the immature stages can be very similar in shape. It is important to always look for the most mature leaves on plants to establish an accurate shape.

The second character is the flower colour. *Viola banksii* and *V. hederacea* can be very similar with stark purple and white. *Viola perreniformis* and *V. silicestrus* are usually pale mauve or bluish-mauve with a white centre.

The type of soil that plants occur on can assist with determining the species. *Viola silicestrus* is found on volcanic rhyolite, and mostly at higher elevations in SEQ. *Viola perreniformis* also has a preference for rhyolite although a recent collection at Helidon is on sandstone. *Viola banksii* and *V. hederacea* are found on a wide variety of soil types, but never on rhyolite for the former, and rarely for the latter.

All species can be cultivated successfully, just requiring a little sunlight but

predominantly shade, and regular moisture. I am cultivating all five species very successfully at present in pots without much difficulty, although *V. silicestrus* was the most difficult to get started. Because of their rapid growth, I've found they need to be split up and/or potted up annually. I've found cultivation in hanging baskets to be the most successful method, and the plants form long runners which hang down below the pots. Daily watering (or a drip watering system) is recommended especially in the dry hot summer months if you want them to flourish. But if you have a shady moist area in your garden, native violets would be most suitable.

At present, only *Viola banksii* is available regularly in the nursery trade, usually labelled as *V. hederacea*. Occasionally, local forms of *Viola hederacea* are available from specialist native nurseries or enthusiasts, and *V. betonicifolia* also through similar sources.

A recent botanical paper has outlined the method of seed dispersal in *Violas* which is an interesting and rather misunderstood process. It was assumed for some species that the seed capsules shot the seeds out as the capsule opened, but it's not quite like that. The seed pod splits into 3 boat-shaped segments, each containing numbers of dark seeds packed neatly and tightly into 2 or 3 rows. Over a brief period of usually less than a couple of hours, each boat-shaped segment dries and shrinks, and as this occurs the segment narrows and squeezes out each seed progressively like squeezing a wet marble between your fingers, firing the seeds off for distances up to 3 metres or more! No wonder they get around in nurseries.

Nurseries throughout Australia sell "*Viola hederacea*" with its bright purple and white flowers. However in nearly all cases the plants are *Viola banksii*. The origin of this nursery form is currently unknown, but probably from NSW. It's common

in landscaping and home gardens, but unfortunately is used regularly in revegetation projects instead of more appropriate local species. This nursery form has been recently recorded in a few national parks in south-east Qld where it has 'escaped' on one occasion from an adjoining private property, and in other cases is planted around car parks. *Viola banksii*, under the name *V. hederacea*, is also exported.

### Acknowledgement

The author thanks R. John Little for constructive comments on an earlier draft.

### Further Reading

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Article and all uncredited photographs by Glenn Leiper





Photo by R. John Little

**Coastal Violet, *Viola banksii*** (shown left)

This species is found in lowland coastal Melaleuca forest, where soil moisture content is high, and also in coastal eucalypt forests especially along watercourses, also on headlands and soaks below coastal cliffs. It is very similar to *V. hederacea* in appearance and can often be very difficult to differentiate between the two. Flowers are always showy purple and white, and these colours very rarely blend or merge. The mature leaves can be up to 35 mm wide and 65 mm long, one to two times wider than long, and will always display an almost circular shape with a 'gap' at the petiole. This gap is called a sinus. The two outside edges of the leaf (lobes) will often overlap at this sinus. The leaves are irregularly toothed, often appearing to lack teeth at all. The petiole will sometimes be minutely hairy. *Viola banksii* spreads rapidly in suitable habitats and often forms dense patches in shady moist locations by runners that take root. Clusters of leaves (rosettes) form wherever the stolon takes root at a node.

**Ivy-leaved Violet, *Viola hederacea*** (shown right)

This species is very common in the region, occurring from coastal low-lying areas, along watercourse banks, shady gullies and slopes, and up into the mountains. *Viola hederacea* occurs in many forest types such as Melaleuca wetlands, dry and wet eucalypt forests, rainforests and occasionally in montane heath areas. Soil types that this species occurs on include coastal sands, meta-sediments, basalt and granite, sandstone and alluvials. Flowers are always showy with strong markings of purple and white, occasionally blurring and merging on the petals. The mature leaves and petioles are sometimes minutely hairy, and never attain an almost circular shape. The sinus is wide and the leaf lobes don't overlap. The leaves can be up to 30 mm long and 50 mm wide, one to two times wider than long, are irregularly toothed, and sometimes roughly semi-circular. This species also spreads rapidly in shady moist habitats by runners that take root. Clusters of leaves form wherever the stolon takes root at a node.



Photo by R. John Little



**Cliff Violet, *Viola perreniformis*** (shown left)

An uncommon species in the region, it is usually found on cliff faces or steep rocky slopes of rhyolite (Moogerah Peaks and Lamington National Park), rocky granite slopes and outcrops (Crows Nest), or sandstone-derived soils and rock-faces (Helidon). In addition to runners, it can develop upright stems to 10 cm long. Upright stems are unknown in *Viola banksii* and *V. hederacea*. Flowers are usually a pale mauve or blue-violet, with violet coloured blotches on the two upper and two side (lateral) petals separating the mauve outer colour from the white flower centre. The mature leaves and petioles can be minutely hairy, up to 23 mm long and 27 mm wide, and attain an ornate, almost circular shape with a narrow sinus. The leaf margin is usually regularly crenate (rounded teeth) with 9 to 21 teeth, and often has a ciliate (fine hairy) edge. The rhizome of this species tends to develop into a toughened, tuberous 'tap root' in many situations. It spreads by runners that take root at a node, forming clusters of leaves.

Continues on page 10...

## Native Violets of SEQ (continues..)



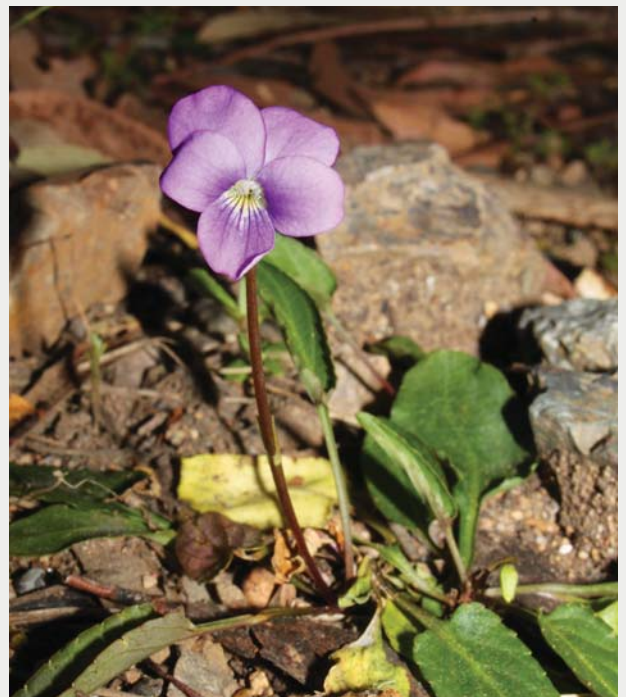
**Rhyolite Violet, *Viola silicestrus*** (shown left)

Another uncommon species in the region, *Viola silicestrus* is confined to high elevation rhyolite areas such as Springbrook and parts of Lamington National Park in Queensland. Like *Viola perreniformis*, it also can develop elongated stems, recorded to 30 cm long, in addition to runners. Flowers are usually pale mauve or blue-violet, with a whitish centre, although some specimens at Springbrook have pure white flowers. The mature leaves are up to 5 times wider than long, growing to 15 mm long and 38 mm wide, attaining a kidney-type shape when mature, and are hairless. The leaf margin has small, yet obvious fairly regular teeth. It spreads by runners that take root, forming individual plants that develop into small rosettes.



**Arrow-leaved Violet, *Viola betonicifolia*** (shown right)

This species is very different from the other four, with a solitary growth habit. It never sends out runners, but develops as a single plant (although sometimes several plants grow closely together) with a number of fairly upright dark leaves. The leaves can be up to 20 cm long (including the leaf petiole) with slightly blunt teeth along the leaf edge. There are two main habitats for this species. One is coastal lowland Melaleuca forests, with high water tables, of which over 90% have been destroyed for various land uses. The other is on high ridges and mountains. Flower colour can vary from deep purple (common in the lowland coastal form) to a pinkish mauve which is common in the higher altitude form. Very rarely are white flowering forms seen. Some forms are perfumed, more evident in the first few hours of sunlight. The plant is host to the rare (if not extinct) and pretty Australian Fritillary butterfly which hasn't been seen in NSW for some years and even longer in Queensland.



The Australian Fritillary butterfly (female shown above) is listed as endangered under Queensland legislation, but has not been definitively seen in Queensland since 1988 and in NSW since 2001. Photo courtesy of Trevor Lambkin, taken by Lance Matthews at Port Macquarie NSW circa 1997.





## practicalities

### DIY Nest Boxes

Most people know the importance of tree hollows and the vital role they play in providing roosting and nesting sites for around 20% of Australian wildlife. However, not many people realise how easy it is to construct an 'artificial hollow' or nest box with some scrap timber and basic carpentry tools and skills. A recent workshop run by Brisbane City Council's Wildlife Conservation Partnerships Program, and presented by Alan and Stacey Franks from Hollow Log Homes, highlighted that with a little practice anyone can build their own nest box to provide a home for an Australian Wood Duck, or maybe even a Squirrel Glider.

Nest boxes, like natural hollows that have formed over many years, come in many shapes and sizes and are used by different species. A tree hollow or a nest box suitable for a small insectivorous bat is completely different from that used by a large Powerful Owl. Choosing the right nest box for your property can depend on what animals you have observed in the area, which animals you would like to attract to your property, and whether your property is lacking certain sized nesting hollows in surrounding trees. By contacting your local Land for Wildlife Officer, you can find out what animal species are likely to occur on your property and construct your nest boxes accordingly.

Some of the landholders who attended the nest box workshop showed great initiative by pulling apart a nest box that they had built, and then used it as a template to construct more boxes for their property. One landholder constructed another two

nest boxes after the workshop and within two weeks had a kookaburra checking one out.

A recent nest box survey on various Land for Wildlife properties in western Brisbane returned some great results. Animals such as Common Brushtail Possums, Short-eared Brushtail Possums, Australian Wood Ducks, Rainbow Lorikeets, Pale-headed Rosellas, insectivorous bats and Squirrel Gliders were all observed in July and August 2012. Perhaps it was due to the cold weather, but it was certainly a busy time.

One property in the middle of suburban Indooroopilly had four out of ten nest boxes occupied with Common Brushtail Possums and a family of Squirrel Gliders, as well as signs of activity in another two boxes. The only natural hollow in this area is a single stag tree on a neighbouring property. It goes to show that if you provide habitat, animals will utilise it. This success has convinced the environmental manager of the site to construct a further ten nest boxes out of unused plywood.

There are a few important points to remember when constructing your own nest box. Ensure any screws or nails are not protruding into the box, as the sharp points may injure wildlife. Coating the nest box with a lanolin-based product will help protect it from weathering while not harming the animals that will use it. When installed, boxes should be protected from the harsh afternoon sun and if storms regularly occur from a particular direction. Try to place the box on the other side of the tree. Use sturdy wire to hang the box

**Proud workshop attendees with their newly made nest boxes.**

from a tree fork. A garden hose or another protective coating around the wire will help prevent it from damaging the tree.

Most animals need nest boxes to be only three to four metres from the ground. However, larger parrots and owls prefer nest boxes to be a lot higher up a tree. Personal safety is paramount when installing a nest box so always recruit someone to be on hand to hold the ladder and assist with installation.

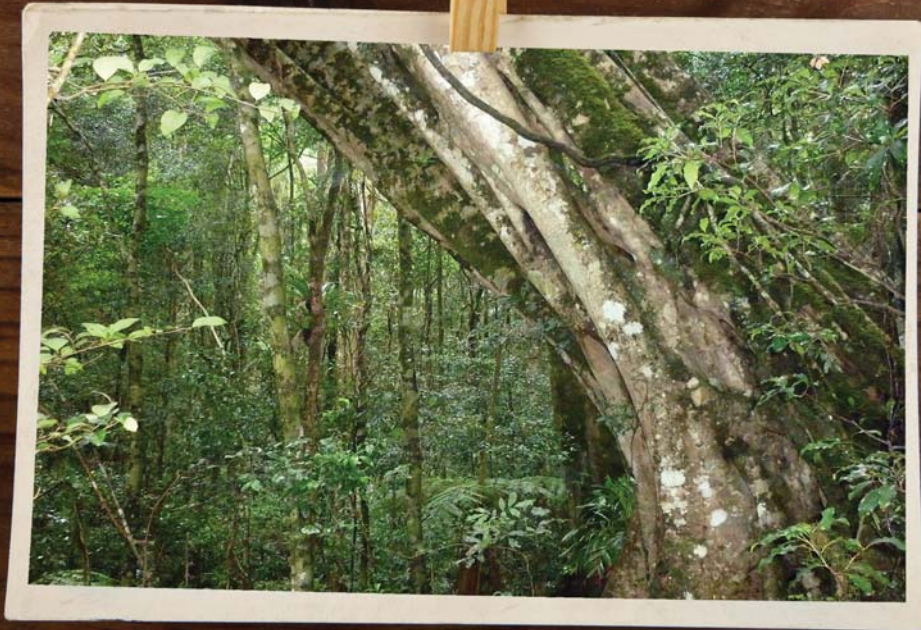
Once installed, nest boxes should be monitored for intrusion of unwanted guests. Common Mynas, Common Starlings and European Honeybees are the major feral species that may take up residence in nest boxes and drive away desirable native species. Non-native birds can easily be deterred by removing nesting material and closing the nest box for a while, or by relocating the nest box to another area. European Honeybees should be removed by a professional beekeeper.

There are many templates for making nest boxes available on the internet. A great reference book for nest box construction, as well as tips and information about nest boxes, is *Nest Boxes for Wildlife: A Practical Guide* by Alan and Stacey Franks.



**Article by Cody Hochen  
Land for Wildlife Officer  
Brisbane City Council**

# my little corner



## The Leaning Fig Leans No More

**A**t lunch we heard the roar. It seemed to go on and on crashing and tearing its way to the ground. Our initial impression was that it was close by and so I immediately searched along the trails around the centre. Nothing. A few days later Susan suggested it might have been the leaning fig so she, Lizz and Rowan went to investigate. After, they told me the inevitable had happened. I had to have a look for myself...

Up until then its majestic bulk was simply awe inspiring when viewed side on. The massive trunk angled at 45 degrees to the ground soaring over a deep wide gully. As with stranglers, the stem was riddled with apertures that at some high point coalesced into a solid cylinder shooting vertically skyward and crowned by a dome of rich green leaves, its fruit parrot heaven. On gazing at it, first thoughts include sheer disbelief at the staggering strength

*"The stem was riddled with apertures that at some high point coalesced into a solid cylinder shooting vertically skyward and crowned by a dome of rich green leaves..."*

required to hold up its immense leaning weight.

When looking up its length from the base, a flying plank buttress flared out from high up and ran parallel to, and separated a metre from, the main trunk only to rejoin it at the base near the ground. One of the lovely things about the leaning fig was you had options for climbing. You could scramble up on the outside and negotiate the trunk's folds and holes and ferns and orchids feeling quite safe on its broad back (although I was once startled by a large python curled up resting). From there you could sit and enjoy the forest from high above the gully and look up into the canopy.

The other option was to enter into its hollow trunk and climb up inside the ever-narrowing tunnel of interlocking roots. And at one point you look out through a window across to the sheer face of the flying buttress. A little further on you come to a gaping hole in the trunk beneath you with no possibility of going on while looking straight down to the gully far below.

That it had fallen was not unexpected. In fact last year it featured as our season's

greetings card photo in the knowledge that it might soon come crashing down. Some years ago ever widening cracks had developed at its base. Now from the top of the spear of splintered hollow stump left angled in the ground I surveyed the damage. Its twisted trunk straddled the gully and the temptation to cross along it too great. It had spread two large trees stripping off their bark and splitting one to its core. Other huge trunks lay smashed underneath and when I reached its far tips I looked back to see the devastation all around. An enormous hole had been opened up in the forest with blue sky searing overhead. I stepped out 45 metres back to where it shot out of the ground.

My thoughts before leaving: sadness in some ways as it had given so many the joyous opportunity to witness this remarkable work of nature. "Check out the leaning fig just after you turn left at the T-junction. It's worth a little look", we'd say.

I also know it's part of life's ongoing process, from death comes life.

**Article by Richard Zoomers  
President, Wild Mountains Trust  
Land for Wildlife member  
Rathdowney, Scenic Rim**

# book reviews

## Barks and Trunks: Rainforest Trees of South-Eastern Australia. Volumes 1 and 2

by Peter Poropat

These two books are a tremendous resource and aid to identifying rainforest trees along eastern Australia. They're packed with good quality colour photos throughout and provide an effective identification guide to the trees, especially when you think that often those tall rainforest trees have their leaves way up in the canopy, and therefore leaf details are difficult to obtain.

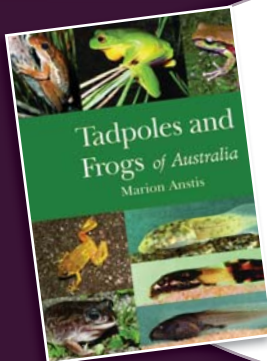
Volume 1 (98 pages) covers 90 species and Volume 2 (180 pages) covers another 150 species, ranging in distribution from the Victoria/NSW border to northern Queensland. Each species has a page devoted to it, with a detailed description of its growth habit, habitat, trunk, bark, leaves, flowers, fruit, and timber details. Botanical and common names are included. These descriptions are more than adequate to assist in identification, and in most cases colour photos are included of leaves, and in many cases flowers or fruit. But the real advantage is the large colour photos of the trunk and/or bark, clearly showing trunk and bark features such as buttressing, fluting,

texture, colour, etc. It should be pointed out that the photos are not only clear but also large enough to be useful.

The author has an obvious love of these rainforest trees to have spent many years searching out not only relevant species, but finding specimens that have trunks that are not only representational of the species, but also ones that can be photographed in the dim light and tangled rainforest vegetation.

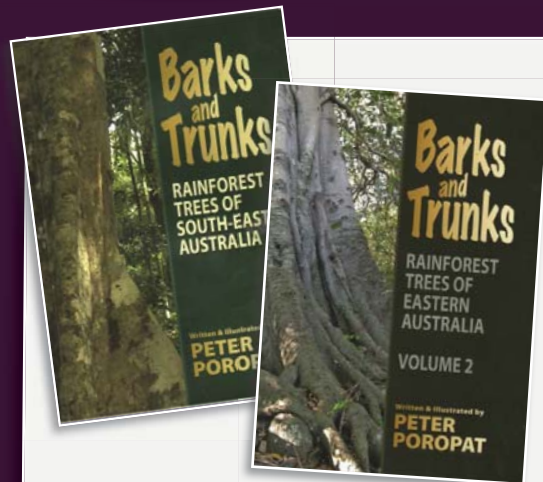
To enhance the book's effectiveness, bark types (with photos) are also listed in the front of the books along with a list of the species in each group.

There is an intention to publish a third volume in the future, and in the long term I'd love to see all three volumes combined into one. The information in the book is accurate and up to date, and along with the wonderful photos, is a credit to the author. I certainly recommend these books to anyone such as plant enthusiasts, bush walkers, timber enthusiasts and people interested in the world around them!



## WIN A BOOK!

SEQ Catchments is giving away ONE free, signed by the author, *Limited Edition* copy of *Tadpoles and Frogs of Australia* by Marion Anstis valued at \$150 to a chosen Land for Wildlife member who contributes a story about a wetland or creek project on their property. Winning story will be printed in the October 2014 newsletter. Prize drawn 1 Sept 2014.



Dragonwick Publishing  
Volume 1 (published 2009) \$35  
Volume 2 (published 2013) \$40  
Soft cover, colour photos.  
ISBN: 9780987351524 (vol 2)  
Available from [www.barksandtrunks.com](http://www.barksandtrunks.com)  
and [www.florilegium.com.au](http://www.florilegium.com.au) and other  
online bookshops.

Book review by Glenn Leiper

## White Beech

By Germaine Greer

Most Australians my age would have heard of Germaine. She led a movement that changed the world. Would I have this job if the path before me was not carved by her and other similar women?

This book, although a divergence in topic from her previous best-sellers, still displays her sharp intellect, ferocious investigative skills and her determination to speak her mind. The topic of focus in *White Beech* is the ecological decline of Australia and her efforts to reverse this decline, and in fact restore, the rainforest on her property in Numinbah Valley on the Gold Coast hinterland.

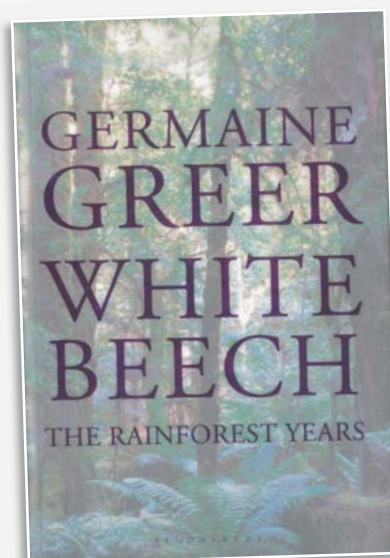
Her story would be familiar to many Land for Wildlife members. The search to buy that block of land that speaks of beauty, hope and an ability to give something back. The search for historical meaning to the landscape we now see knowing that it has undergone dramatic changes in the last 250 years. The search for knowledge about

the plants and animals we have entrusted into our care by 'buying' their homes. As well as the hard work and energy required to restore ecosystems, and the joy we get when we see success.

There are Land for Wildlife members in Numinbah, and indeed across Australia, who are undertaking similar journeys of ecological recovery, and I think this book would resonate with such an audience.

This book is written with conviction. Her passion and sometimes bluntness are refreshing and mirror my own joy, and sadness, for this country and its natural assets. I found some sections in the chapters on botany and non-indigenous history to be hard-going, but there are gems of surprise throughout that kept me engaged from start to finish.

This is an appealing read for people doing ecological restoration and those who have an interest in the history of land use in SEQ.



Bloomsbury Publishing, 2013  
Hard cover, 384 pages.  
ISBN: 9781408846711  
Price: \$39.95  
Available from most online and in-person bookshops.

Book review by Deborah Metters

*"The wildlife that we have identified over the years has given us some magnificent 'feel good' moments."*

# property profile

## Moodlu Matters

In 1981, we purchased our 15 acre property, with nearly three quarters of the property previously cleared for timber. The soil in the southern section of our property was so high in salinity we could have used it for table salt. We decided to set this section aside and restore it in the hope that the salinity levels would drop over time. Thank goodness we did. This area is now a *Melaleuca* wetland.

When we became a proud member of the Land for Wildlife program in September 2003, we were pleased to find out that the wetland that we set aside those many years ago was now valued as remnant *Melaleuca* wetland. This area plays an important role in providing exceptional habitat and refuge for the local wildlife including our resident egrets, herons, wood ducks, cormorants and water dragons. Our migratory friends, the Yellow-tailed Black Cockatoos also enjoy a plunge in the water hole after gorging noisily on the *Banksia oblongifolia*.

We have identified numerous local plant species re-populating the area over the years, like *Lomandra*, *Melaleuca thymifolia*, *Glochidion*, *Acacias*, *Leptospermums* and rushes. We have given our property a helping hand by infill planting with endemic plants purchased and propagated from the Society for Growing Australian Plants (SGAP) and Caboolture Region Environmental Education Centre (CREEC) nurseries.

The wildlife that we have identified over the years has given us some magnificent 'feel good' moments. During the early years, we had regular visits from Eastern Grey Kangaroos and Swamp Wallabies, which grazed on our grasslands and drank from our dams. Among our friendly visitors are our resident families of Common Brushtail Possums, Common Ringtail Possums, Squirrel Gliders, bandicoots and a roaming *Echidna* using our property as a nature corridor.

When the *Melaleucas* and *Acacias* are flowering the whole place is alive with

noise and vibrant colour as the birds take advantage of the abundance of nectar and pollen. We reserved some grassed areas naturally for the wildlife, and maintained other areas through grazing for fire management purposes.

Howard has eliminated lantana from the property through constant vigilance, but we still have ongoing weed control for Billy Goat Weed, Slash Pine wildlings, *Ochna* and Whisky Grass. The Whisky Grass only appeared about five years ago.

We love finding our silent residents (Tawny Frogmouths) hiding in the *Angophoras* or *Acacias*. There are usually three of them together. It is easy to see from our photo why they are called frogmouths.

Our membership with Caboolture Daytime SGAP and the Wallum Study Group has helped us enormously in learning about the native indigenous plants for this area and helped me buy the correct plants for our revegetation. The *Melaleuca thymifolia* that we were given as free plants have proved to be very tough plants, surviving after being flooded for about three months. They are my favourite wallum plants and it has a beautiful flower.

Our property consists of wallum wetlands and dry eucalypt forest with some beautiful specimens of *Eucalyptus racemosa* (Scribbly Gum). I have been able to rescue various native seedlings from here to share with SGAP and CREEC.

We have three Carpet Pythons living on the property. The largest one seems to stay up the back of the property while the two smaller ones are often seen in the shed and near the house. One was happy to get up close and personal with us. He needed a gentle tickle with the hand broom to encourage him to back out of the fly mesh from our back door. Once he was back on the downpipe, he frightened a Green Tree Snake who was happily sunning himself on the pipe.

We discouraged one carpet snake that was sneaking up on a baby White-browed



Scrub-wren when it was fledging. We felt it was okay for us to intervene as the parents had chosen the safety of Howard's workshop to build their nest.

The Dollarbirds return every October and compete for a magnificent 40-year plus Scribbly Gum nest site with a pair of Galahs and lorikeets.

Last year we noticed a decline in our Brown Quail numbers. We had two families of at least ten, then for six months, we only saw one pair. It was such a relief when we saw eleven of them return last week. We had been concerned they may have been subject to domestic or feral predation.

There are still a few kangaroos around but they are not as bold as they used to be.

We will always have to work at keeping our little piece of paradise free from weeds, but the pleasure of enjoying the wildlife is worth it.

**Article and photos by  
Carol and Howard Heyworth  
Land for Wildlife members  
Moodlu, Moreton Bay**

**Photos top to bottom:**

The beautiful *Melaleuca thymifolia* in flower. Variegated Fairy-wrens and Red-browed Finches can often be seen in these trees.

One of our Tawny Frogmouths.

I was fortunate enough to get close to this young Dollarbird when she was resting after her first flight.

It was exciting to see the Yellow-tailed Black Cockatoos feed on the *Banksia oblongifolia* trees that I had planted close to the house 12 years ago.



# letter to the editor

## Wallum Wonderland

Enclosed is an article on a disappearing bit of Queensland habitat, which may be of interest to your readers.

**Graham Reese**  
**Land for Wildlife member**  
**Rochedale, Brisbane**

**Editorial note:**

Over the years, Graham has submitted several articles for this newsletter. All are beautifully hand-painted and hand-written on board, and carefully posted to me. I am always delighted to receive, scan and print them for others to appreciate.



**WALLUM Wonderland**

THE DISAPPEARING BUSHLAND GEMS THAT USED TO DOT THE SANDY AREAS ALONG THE QUEENSLAND COAST, ARE FAST BECOMING A VERY SAD DISTANT MEMORY.

In less enlightened time, these havens for small birds and butterflies were bulldozed to create rubbish tips, quarries and sporting grounds.

However, if you are an admirer of the unique vegetation of these heath areas, you can create a smaller version on your own property, with a bit of effort. The size depends on your budget.

On my property, I got a bulldozer to dig out an area, similar in depth to a dam site. I removed the clay soil and trucked in white-washed sand to fill the excavation site, raising it unevenly above the surrounding ground by about one-third to one metre. I then covered the top sand with 10-20 cm of fine compost, which I made from leaf litter from my own property.

I then planted, remembering that the deepest and sunniest parts were reserved for *Banksia aemula*, *Ricinocarpos pinifolius* and *Leucopogons*. The *Gompholobiums*, *Phebaliums*, *Persoonias*, *Aotus* and others do well in less depth of sand.

**MAKE UP OF WALLUM SOIL**

GREY COMPOSTED TOP SAND →

BROWN STAINED SAND →

PURE WHITE SAND →

CLAY, PEAT OR ROCK SUB-SOIL →

DUG OUT AREA → DITCH

RAISED FILL SAND IN PLACE → DITCH



Above: A bare paddock - arguably the least preferable type of land to rehabilitate and the most vulnerable to soil erosion.

## Philosophy with Phil

### I would prefer a paddock full of weeds to a bare paddock

Now that I have your attention... If I just bought a block and want to rehabilitate it, would I prefer a cleared paddock or a paddock full of weeds? Depending on the type of weeds, I would prefer the latter.

Some weeds such as Cat's Claw Creeper, Madeira Vine, Camphor Laurel and Chinese Celtis are a real problem, so I certainly would not want to inherit them. However, weeds do serve a purpose. In any rehabilitation project you first need to do a 'weed triage' and a cost/benefit analysis. At the core of this theory is the soil.

In an open, cleared paddock your land is more likely to be eroding and losing its precious topsoil. With no vegetative cover, be that weeds, wattles or grass, the top of the soil is fully exposed to sun, wind and rain. Any moisture that does happen to fall on your land will run straight off and not permeate into the soil.

Any plant that shades the earth has some benefits. Worms and other soil organisms will not come up to a baked surface. They need food, water and oxygen. They like it

cool, preferably with leaf litter and some moisture. These organisms, like the humble but vital earthworm, recycles leaf litter and vastly improves the soil.

Plants have roots. These worm (sorry about that!) their way into compacted soil, breaking it up and allowing for penetration of moisture and oxygen. Soil organisms need access to oxygen via air spaces in the soil. Some roots, such as those of legumes and the under-rated wattle, have nitrogen nodules that fertilise the soil.

Another benefit is strata. This is the depth of plant material from the ground. In a healthy forest, I like to see grass/ ground cover; then small shrubs/small trees; then mature canopy trees. This is a healthy forest, with little kiddies coming through to replace the old, tired ones (like me!).

Another great benefit of strata is habitat - a place for critters to live and poo. Within some poo are seeds that can help aid natural regeneration. Strata includes dead material such as rocks, logs and branches. This material slows down water

penetration, slows run off, creates shade and provides sanctuary for animals. Strata also reduces wind at ground level, resulting in less evaporation and less erosion. This all helps create a healthy piece of land.

To me, lantana, tobacco bush and all the annual weeds can be useful as part of a regeneration project. Lantana is a good example. It provides shade to the soil. It restricts run-off in storms. It stops the impact from rain drops by breaking them up before they hit the earth. It reduces wind at ground level. It provides leaf litter as mulch. It provides habitat. Birds love the branches to perch. Butterflies love to feed on the nectar of lantana flowers.

The lesson for me is that any rehabilitation takes time. Plan for it taking time and work with nature. Rehabilitation to a healthy system is not neat. Neat is the opposite of good habitat.



Phil Moran  
Land for Wildlife member  
Cooran, Sunshine Coast  
Manager, Noosa and  
Districts Landcare

Phi-los-o-phy (say fuh'losuhfee) *n.* a system of principles for guidance in practical affairs. *Macquarie Dictionary.*

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