LAND FOR WILDLIFE
South East Queensland

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Rarity found on a Land for Wildlife property

Many rare and interesting plants and animals are found on Land for Wildlife properties. The photograph here shows one such animal. It is displaying large blue-black 'eyes' and barring rows of white 'teeth' in a supposed attempt to ward off predators. This animal is about 12 cm in length and is the larvae of one of Australia's largest and most threatened moths, the Pink Underwing Moth (*Phyllodes imperialis*) southern subspecies.

Nick Clancy, Land for Wildlife Extension Officer, found this caterpillar on a Land for Wildlife property in the Sunshine Coast hinterland while conducting a property visit. The Pink Underwing Moth southern species was first discovered and identified by a CSIRO team in 1988 at Mary Cairncross Scenic Reserve, which, until Nick's recent find, was the only confirmed breeding site in Queensland.

Knowing that the Pink Underwing Moth southern species larvae eat only one species of plant, Carronia (*Carronia multisepalea*), Nick kept an eye out for Carronia and was rewarded to find a heavily defoliated plant and a larvae.

The Pink Underwing Moth southern species is listed under Commonwealth legislation as Endangered and is the subject of a Threatened Species Network project and other activities to confirm taxonomy, locate breeding sites and raise community awareness.

Given that over 75% of rainforest and vine forests in the Sunshine Coast region are found on private land, it is obvious that landholders play a vital role in the protection of many rare species that depend on rainforests for survival.

This bizarre looking creature is the larvae of the rare Pink Underwing Moth southern species. A new breeding colony of this threatened moth was discovered during a Land for Wildlife property visit.

> *"landholders play a vital role in the protection of many rare species that depend on rainforests for survival"*

Similarly, it is vital that programs like Land for Wildlife offer sound ecological assessment and management advice.

At least 45 Land for Wildlife properties within the Sunshine Coast Regional Council region contain populations of Carronia. These properties will be revisited by Land for Wildlife officers to look for potential Pink Underwing Moth southern subspecies breeding sites.

If you own a property that supports rainforest or vine forest, you may wish to keep an eye out for any Carronia plants. This plant species is reasonably easy to identify as it has a couple of characteristics traits which are described in detail on page 3.

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editorial

Welcome to the Land for Wildlife SEQ newsletter for winter 2008.

After many years of thought, discussion and planning, the first Land for Wildlife Open Property Scheme has finally arrived in Queensland.

To help celebrate Land for Wildlife Queensland's 10th anniversary, there are 28 Land for Wildlife properties which are open for a designated period of time during the month of September for other Land for Wildlife members to come and have a look at.

The enclosed Open Property Scheme brochure details 27 properties, with the backpage of this newsletter giving information about an additional one that unfortunately missed out on being in the brochure.

As you will see, there is a wide selection of properties from South-east Queensland. Some large grazing properties, some small peri-urban blocks and some education centres. All have unique stories to tell about how they are contributing to the overall health and wellbeing of ecosystems in SEQ.

Pages 8 to 11 of this newsletter showcase two quite different Open Properties. Given the diversity of properties and the wide geographic spread across SEQ, I hope you will be inspired to participate in the Open Property Scheme.

I am planning to visit several Open Properties, so please introduce yourself and let me know what topics you would like to see covered in this newsletter.

The rest of this newsletter covers animals from the extremely rare (Pink Underwing Moth) to almost too common or problematic (brushtail possums and jumper ants). Alan has provided an excellent article on the biocontrol of Cats Claw Creeper involving Land for Wildlife landholders. It will be interesting to watch the long-term effects of biocontrol on such an ecologically damaging weed.

One good part of my job is that people send me photographs of wildlife, plants and fungi that they have come across. I have included some of these here for your interest.

As always, I welcome any comments or contributions that you may have.

Happy reading.

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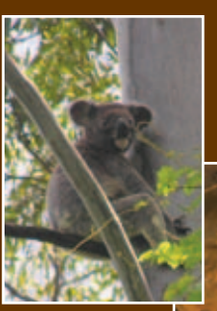


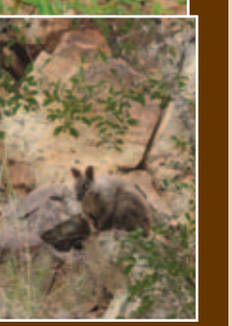


Images (L to R): Lesuer's Frog, Madeira vine tubers, Koala released after rehabilitation at Australia Zoo, unidentified spider, Stephen's Banded Snake, Brush-tailed Rock Wallaby.

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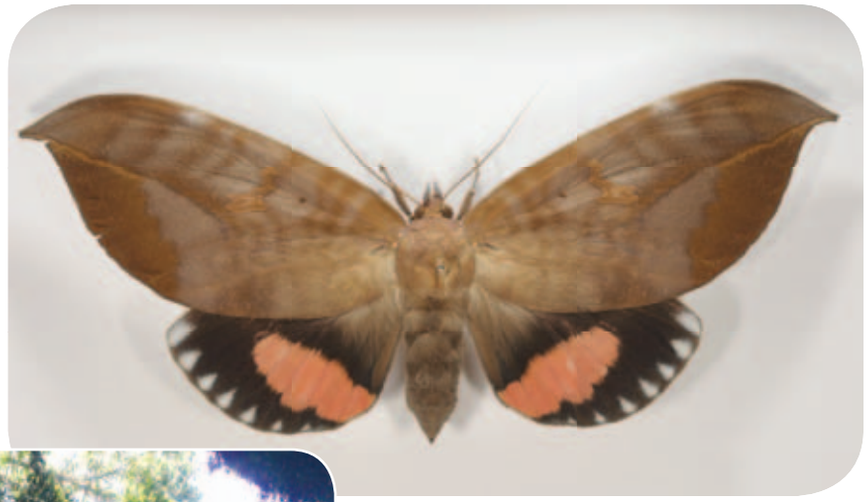
Landholder Registrations, Land for Wildlife SEQ - 30/06/2008

Registered Properties	Working Towards Registration	Total Area Retained	Total Area under Restoration
2265	481	43,750 ha	2,929 ha

fauna profile

Pink Underwing Moth

continued from page 1



*Pink Underwing Moth (*Phyllodes imperialis*). Photograph by Don Sands courtesy of CSIRO Entomology.*

Carronia growing as a climbing vine and as a shrub. Note the long petioles, swelling where the petiole meets the leaf and angle of leaf away from petiole. Photos by Deborah Metters.

Identifying Carronia

In SEQ, *Carronia multisepalea* is an uncommon rainforest vine found on the Blackall Range, Sunshine Coast hinterland, Mt Tamborine and the Border Ranges. Suitable habitats for Carronia include rainforests on red basalt soils (regional ecosystem 12.8.3), in vine forests on alluvial flats (regional ecosystem 12.3.1) and in rainforests on granite soils on the western slopes of the Blackall Range (regional ecosystems 12.12.1 and 12.12.16). Carronia prefers unlogged, intact rainforest remnants.

In low-light conditions, Carronia will grow as a rambling small shrub, but will rapidly grow up into the canopy as a strong climbing vine if light becomes available. Leaves are dark green and have prominent lateral veins. An important identifying feature of this plant is the petiole – the small stem that joins the leaf to the main stem or branch. The petiole is usually long and straight (up to 5 cm long) and has a distinctive swelling where it meets the leaf. The leaf distinctively grows at an angle (up to 90 degrees) to the petiole.

Carronia vines are dioecious with male and female flowers on separate plants. Their pollination vectors and fruit-dispersing agents are currently unknown.

Identifying the Larvae

Given the wonderfully complex ecological systems found in rainforests it is of no surprise that the Pink Underwing Moth larvae is not the only animal to enjoy a feed on Carronia leaves. Several leaf predators such as snails and larvae of other moths also eat Carronia. Large caterpillars of the Pink Underwing Moth southern subspecies commonly strip the entire leaf leaving only the petiole behind. The caterpillars are also known to eat half a leaf down to the midvein. These distinctive eating patterns may lead you in the direction of finding a Pink Underwing Moth.

Pink Underwing Moths seem to prefer to breed on Carronia vines found in dark rainforests with minimal sunlight. Young caterpillars need to eat young soft leaves, whereas mature caterpillars will eat most leaves and petioles. Larvae are only in the field for a short 4-6 week period per year and then they pupate and remain in diapause from May to September.

Dr Don Sands, a retired CSIRO entomologist who has been studying this moth for over 20 years, and Nick Clancy are working together to identify potential breeding sites through analysing feeding scars on Carronia. Sites with a high likelihood of being breeding locations will be revisited during October - November when the larvae start to appear.

Pink Underwing Moth Ecology

The Pink Underwing Moth southern subspecies can grow up to 13 cms in size and has mottled brown wings that look like eucalypt leaves. A bright pink section on the underwing can be flashed if disturbed. Dr Sands believes that the southern subspecies of the Pink Underwing Moth is threatened due to the loss and fragmentation of its highly specific rainforest habitats.

The Pink Underwing Moth southern subspecies feeds on the juice of rotting or over-ripe fruit that has not fallen to the ground (D. Sands pers. comm.). Pink Underwing Moths do not pierce fruit as do some of the related fruit-piercing moths. Adult moths live for about 30 days and probably disperse widely to suitable rainforests. Late October and December-March are the two main known flight periods.

This recent discovery of a new breeding population of a threatened species confirms that community involvement is essential to protect threatened species.

This article was compiled by Deborah Metters from information presented at the Pink Underwing Moth Revegetation Workshop held at Mary Cairncross Reserve on 12 May 2008 organised by Barung Landcare.

Ecological information about *Phyllodes imperialis* is from Clarke, GM & Spier-Ashcroft, F (2003) *A Review of the Conservation Status of Selected Australian Non-Marine Invertebrates*, Commonwealth of Australia.

fauna profile

Jumper Ants

Article by Nick Clancy
Land for Wildlife Extension Officer
Sunshine Coast Regional Council

It is quite possible that your Land for Wildlife property is home to as many as 100 different species of ants. Ants occur just about everywhere in our environment and represent an impressive amount of diversity. Around 1300 species of ants have been formally described in Australia. It is estimated that this represents only about one third of the continent's total ant fauna. Ants play important ecological roles such as recycling nutrients, devouring carrion, dispersing seeds, controlling potential 'pests' as well as highly specific interdependences with other fauna such as is the case with the Crematagaster Ants and the Illidge's Blue Butterfly.

One primitive species that is quite infamous amongst landholders living in the bush in SEQ is the Jumper or Jumping Ant (*Myrmecia nigrocinta*). Jumping Ants are related to Bull Ants and are just one of the 89 described Australian species in the *Myrmecia* Genus. Characteristic of the *Myrmecia* Genus are the very prominent forward pointing mandibles.

Worker ants forage individually during the day and on warm nights for small invertebrates both on the ground and in vegetation. They use their strong sting to subdue prey and their large mandibles to transport them back to the nest. Protein in the form of insects is carried back to the nest to feed the larvae. Workers also gather nectar and honeydew by feeding on sap-sucking insects and flowers. The adults live entirely on sugary foods which once consumed is carried in their crop back to the nest where it is regurgitated and shared with others.

Walking through the bush you are most likely to notice the Jumping Ants distinctive cone shaped mound nests which are often built at the base of a tree or grass clump. These are made of dirt and are generally about 200 mm in height. This is the tip of the iceberg as the tunnels and galleries can extend a metre or more underground. It goes with out saying that these nests are best avoided. When disturbed the nest erupts with a swarm of ants that jump about aggressively in a defensive charge. If you are unfortunate enough to be bitten, the ants deliver a powerful 'bite' with an intense sting that often causes local swelling. The Jumper Ant grabs its victim with its powerful mandibles and holds on while the tail is thrust forward to deliver the sting. Stings have been known to cause serious allergic reactions in some people. This renowned sting of Jumper Ants is currently the subject of promising cancer research at the University of Technology Sydney. You really only need one introduction to this relatively common species and it's extremely unlikely that you will ever forget it!

Jumper Ants inhabit moist forests of eastern Australia. In SEQ they are found on rainforest edges and in wet eucalypt forests. They reach about 12-17 mm in length. Both the head and the gaster (rear section) are black, while the middle section (mesosoma) is a reddish-brown with a black band. The large mandibles are red-yellowish in colour. Photos by Peter Chew.

Jumper Ant nests are often found at the base of a tree or grass clump. Photo by Nick Clancy.

Jumper Ant nest entrance. Photo by Peter Chew from Brisbane Insects and Spiders website at http://www.brisbaneinsects.com/pchew_brisbane/index.html

References

Burwell, C. (2007) *Ants of Brisbane*. A Queensland Museum Wild Guide, Queensland Museum.

weed profile

Silver-leaved Desmodium... A Sticky Problem

Article by Nick Clancy
Land for Wildlife Extension Officer
Sunshine Coast Regional Council

This Lesser Long-eared Bat (*Nyctophilus geoffroyii*) pictured was recently found dead on a Land for Wildlife property near Conondale in the Mary Valley. It was entangled in the environmental weed Velcro Vine or Silver-leaved Desmodium (*Desmodium uncinatum*). This vigorous vine is used as a pasture legume but has also become an invasive weed in bushland and regrowth areas. In winter it produces an abundance of sticky, velcro-like segmented seed pods that are dispersed as they latch onto passing animals, machinery and humans. The leaves and stems also have velcro-like hairs that cling onto most things they come in contact with.

Landholders have reported a range of small native species such as frogs, small birds, moths and other invertebrates becoming entangled in this problematic weed. Small animals that forage in the understorey and forest edges are most likely to become entrapped. The Lesser Long-eared Bat forages for insects close to and even on the ground making it particularly vulnerable to entrapment in the sticky stems of the vine.

We would be interested in hearing your stories and seeing any photos if you have encountered wildlife that has become trapped in Silver-leaved Desmodium.

Control of Silver-leaved Desmodium
Look out for the distinctive pink pea like flowers in early winter. Small seedlings can be hand-pulled when the soil is moist. Being a nitrogen fixing legume, more mature plants have extensive tap roots that can be difficult to hand pull, grubbing out is an option.

Herbicide treatment may be required for larger infestations. An off-label permit allows for the foliar spraying of this invasive weed with Brushoff®, Kamba 500® and Kamba M®. Be sure to read the label carefully before use and always use the herbicide in accordance with label directions. Target control efforts annually prior to vines setting seed in winter and mark treated infestations so you can check for any regrowth the following year.

Silver-leaved Desmodium images showing the leaves, sticky hairs, pods and flowers. Photographs by Sheldon Naive from Suburban and Environmental Weeds for South-east Queensland and northern NSW CD-ROM (2002).

fauna profile

Our Urban Neighbours - The Brushtail and Ringtail Possums

Article by Gavin Hammermeister
Land for Wildlife Extension Officer
Redland City Council

The Common Brushtail Possum - a sometimes unwanted visitor into South-east Queensland homes. Photo by Darryl Larsen.

The Common Brushtail Possum (*Trichosurus vulpecular*) and Common Ringtail Possum (*Pseudocheirus peregrinus*) are two of the best examples of native fauna who have adapted to our suburban lifestyle. As our urban footprint expands, the majority of native fauna struggles with the loss of habitat, However, both the brushtail and ringtail possum see this as an opportunity to expand their ranges, culminating in them being possibly the most common native mammals in major cities and towns of South-east Queensland. They have easily made the transition from their typical habitat of open forest and woodlands to our backyards.

The Common Brushtail Possum has a black bushy tail, large pointy ears and a silver-grey coat and is roughly the same size of a cat. Males also have reddish-brown fur on their shoulders. Males weigh anywhere from 1.3–4.5 kgs while the females range from 1.2–3.5 kgs.

"there are up to 7 Common Brushtail Possums per hectare in suburban Brisbane"

The Common Ringtail Possum is comparable in size to a brushtail however its colouration consists of grey with white patches behind the eyes and on the belly, and orange-brown tinges on the tail and limbs. Its long prehensile tail has a white tip and it uses it like a fifth limb to climb and jump.

Both species are nocturnal and very agile climbers as they can often be seen climbing along powerlines and fences using them as their own personal highways. Both eat a variety of native and introduced leaves, flowers and fruit. The brushtail also consumes a variety of household refuse.

While both possums are listed as common and protected in Queensland, the Common Brushtail Possum is actually declining through Central Australia and is listed as rare in South Australia and endangered in the Northern Territory. Introduced predators such as feral cats and foxes, introduced herbivores such as cattle, rabbits, horses and camels, and changed fire regimes have all contributed to the decline. It is interesting to note that before protection in Queensland the brushtail was hunted for its pelt, much like the Koala was.

While Common Brushtail Possums are declining in parts of Australia, they are one of New Zealand's most serious pests. In the 1800's, around 200 were introduced for the fur trade and now number in their millions and are found in most parts of the country. In New Zealand the brushtail is a vector for bovine tuberculosis, has changed forest composition through selective browsing of native plants and also preys on the eggs and chicks of native birds.

With the expansion of both of these possums into urban settings in South-east Queensland, this has lead to conflict with humans in suburbia. Both brushtails and ringtails eat garden plants and can cause faecal contamination of water tanks, however it is the brushtail that tends to have the most conflict with humans due to its habit of taking up residence in the roofs of houses. It has been reported that there are up to 7 Common Brushtail Possums per hectare in suburban Brisbane. The ringtail is less of a problem as it constructs a spherical nest (referred to as a drey) in trees in which it resides during the day.

If you wish to stop a brushtail living in your roof, then a few simple steps can be taken:

1. Find out where the possum is getting out by cramming paper into suspected entry points during the day, when the possum exits at night it will push out the paper showing where it is getting out.

2. Provide alternate homes by placing nest boxes or hollow logs in nearby trees. These will need to be monitored to ensure introduced species such as the European Honey Bee and Indian Myna do not take over. Brushtail possums will happily use nest boxes.

3. Once nest boxes are installed, seal the entry points into the roof. Do this between the hours of 8 – 10pm when the possum is out. It is also recommended to splash disinfectant around the old entries to destroy where the possum has marked the entry points with its scent glands.

A family of Common Ringtail Possums.
Photograph by Redland IndigiScapes Centre.

Both Common Brushtail Possums and Mountain Brushtail Possums (pictured) will happily use nest boxes.

Possum scats.

This Common Brushtail Possum was upset after having being disturbed in its nest box by prying Galahs.
Photo by Jason Flynn.

an interesting fact about the Common Ringtail Possum is that it eats its own poo

Trapping should never be undertaken by the home owner as permits are required to do so. Most pest controllers are experienced at removing brushtails and are licensed to use harmless traps if required. A trapped possum has to be released within 50 metres of the capture site so it is still within its home range.

Brushtail and ringtail possums that inhabit woodlands, forests and urban fringes face a number of predators which can impact on population numbers. These include the Dingo, Powerful Owl, Carpet and other large pythons and the European Fox. However, their city cousins also face their fair share of peril. Causes of mortality in urban areas include car strikes, dog and cat attacks and accidental/deliberate poisoning.

Dense urban populations of brushtail and ringtail possums can be more susceptible to disease. Most possums that are illegally relocated face a high chance of mortality as they face competition with existing territorial possums.

I thought I would finish this article with an interesting fact about the Common Ringtail Possum by discussing the reason why it eats its own poo. As the ringtail eats mostly leaves, its energy source is obtained from the cellulose in the plant fibres. Cellulose is a poor food choice but also difficult to break down and digest.

The problem is solved by specialised bacteria in the gut that breaks up, ferments and digests the cellulose. This process happens inside a very large fermentation chamber called the caecum that is located towards the end of the gastro-intestinal tract.

The chewed-up leaf litter passes through the gastro-intestinal tract until it reaches the caecum. Once in the caecum the specialised bacteria break down the cellulose further by fermentation. This then passes through the large intestine and is excreted through the cloaca in pellet form.

The ringtail produces two types of pellets in the caecum using a clever separation mechanism. These two types are faecal and caecal pellets. Faecal pellets are hard, dark and contain unwanted recycled matter. The caecal pellets are soft, greenish and still contain undigested nutrients. A sleeping ringtail curled up into a ball with its nose next to its cloaca consumes the caecal pellets so that remaining nutrients can be extracted. The mother also passes these to the young to increase their gut bacteria to enable them to ferment and digest the leaves they eat.

References

Pest Animal Control CRC website.

Australian Koala Hospital Association Inc, Wildcare Australia website.

EPA website.

Wildlife of Sydney website.

property profile

"Yarrawonga" - a Land for Wildlife Open Property

Article and photographs by Bruce Lord
Community Partnerships Manager,
Upper Brisbane Catchment
SEQ Catchments

Endangered Araucarian dry rainforest remnants on "Yarrawonga".

The most westerly property involved in the Land for Wildlife Open Property Scheme is "Yarrawonga", an impressive beef cattle enterprise managed by Bill Hobbs. The property contains extensive remnant dry rainforest patches and some innovative farm forestry plots. "Yarrawonga" is located south-west of the Yarraman township in the Toowoomba Regional Council district.

Sawmilling Company , Broadfoot & Foote were original owners of the 456 hectare (1128 acre) block and had logged the original rainforest for Hoop and Bunya Pine and some Yellowwood. Purchased by the Boisen family in 1935 and a through a long-standing relationship with Hobbs family that extends through generations until the present day, the property has been managed by, and the home to, the Hobbs family since 1936.

On arriving at the property and camping in a tent in 1936, Bill Hobbs' father set about progressively clearing the scrub which covered the whole block. In these early days the scrub was felled by axe and burnt. Improved pastures were established on rich upland basalt soils to support a dairy herd. In 1938 a complete dairy herd was walked from a farm at Tingoora in the South Burnett to commence dairying at " Yarrawonga".

As was often the case, the property was run as a mixed farming operation with the raising of pigs and dryland cropping in conjunction with the dairy herd which continued until 2000. Today the property is managed as a beef cattle enterprise with a breeder herd running on improved pastures and annual crops to produce weaners.

During the early days, the 2 large remaining patches of scrub on the property were not cleared to allow remaining smaller pines to mature and because of the steep terrain. This whole area has been retained and preserved by successive generations of the Hobbs family.

Bill Hobbs standing in front of a rainforest remnant.

In addition to retaining and establishing shade trees for stock across the property, Bill has also established a number of small farm forestry trials on the property and continues to plant trees across the property.

The Hobbs' family has also been generous in sharing the rainforest with other interested people. The first campers arrived in 1953 and a small hut has been constructed at the edge of each remnant, with regular visitors ever since. While some of the original campers enjoyed shooting scrub turkeys which damaged corn crops, people now come to getaway and enjoy the natural values of the scrub.

As well as having numerous private visitors each year , Bill's involvement with the Rosalie North Landcare Group has seen the family host several field days and guided scrub walks for people interested in the natural values and diversity in these large dry rainforest remnants.

"Yarrawonga" contains two main remnants with an approximate total area of 160 hectares. These remnants are comprised of Araucarian complex notophyll and microphyll dry rainforest on weathered basalt

"whether it be planting trees or shrubs or pasture, you should always aim to establish species which are suited to your country""

identified as the Endangered Regional Ecosystem 12.5.13 with a small area of Of-Concern Regional Ecosystem 12.8.13.

Bill Hobbs aims to protect and maintain the condition of these large dry rainforest remnants through the maintenance of fences to exclude stock access and the control of weed species, especially lantana, around remnant edges.

The main natural resource management issues over time have been the gradual replacement of fencing, ongoing weed control and the damage to the remnant and degradation of surrounding pastures from large populations of wallabies which shelter in remaining patches of scrub.

One of the remnants joins Yarraman State Forest to the east forming a large and significant tract of core vegetation.

Bill has a couple of favourite natural spots within the scrub, including massive fig trees (one over 13.8 metre around) in a gorge, with one particular strangler fig growing over large rocks. With regard to wildlife, Bill has a soft spot for the native marsupial mice which live around the camp and have become very quiet, cheeky, and comfortable sharing their accommodation with human visitors.

When looking to the future Bill believes that whether it be planting trees or shrubs or pastures you should always aim to establish species which are suited to your country and it is essential to have sufficient soil moisture to ensure success. Bill hopes that the condition of the rainforest scrub will be maintained over time and that he can continue to enjoy the beauty and diversity of the scrub.

If you wish to visit "Yarrawonga" as part of the Open Property Scheme please fill in the enclosed RSVP form.

Visitor numbers to "Yarrawonga" are capped at 40 so that 2 groups of 20 people will have guided rainforest walks. A botanist with expertise in dry rainforests is being arranged for the day.

Rainforest scrub in the distance over the dam.

Entrance to a dry rainforest remnant on Yarrawonga.

Sharp contrasts - remnant rainforest scrubs and pasture.

property profile

"Dillon" - a Land for Wildlife Open Property

Article and photographs by Joan Dillon
Land for Wildlife landholder

Lantana and other weed control on the Dillon's property.

A successful revegetation site on the Dillon's property.

Our part of the Sunshine Coast Hinterland is, as a result of historical land use, a patchwork of vegetation fragments. First the timber cutters took out any Red Cedar and White Beech, leaving behind only inaccessable trees in the steep gullies. Clearing for bananas came next, followed by small crops, dairying, and finally a combination of beef cattle, subdivision, and casual grazing on unoccupied land. Needless to say conditions were ideal for the growth of many of the weeds common in SEQ.

The results of all the above confronted us 10 years ago when we moved onto our 4.4 hectare property in Hunchy. The land was dissected with gully lines, had highly erodible but reasonably deep soils and a few old landslip sites. We were, however, fortunate to have a very small but permanent creek, one of the many un-named sources of Petrie Creek, a tributary of the Maroochy River. A few remnant trees had survived the depredations of history and there was some moderately mature regrowth. Lantana, glycine, desmodium and mistflower were the priority weeds. There were, of course, plenty of others!

Apart from weeds, the existing dominant trees were *Cryptocarya obovata* and *Cryptocarya triplinervis*, *Streblus brunonianus, Olea paniculata, Ficus fraseri* and *Ficus coronata, Elaeocarpus obovatus, Dysoxylum meulleri, Guioa semiglauca, Aphananthe philippinensis* and *Mallotus philippensis*. We were fortunate that there were sufficient numbers of *Macaranga tanarius, Pipturus argenteus* and *Trema tomentosa* nearby to naturally establish as pioneers. Where light reached the ground in the gullies, there was a partial cover of native forest grasses amongst the weeds.

Our revegetation program over the past 10 years has focussed on patch planting, working out from clear edges such as the internal driveway and existing vegetation. The size and shape of the patches has been designed to minimise edge effects and, as far as possible, reduce maintenance. We soon learned that in this climate and with our soil type, the three major issues when undertaking any revegetation program were maintenance, maintenance and maintenance. It was really important not to take on too much at any one time.

We propagated many trees ourselves from seed harvested on our own and neighbouring properties and were fortunate to be able to access additional stock from Barung Landcare's excellent nursery in Maleny. Various small grants for the purchase of plants and mulch helped along the way. Hares were and still are a major problem and all young trees have to be protected with chicken mesh guards. Several hundred have been made and are constantly recycled.

Our only water is from tank storage so none of the revegetation is irrigated. All trees receive 10 litres at planting, a generous layer of mulch and after that they are on their own. Survival rates have been above 95%, helped by a clay soil with good moisture holding capacity and planting timed to avoid hot, dry weather. Brush mulching with broken lantana has been useful in protecting the soil and has also provided food for various invertebrates in the course of breaking down. These in turn have provided food for the many insectivorous birds.

The revegetation program has also involved the creation of a large wildlife friendly garden utilising local and regional species with space set aside for a home orchard and vegetable garden. It's quite remarkable what can fit onto 4.4 hectares, particularly when the land form is a mix of gullies, slopes and moderately level areas with several different aspects.

A comprehensive plant list for the Blackall Range has helped with the selection of appropriate species to improve the general diversity of our establishing forest. Patch clearing of lantana combined with the development of the dense, layered garden has provided the whipbirds with a safe haven close to the house and safe corridors from the remaining lantana and regrowth.

A rainforest restoration workshop for Land for Wildlife members on the Dillon's property, May 2007.

> *"mulching with broken lantana has been useful in protecting the soil"*

We were told that the during the depression years the valley had been a hunting ground for locals shooting pigeons for the pot and with this in mind we consciously planted a range of additional food trees, particularly figs native to this area. Apart from the existing sandpaper figs we are also the proud stewards of a magnificent *Ficus virens* (image right) from which hangs the grandchildren's swing. What is a large tree with long strong overhanging branches without a swing!

The pigeons seem to have appreciated our efforts and are definitely coming back, and increasing in numbers. Nine species now either live with us permanently or are regular visitors. Figbirds, fruitbats, carpet snakes, possums and many other species also appreciate the additional resources. Our numerous honeyeaters, assorted flycatchers and pardalotes spend hours removing tiny insects from around the twigs and under the leaves.

Our revegetation program has also targetted several other species in terms of specific habitat creation. When you have a mostly blank canvas, you might as well be creative! The current project is the planting of a sedge and grass field in a seasonal drainage line as a means of encouraging the finches and wrens to return. They had been favoured by the many tall weeds and exotic grasses which have now gone but are still abundant on adjacent properties. Strategically planted windbreaks, either permanent, *Syzygium australe*, or temporary, *Acacia perangusta*, seem to have been quite effective in controlling wind blown seed.

Observation of existing remnants and the progress of our own revegetation plus natural regeneration has shown us that the natural shrub understorey in the dry vine forest of the valley is quite sparse. A dense layer of leaf litter with ferns on the south east facing slopes is, however, suited to several ground feeding birds such as the pigeons, Noisy Pitta, Bassian Thrush and of course the ubiquitous turkeys. Our overall bird count of identified species is now just over 100.

A mix of planting and natural regeneration is resulting in the return of palms and treeferns to the creek and gully lines with ground ferns gradually replacing the mistflower. We're also seeing many young seedlings waiting for a break in the canopy so that they can make a dash for the light. Wonga vines and cockspur have had to be strategically controlled as they have brought down several trees through sheer weight. Their trailing stems and roots do, however, hold the soil together on steep banks. Managing a new forest can be quite a challenge!

We have appreciated the Land for Wildlife network providing information such as plant lists to help with particular projects, and also the encouragement to do a bit of experimenting with what, in this area, is a very much modified landscape.

It's sometimes hard to believe the photographic evidence of what the property used to look like and there's still some distance to go. However, waking up to melodious birdsong, seeing an occasional shy wallaby, even if it does nibble the young trees, noting the flowering and fruiting of trees we planted and sharing our experiences with others is an incredible reward for doing what we love doing anyway.

If you wish to visit the Dillon's property as part of the Land for Wildlife Open Property Scheme please fill in the enclosed RSVP form.

letters to the editor

Recycling, Habitat Restoration and Special Education

Many thanks for your editorial on climate change, the most crucial issue ever to have faced humanity. If we don't start to address this issue now, today, the future for much of our non-voting wildlife appears wild and woolly indeed. Rupert Murdoch recently said "climate change poses clear, catastrophic threats". But there are also the catastrophic environmental and social threats.

Many thanks for the newsletter. It was excellent. Great to read how the red-bellied black snake is making a comeback. Many years ago on a bushwalk with the students we saw a couple of red-bellied blacks entwined together, mating or fighting? Very spectacular. They certainly are beautiful creatures.

Good news here is that three enthusiastic volunteers rolled up wanting to form a habitat group to weed and regenerate the beautiful bush around the Aspley Special School's Kingfisher Recycling Centre. That's fantastic since our kids are great at putting down cardboard and then mulching but anything small that is growing is, to them, a weed. We're delighted with the support of BCC Northern Catchments Coordinator.

I'm delighted that the Kingfisher Centre has already scored another volunteer to help our students with considerable disabilities process the centre's ever mounting volume of recyclables. As always, habitat groups and school community recycling initiatives thrive on VIPs and OBEs – Volunteers In Partnerships and Other Beggar's Efforts.

Just a small point about the photo of the Land for Wildlife sign attached to a stringybark tree. Some people might think that a Land for Wildlife sign that looks as if it's nailed to a native tree isn't a good look.

I agree with the article about the linkage between trees and rainfall and I found the practical article on killing weed trees to be excellent and obviously we enjoyed the article on SEQ kingfishers.

I retire this year at the end of 40 years in Special Education. My replacement has expert knowledge about birds and has already carried out spotlighting and accurate weed surveys on site. Plus BCC weed officers have already visited the site to assist with major weed tree eradication, so some aspects of Kingfisher Centre's environmental education curriculum are already in place. But what will happen to our waste minimisation program, then, 24 years after its inception, who knows? Please spread the word because I'd hate all our hard yakka to go down the tube.

All the best in the future you choose.

Harry Johnson
(former) Co-ordinator
Kingfisher Centre
Aspley Special School's Recycling Station
The world's most comprehensive school recycling project!

Combined letters from May & Nov. 2007

Ed – thanks for your letters and your passion shown for school recycling projects. I hope that the recycling program stays strong. With regards to our signs, the Land for Wildlife program encourages members to attach their signs to fence posts and gates, not trees, in line with your sentiments.

Aspley Special School is a registered Land for Wildlife property in northern Brisbane. The property contains over 1.5 hectares of an "Of-concern" Melaleuca ecosystem that fringes two creeks forming an important riparian wildlife corridor.

Glider Feeding Scars

Here is a photograph of incisions made by a Yellow-bellied Glider (*Petaurus australis*). A key component to the diet of Yellow-bellied Gliders is the sap from eucalypt trees which they extract by gnawing incisions into the bark of trees. Incisions are usually in the shape of a shallow V and are on average about 12 cm long and 1-5 cm wide.

Usually only one tree within a stand of similar trees is tapped for its sap at any one time. The selected tree may change over time and seasons, although single trees have been reported as being used as sap sources for over 10 years.

Yellow-bellied Gliders are one of Australia's largest gliders requiring mature, unfragmented forests with hollows for survival. These gliders can still be found across SEQ in areas where there are large tracts of undisturbed vegetation.

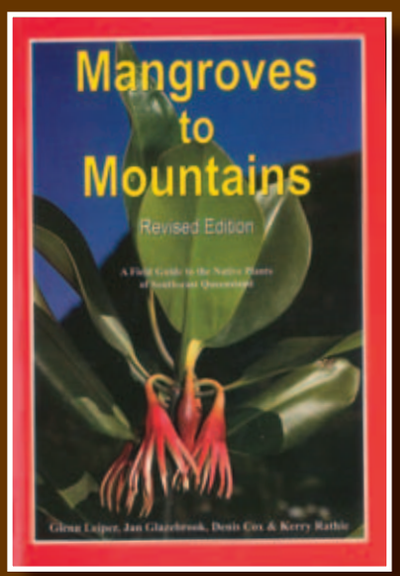
Reference:
WPSQ, Bayside Branch newsletter, August 2007.

Photo by Bruce Lord.

book reviews

Mangroves to Mountains: A Field Guide to the Native Plants of South-east Queensland (revised edition)

by Glenn Leiper, Jan Glazebrook, Denis Cox & Kerry Rathie



The revised edition of *Mangroves to Mountains* was launched in early June. It is now just one volume and includes all the species found in the original two volumes and many more. Over 2200 species of plants from the NSW border to Fraser Island and west to the Great Dividing Range are pictured and described with updated names and classification.

As with the original volumes the photographs are superb and the same easy to use layout of the original two volumes has been retained. The layout makes using this book to identify plants very simple; the book is divided into sections that covers the major vegetation types as well as a section on mistletoes and the eucalypts (and eucalypt look-a-likes). Each section is then divided again according to fruit or flower colour.

The sections are colour coded to make finding the relevant pages easy and quick. It is then simply a case of scanning the photos to find the plant that matches the plant you are trying to identify. The text is concise and easy to understand and is useful for confirming the identity of plants. People new to identifying plants in the field will find the text mostly free of confusing technical terms and there is a simple glossary in the back of the book for those words like 'lenticel' (no they're not great in a curry).

For many Land for Wildlife property owners it is sometimes difficult to make use of the flora species list provided during a Land for Wildlife assessment. With this book you will be able to put a 'face to the name' and become more familiar with the native plants in your backyard.

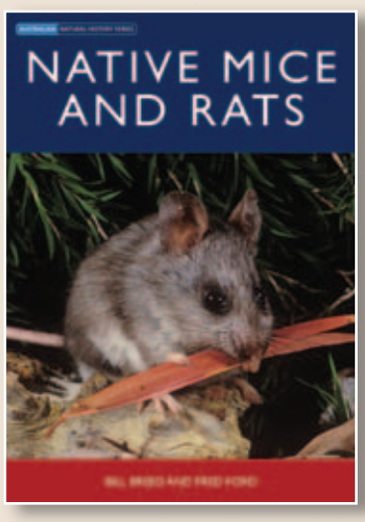
This book is the most comprehensive field guide available for the native plants of South East Queensland and is a valuable resource for property owners who want to gain a better understanding of the flora on their block.

Review by Alan Wynn.

Society for Growing Australian Plants (Queensland) Inc, 2008.
Soft cover, 544 pages, full colour.
ISBN: 978 0 646 48846 2
RRP: $50

Native Mice and Rats

by Bill Breed and Fred Ford



Australia's native rodents are a relatively little known group of mammals which actually make-up 25% of all our mammals. They are the most ecologically diverse family of Australian mammals with about 60 living species. They range in size from the very small delicate mouse to the highly specialised, arid-adapted hopping mouse, the large tree rat and the carnivorous water rat.

Australian native rodents do not adapt well to disturbance of their habitat and have not become pest species. Unfortunately, the native species are often mistaken for the more notorious pest species that have been introduced to Australia.

Native Mice and Rats describes the evolution and ecology of this much-neglected group of animals. It details the diversity of their reproductive biology, their dietary adaptations and social behaviour. The book also includes information on rodent parasites and diseases, and concludes by outlining the changes in distribution of the various species since the arrival of Europeans as well as current conservation programs.

One of the main aims of the authors in writing this book is to increase awareness and knowledge in an effort to conserve what is left of this important native group of animals.

Review by Amanda Ozolins.

CSIRO Publishing, 2008
Soft cover, 192 pages, colour photos
ISBN: 9780643091665
RRP: $39.95

weed profile

Biological Control of Cats Claw Creeper

Article by Alan Wynn
Land for Wildlife Extension Officer
Sunshine Coast Regional Council,
Caloundra District

Biological control or 'biocontrol' is the use of naturally occurring insects or pathogens from a weed's country of origin to reduce the overall vigour of a pest plant. The agent can do this in a wide variety of ways including, but not limited to; sap-sucking, leaf eating, seed predation and disease.

Many people will be familiar with some of the more successful biocontrol programs, usually these have been the ones that resulted in spectacular results such as the Cactoblastis moth on prickly pear. Many biocontrol programs do not result in such spectacular results and often a range of agents and many years are needed before there are noticeable reductions in weed density.

The development of a biocontrol program typically costs $2-3 million over a period of 5-10 years and follows a strict process that has little in common with the disastrous introduction of the Cane Toad. Approval for release of a biocontrol agent is given only after assessment by 21 agricultural, conservation and scientific organisations. All 21 organisations must approve the release and final approval is granted by both Australian Quarantine Inspection Service and Environment Australia.

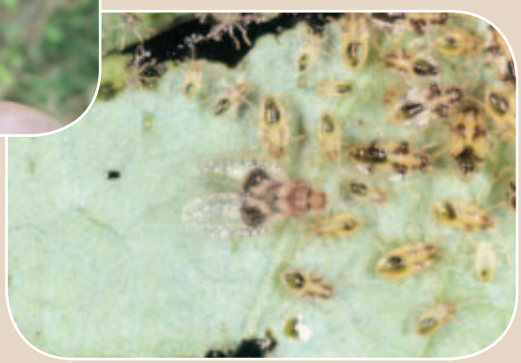
Some limitations of biocontrol are:

- Weed populations will never be completely eradicated by biocontrol agents.
- Not all weeds have biocontrol agents that would be considered safe for introduction.
- Biocontrol is not suitable where fast control or total eradication is desirable.

Biocontrol is best considered as part of a long term solution to a particular weed problem in combination with cultural and chemical control methods. When these control methods are combined it is known as Integrated Pest Management and provides the most sustainable approach to weed control.

Adult leaf tying pyralid moth. Photo by DPI Biosecurity Queensland.

Leaf tying pyralid moth larvae. Photo by DPI Biosecurity Queensland.



Adult leaf sucking tingid bug with nymphs. Photo by DPI Biosecurity Queensland.

Biocontrol agent release for Cats Claw Creeper on a Land for Wildlife property

In late March of this year Mariano Trevino and Jayd McCarthy travelled from the Alan Fletcher Research Station in Sherwood to a Land for Wildlife property near Maleny. They brought with them a precious cargo – over 40 Cat's Claw plants in pots and 2 large plastic boxes filled with Cats Claw foliage. The potted plants were the temporary host for the leaf-sucking tingid bug (*Carvalhotingis visenda*) and the boxes of foliage provided a 'travelling lunch' for the leaf tying pyralid moth (*Hypocosmia pyrochroma*).

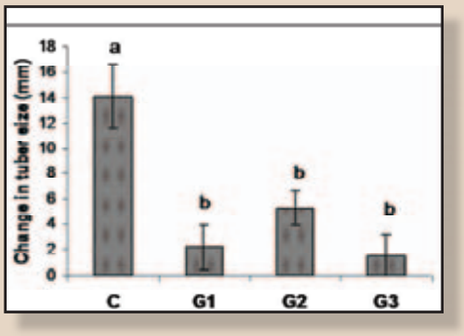
This particular site was chosen as it is one of the few significant Cats Claw Creeper infestations at altitude (approximately 425 metres). Mostly Cats Claw Creeper is a problem in riparian forests at lower altitudes. The infestation covers about 10 hectares over several properties including a Conservation Reserve and the topography has made conventional control techniques difficult and expensive. The location of the infestation is also of strategic importance as it sits in the head waters of the Mooloolah River and has the potential to not only spread down the catchment but also into hinterland forest via the winged seed it produces in great quantities around April each year.

The potted host plants carrying the tingid (both nymphal and adults) were placed in amongst the dense Cats Claw Creeper on the forest floor. After only ten days the tingid had dispersed from the potted plants to the wild plants and their leaves showed signs of chlorosis (loss of chlorophyll). Closer inspection revealed lines of eggs laid into the midrib of the leaf clearly visible as small black dots.

"after ten days, the caterpillars completely defoliated about one cubic metre of foliage"

Nearby the plastic boxes of leaf covered with the larvae of the leaf tying pyralid moth were emptied onto a dense 'lump' of Cats Claw Creeper. A mosquito net was placed over the introduction site of the moth to reduce predation of the larvae and ensure that when the adult moths emerge from their pupal stage that finding a mate will be easy. After ten days

A potted host plant showing chlorosis (pale leaves due to loss of chlorophyll) is placed among healthy Cats Claw Creeper plants at the release site. After only 10 days the tingid had dispersed from the potted plants to wild plants. Photo by Alan Wynn.



This figure shows a decrease in Cats Claw Creeper tuber size in relation to tingid herbivory (C= no herbivory; G1 = single generation of herbivory; G2 = two generations of herbivory; G3 = three generations of herbivory) over 26 weeks.

Mariano Trevino from Biosecurity Queensland with the host plants ready for placement at the release site. Photo by Alan Wynn.

the caterpillars completely defoliated the 'lump' (about one cubic metre of foliage) that they had been placed on. They are expected to remain dormant as pupae in the soil over the colder winter months so they may not be as effective in higher altitude sites like this one.

The next phase of the establishment for the tingid and the moth is their dispersal within the infestation (especially if it covers a large area) and then on to new infestations. We can effectively reduce the time scales involved in dispersal if we lend a hand. Distributing the tingid involves the growing and nurturing of healthy potted cats claw plants. Once they are large enough these plants will be taken to the release site to be infested with the tingid then moved to a new location. This process can be repeated as often as necessary to assist the insect in building up its population in the wild and to disperse to other cats claw infestations. This process is more important for the tingid than with the moth as, due to its size, the tingid does not travel very far from the introduction site. The moth can be shifted around simply by cutting sections of cats claw foliage with larvae on them and transporting these to new sites. Though this is only viable once the population has established at the release site.

It is still early days but it is hoped that these two agents will reduce the vigour of the vines to the point that once the mature vines have been cut the creeper will have difficulty in regaining the canopy of the forest. So while these two insects may not be the 'silver bullet' that many hope for when dealing with aggressive environmental weeds they are useful tools in the kit.

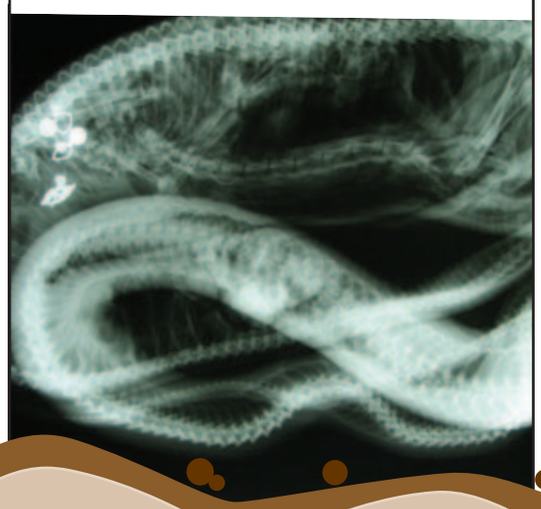
Footnote: The researchers returned recently (2 months after the release) to monitor the tingid population at the release site. The monitoring included a 20 minute search period which failed to find any adult tingids though there were healthy numbers of juveniles and eggs. The researchers commented on the presence of an unidentified skink in high numbers around the release site perhaps explaining the absence of adult tingids.

References:

CRC for Weed Management http://www.weeds.crc.org.au/weed_management/biological_control.html

CSIRO Entomology http://www.ento.csiro.au/biocontrol/classical.html

Biosecurity Queensland www.weedscrc.org.au or www.dpi.qld.gov.au - for more information on Cats Claw Creeper and biocontrol agents.



A tale of a missing pet cat was solved through an x-ray of a Carpet Python. Note the cat collar and bells. The python was taken to Australian Wildlife Hospital for monitoring and was released healthy back into the wild 2 weeks later after the bells had passed through. A good reminder to keep your pets inside at night!

The Land for Wildlife Open Property Scheme has arrived !! Helping to celebrate 10 years of Land for Wildlife in Queensland

September 2008 is shaping up to be an inspiring and possibly hectic month for Land for Wildlife members. 27 Land for Wildlife properties in Queensland are opening their front gates to share their stories and take pride in their nature conservation achievements.

All Open Properties aim to recognise the personal efforts made by members of the Land for Wildlife program to conserve nature on their properties.

25 Open Properties are in the wider SEQ region - a great opportunity to travel across one of Australia's most biodiverse regions to properties which are not found on any tourist map.

Please find enclosed the Open Property brochure and RSVP as soon as possible. Please note that many properties can only take limited registrations.

It is free of charge to attend Open Properties.

In addition to the 27 properties shown in the Open Property Scheme brochure, Moreton Bay Regional Council is hosting an Open Property Day at the Caboolture Regional Environmental Education Centre (CREEC) on Saturday the 6th September between 9.30am and 12.30pm.

Land for Wildlife members are invited to attend. There will be a guided walk and talk by Jim Pulsford with a BBQ lunch, tea, coffee and refreshments provided. Wheelchair access is available for the guided walk.

CREEC is a registered Land for Wildlife property set on 18 hectares within Burpengary Creek providing a wildlife corridor for fauna moving between CREEC, nearby council reserves and other Land for Wildlife properties.

CREEC contains an Endangered gallery rainforest with many important species such as the Richmond Birdwing Butterfly Vine, Blue Quandong, ancient figs and Foam Bark trees. Since 1999, CREEC volunteers have been replanting rainforest species to restore riparian vegetation and have cleared dense areas of lantana.

CREEC also has a 2.5ha Macadamia plantation for research purposes. The CREEC site runs on solar power and has a grey-water recycling system that is used to irrigate the Macadamia plantation.

If you wish to attend the Open Property at CREEC, please RSVP by 15 August 2008 to Cheryl Regan or Julie Caught on (07) 5433 2294. Registrations are limited to 100 people. CREEC is located at 150 Rowley Road, Burpengary.

Proudly sponsored by: Moreton Bay Regional Council

CREEC

Land for Wildlife South East Queensland is proudly managed by SEQ Catchments (the accredited regional body for Natural Resource Management in South East Queensland) and proudly delivered by the following 11 Local Governments:

Brisbane City · City of Ipswich · Redland City Council · Lockyer Valley · Toowoomba Regional Council · Gold Coast City Council · Logan City Council · Scenic Rim Regional Council · Somerset Regional Council · Moreton Bay Regional Council (Incorporating Caboolture, Pine Rivers and Redcliffe) · Sunshine Coast Regional Council

SEQ Catchments — Healthy Land – Healthy Water

Australian Government

Land for Wildlife South East Queensland Regional Coordination is supported by the Australian Government.