

Newsletter of The Land For Wildlife Program Winter, Vol. 11 No. 1 2015



[\(Link to Summer Edition Vol 10, No.2, 2014.\)](#)

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Letter from the Editor

Welcome to the winter / spring edition of the LFW Newsletter!

You may have noticed that Large Old Trees are featured on a regular basis in LFW News. Here, I continue the discussion from previous editions, asking “Why are Large Old Trees so valuable?”. The cover image provides a hint (it is related to age and area of bark for foraging).

The LFW Newsletter is not complete without articles from you—the reader. Three contributors are fast becoming the most regular providers of articles. Thank you to Ian Hansen, Jim Kerr, and more recently, Karen Thomas from Mandurang in central Victoria, with two articles.

I recently attended the NSW Land For Wildlife Forum. This event has been held every two years in Sydney and was a terrific opportunity to meet LFW’ers mainly from NSW. Land For Wildlife began in Victoria more than 30 years ago, with interstate agencies later invited to participate and deliver the program under an agreement with Victoria. These interstate agencies are also permitted to create third party delivery agreements with other providers. It is an interesting and effective model where multiple agencies can be involved in partnerships with land-holders.

New Zealand continues to implement its LFW program in the Bay of Plenty region, under a “voluntary agreement” with Victoria. By the end of 2015, 60 LFW members will have joined the programme. If visiting NZ, look out for the green LFW signs in the Bay of Plenty area.

All the best,

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Land for Wildlife Property Statistics, July 2015

LFW Membership	Total Property Area	Habitat Being Retained	Habitat Under Restoration	Total Retained and Restored Habitat
5,637	526,862 ha	140,624 ha	22,483 ha	163,107 ha

Cover Image: A large old Red Gum. Large old trees provide more food, shelter and nesting resources than younger trees. For example, a 300 year old Grey Box with a height of 20 m and trunk diameter of 1.5m has a bark surface area of approximately 94 square metres.

Large Old Trees

Articles in a previous edition of LFW News ([Vol.10 No1. 2014](#)) showed us that large old trees are an important and inspiring part of Victoria's landscapes and many rural properties. Conservation of large old trees is a priority for wildlife, as is their contribution to preserving our landscape.

Why are Large Old Trees so valuable?

They are irreplaceable. Many large old trees alive today are 200-800 years old or perhaps even older. Such trees provide some sense of what the landscape was like before the arrival of Europeans. Trees planted now will need two centuries or more before they attain a similar form and position in the landscape.

In many parts of the State the older trees needed by wildlife are now restricted to private land, roadsides and other refuges. These trees allow hollow-dependent wildlife species, such as the threatened [Red-tailed Black-Cockatoo](#), to persist in areas that would otherwise not support them.

Tree hollows only occur in mature trees. They provide essential refuge and breeding sites for many species of mammals and birds, as well as for many invertebrates, reptiles and frogs.

Large old trees provide more food and nesting resources than younger trees. One 300 year old Grey Box (*Eucalyptus microcarpa*) with a height of 20 m and trunk diameter of 1.5 m has a bark surface area of approximately 94 square metres. A 20 year old tree with a trunk diameter of 20 cm and height of 15 m has a bark surface area of just 9 square metres. An animal can therefore forage as profitably on the one large old tree as on 10 smaller trees, at the same time decreasing the risk of predation by not having to travel so often from one tree to the next.

Healthy mature trees produce more nectar, foliage and fruits than young trees. These highly productive nectar sources are vital to the survival of some

wildlife species providing energy to nectar feeders (e.g., [Regent Honey-eater](#)) and species that rely on insects (e.g. [Brush-tailed Phascogale](#)).

Litter-fall is also directly related to tree size and age. Litter is one of the key components of woodland and forest ecosystems. The litter layer reduces the impact of water on soil, leading to runoff. It gradually decomposes, providing a small, constant input of nutrients into the system. It supports a huge array of invertebrates, some of which spend their whole lives in the litter layer, others of which spend their larval lives there and their adult lives in the tree canopy.

Retention or revegetation?

Re-vegetation throughout Victoria for wildlife habitat will not provide hollows for 100-200 years. However, in some areas remnants of the original native vegetation persist, often as scattered mature trees in paddocks. In such instances landholders have a choice between revegetation by replanting, revegetation through protection of mature trees (and seed fall from the trees), or a combination of both. Which option will provide the best wildlife habitat?

Obviously the choice will depend partly on the aim of the landholder and the presence or absence of vegetation at the target site. For example, many saline areas and creek-lines are denuded of vegetation. In such situations, control of rising groundwater and erosion will require planting many young trees and shrubs.

Where mature trees are present, the protection of those mature trees should be paramount. Indeed, the retention and protection of stands of old trees (the larger the stand the better) is probably the single most important conservation action that landholders can do, particularly where mature trees form a natural corridor and buffer along the edges of creeks and roadsides.

Wattles And Wildlife

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Wattles are one of the most widely recognised native plants. This article explores a few aspects of the less well known relationships between wattles and wildlife.

Wattles and Birds

The seeds of wattles are eaten by birds including Red-tailed Black Cockatoo, Gang Gang Cockatoo, Emu, Crimson Rosella, Red Wattlebird, Superb Fairy-wren, various honeyeaters, King Parrot and Bronzewing Pigeon.

Certain birds glean insects directly from the foliage of wattles. The Brown Thornbill feeds mainly from acacias. Fan-tailed Cuckoos are common amongst wattles.

Many wattles possess glands at the base of the leaves or edge of the phyllode (leaf stem that has been modified to appear and function like a leaf).

During flowering this gland may produce a sugary fluid that attracts a wide variety of birds including silvereyes, honeyeaters (New Holland, White-naped, Yellow-faced, White-plumed, Crescent, Spiny-cheeked) and thornbills. Wattle pollen has been observed in bird feathers and birds are known to act as pollinators of some wattles. The Little Corella has been observed feeding on wasp larvae in galls on *Acacia* spp.

It should be remembered that wattles are only part of a plant community. To create a sustainable habitat for wildlife requires consideration of all the other species typical of the plant community and location.



Wattles and Mammals

Research in rural forest remnants in Victoria has shown that the number of Sugar Gliders is determined by the amount of plant exudates available during winter. The most important exudates are the gums produced by certain species of wattles, particularly Black Wattle *Acacia mearnsii*. The density of Sugar Gliders has been shown to range from a minimum of one animal per hectare where wattles are absent, to as many as 12 per hectare where wattles are abundant. Sugar Gliders and Squirrel Gliders use acacia gum as an important source of carbohydrate during winter when other sources of energy - rich food, such as nectar and some insects, are scarce. The quality and quantity of gum produced by different acacia species is highly variable. The gum of Black Wattle is water-resistant and persists on the plant throughout the year whereas Blackwood is not a gum producer.

The rare Leadbeater's Possum *Gymnobelideus leadbeateri*, which is found in the Mountain Ash *Eucalyptus delegatensis* forests of Victoria's central highlands, feeds on the carbohydrate-rich sap of certain wattles. Where hollows are not limiting, the abundance of suitable wattles is the next most important factor determining the numbers of this possum.

Wattles and Invertebrates

Most of the insects which visit or live on wattles do not pollinate the flowers but come to take leaves, pollen or nectar. Ants, native bees and wasps are attracted to the sugars produced by wattle glands during the flowering period. Wattle seeds possess an oil-rich attachment (elaiosome) that is designed to attract ants which aid in seed dispersal.

A study conducted near Melbourne identified sixty species of moths, some rare, on wattles. Thirty-six species of wattle are known to be food plants for Australian butterflies.

Galls, such as those found on some wattles, are produced in response to infection by flies, wasps, psyllids, thrips, scale insects, beetles, bugs, mites, nematodes, fungi and bacteria.

Plastic Tree Guards

Plastic Tree Guards - are they beneficial?

According to the promotional material distributed by manufacturers of plastic tree guards, research findings show that seedling survival rates were lifted from 64% for unguarded trees to 96% by using plastic guards.

Improvement in seedling growth rates of more than 500% were also reported. The guarding of plants in certain situations may increase their survival rate, but it is only one of a number of factors which influence survival rate of plants.

These include:

- **Timing.** The optimum timing for planting varies between regions, depending on soil types and climatic conditions. For example, autumn or winter may be a better time to plant than spring.
- **Site preparation.** Ensure weeds are adequately controlled to reduce competition. Consider the use of weed matting or mulch. Ensure rabbit burrows/warrens are ripped and fumigated and the area to be planted is adequately fenced to control stock.
- **Choice of plants.** Obtain indigenous tube stock of local provenance from a reputable nursery. Stock should not be taken directly from glass or poly houses but should be hardened off outside, well before planting.
- **Correct Planting.** Many plants do not survive long because they are incorrectly planted. Ideally, holes should be twice as wide and deep as the container and the soil well broken up.

Plants should be watered the night before planting and gently removed from the tube by holding the seedling between your first and second fingers, turning the tube upside down and tapping the base while easing the plant out. Care should be taken to ensure the soil column surrounding the roots remains intact.

Support the roots and stem while backfilling the hole ensuring the base of the stem is level with the top of the hole. Use fine dirt to fill around the roots and firm with your fingertips only.

Do not fill the hole with imported soil as this will create a sump effect which will result in waterlogging of the root system and death of the plant.

Next, water each plant with half to one bucket of water, pouring the water gently so the soil is not washed away. This is particularly important to remove air from around the roots and to give the plants a good start.

- **Protection.** Healthy seedlings, correctly planted, only require guarding to protect them during the early growth stages from grazing animals such as rabbits and wallabies. Consider the cost of guarding individual plants compared to erecting animal proof fences around the planted area. Also consider the visual impact of using plastic guards compared with wire mesh.
- **Maintenance.** Many people are under the false impression that once the plant is in the ground and guarded by a plastic tree guard that it can be forgotten. This is one of the main reasons for high plant mortality in the early weeks following planting. Bamboo stakes are easily dislodged, guards can lift providing access for rabbits and weeds. Check tree guards at regular intervals after planting.



Ecological Vegetation Classes

Ecological Vegetation Classes (EVC's) help us to understand communities of plant species. EVCs describe vegetation communities based on their component plant species and habitat features.

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An EVC may consist of one or more vegetation communities which operate across the landscape. In general, EVCs are defined by a combination of floristics, life form, position in the landscape and a preference for particular environmental attributes (eg. soil type).

A group of individual EVC classes forms a bioregion, which is a broad landscape approach to classifying the environment using a range of attributes such as climate, geomorphology, geology, soils and vegetation. There are 28 bioregions across Victoria. Each EVC within a bioregion can be assigned a conservation status, to indicate its degree of alteration since European settlement, nominally chosen as 1750. Benchmarks have been established describing EVC's and their component plant species across Victoria, supporting environmental assessments, the development of revegetation plans, and monitoring programs.

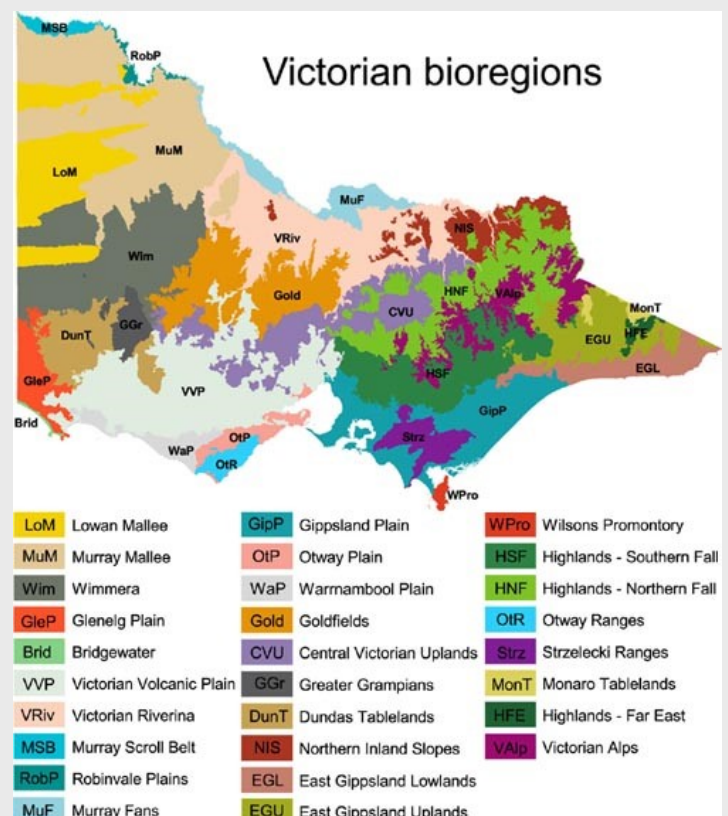
EVC Benchmarks

EVC benchmarks were established to assist in assessing and understanding vegetation quality. They contain a subset of "typical" but not comprehensive lists of species for each EVC in a bioregion. Not all species listed in the benchmark will be appropriate to all sites across the range of an EVC in a bioregion. [VicVeg Online](#) is a good source of information on species suitable for revegetation. You need to know the EVC and Bioregion to bring-up a species list. [Click here](#) to open a list of EVC benchmarks in your Bioregion.

EVC Mapping

EVC mapping has become an important tool for biodiversity planning and management in Victoria. The [Biodiversity Interactive Mapping Tool](#) allows users to display a number of EVC's for any area of Victoria - including pre-1750 EVCs, bioregions, and Bioregional Conservation Status of EVCs. Users can print out interactive maps they have created.

Click on the following link to open an information sheet '[Overview of native vegetation spatial datasets](#)' explaining the various EVC mapping products available.



Identity Crisis Or Just Plain Fun?

Having recently become a neurotic dog mummy, after one said dog was heard to be barking in the garden *"What's this mum??? Oh YES!!!!!!a one metre brown snake in front garden perched in Westringia bush... after baby Blue Wrens!!!"*

I am now nervously on 'beck and bark' to anything she says (sorry.. barks!).... to discover her barking at a stumpy tail in the dam.

"Awh poor thing it must be sick or dyingmaybe I should put it out of its misery? ...No!... I 'll wait til' tomorrow to see if it's any better."

So in lieu I moved it to a safer spot 30 metres away.....safer according to me... only to find it back in the water a few hours later. *"What's going on here?"* Well it was a cold day and the water did feel warmer than the air so I'm thinking ... *temperature regulation perhaps?*

Over the next few days the stumpy was either sunning itself, crawling around near the house, squeezed in a rock crevice or in the water. *Thank god I didn't euthanize it...proud of myself for not interfering with nature this time. Still , I couldn't help prodding it every time I 'd see it in the water not moving just to see if it was still alivebut it was... alive!*

From time to time, say every minute or so, it expired a few bubbles from its nostrils followed up by surfacing for some fresh Mandurang air; rest; then crawl back into the depths for a bit of a romp amongst the decaying leaf litter only venturing about 20-30 cm deep.

Curiously I ponder...*does it think it's a crocodile? ... well perhaps from an ant's perspective !.....or maybe an Amphibian?.....well it's not for me to say really but it does look like its having fun ...!!!!!!*

Karen Thomas , Land For Wildlife member in Mandurang, central Victoria.



Winter And Spring Fire Safety

By Jim Kerr, Land For Wildlife and Volunteer CFA Member, Sarsfield

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LFW'ers use wood from their properties for heating, including wood from purpose-grown firewood-lots. They must also think about the safety issues around the use of fires for domestic heating purposes. As a passionate LFW'er, Jim Kerr is also involved in local fire and fire safety. Here, he has provided another article, this time about fire safety in winter and spring, with LFW'ers in mind.

Cooler, damper, conditions in most areas ease the threat of bush fires but present us with a different range of hazards for which WE are directly accountable. Home Fire Safety is top of the list. The number of chimney fires on rural properties is increasing. Two new CFA Home Fire Safety publications are essential reading if you burn wood: 'What does your wood heater look like?' and "What does your fireplace look like?"

Check the exterior condition of any brick/masonry chimney on open fireplaces, including a thorough inspection inside the roof space. The same applies to cooking and slow combustion stoves using steel piping. As a general rule, the older the installation the more hazardous it may have become.

When checking in the roof space, pay particular attention to the way piping is attached to the interior structure of the roof – a roof truss or rafter for example. It must not be directly secured to any wooden part of the frame. It should have a metal stand-off provided to prevent the heat from the pipe transferring directly to the wood. Older installations are more prone to faults. Houses with cathedral ceilings require special attention. Should this inspection be difficult for you, get a reliable expert to do a thorough inspection.

Disposal of fire-place ashes must be done with care. It is far safer to leave all part burned wood and even small charcoal pieces in the fireplace/firebox and consume them in the next fire. Wind squalls have blown ashes into wood heaps or flammable structures and caused considerable fires. Most of us are cleaning up around the place and piling up material to be burned.

Remember that fallen trees and branches provide habitat for wildlife. It's best to leave any timber with hollows on the ground., and seek alternative supplies of firewood (e.g., Sugar Gum makes excellent firewood and is not native to Victoria). There are reputable firewood retailers who provide sugar gum and other alternative timbers for firewood.

Don't hesitate to check the CFA's web site for the latest publications: cfa.vic.gov.au and go to 'Publications' (<http://www.cfa.vic.gov.au/about/publications>) Feel free to look around the whole site, there is much useful information.

Your local District CFA Office can assist you to find your nearest Brigade, and provide answers to many of your questions.

Jim Kerr

CFA has a wide range of publications to help you plan and prepare for fires ALL year round.

<http://www.cfa.vic.gov.au/about/publications/>



The White 'Roo

By Ian, Vicki and Brett Hansen, Healesville. March 2015

Decades ago, a little three year old boy came running into the house yelling about the Big White Bird in our garden pond. Yeah right, we said, since at that age the said little boy was telling whoppers. But the missing fish in the pond attested to the veracity of his statement!

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Well, this time, we just grabbed a camera and wow!! A White Roo. Impossible. Never seen one before. Couldn't be. Albino? No. It had black features. Fifty metres down from the house, with a small harem of his own. Pretty well full grown. Not the biggest roo we have seen, but very special.



We wondered if this was a summer coat? There have been light brown and almost russet roos here before, but this one was too white. The unedited image reveals the shoulder and chest development of a roo who has not yet reached his prime. No damage to his ears or other scarring. A magnificent animal.

He was a lot more wary than most other roos around here, probably due to his colour. He did guard his four or five females that came up near the house, but he stayed fifty to sixty metres down. He frequently watched from deep in the bush. We never saw him lying down like the others.

He was displaced soon after by a very large, aggressive male with half an ear missing. Battle scars. Unhappily, we have not seen him again this past two year period.

You Get Knocked Down -You Get Up Again!

*“You get knocked down ...you get up again ...you’re never going to keep us down”
Lessons from our avian friends.*

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You have to admire the determination of a pair of Willy Wag Tails and their “never give up” attitude, who set-up camp outside our bedroom window.

Having just built a nest, laid, fed and reared 3 offspring to near fledgling stage; and then to have them whipped off as a tasty breakfast would be enough to make any Homo Sapien pack up and go on a vacation...but these wonderful little creatures picked themselves up and started all over again.nest and all...on the other side of the same tree.

This tree is a popular site also supporting a pair of nesting White Plumed Honeyeaters ...but that’s another story. Not to mention a pair of parenting mudlarks in the neighbouring River Red. “God help any raven that came into this precinct!”

The next day the Willies proceeded to start again. It was hilarious to see them return to their selected branch with heads covered in a mass of spider webs and fascinating to watch them weave this web around the branch. Many an acrobatic stance was taken in an attempt to hang on to the top of the branch ...tails up ...head down... and scrape their beaks on the underside of the selected site.

I decided to give them a helping hand by collecting spider web from the windows ..., which they accepted without hesitation...a win, win for all...willies and my clean windows. However attempts to leave the dog’s fur out for them didn’t go down too well... for both Willies and my dogs.

At some stage when a slither of a platform on the branch was deemed sufficient they began to introduce grasses and fine twigs. These were not so much woven into the spider web but prodded and poked. I had to breath a sigh of relief (for the spiders that is)...when they then proceeded to deconstruct their old nest and bring it, bit by bit to the new site. Yep, recycling ...another lesson I hear you say!!!



A few days later the nest began to take shape... the old one completely obliterated ...again deep joy was felt as I watched them shape the nest to the correct size...it reminded me very much of trying to stretch a stricken woollen jumper. One at a time into the nest headfirst they would go... with their chests pushing on one side of the nest their legs would kick the other as they circumnavigated the perimeter ...beautifully executed resulting in a lovely circular shaped willy sized nest.

Sadly I missed their courtship and egg laying ...but I could gather from the increasing elevation of mum and dad in the nest that they had hatched ... 3 baby willies again!!! I was a little concerned though with the new site they had selected as it had a very low overhanging branchgood for predator avoidance but it was suspenseful watching the babies grow and push mum and dad up forcing their heads to squash under this branch.

Well I am happy to say the 3 babies have fledged...the tree was used for 2 days as a testing ground for aerial training. Even with tiny stubs for a tail they wagged them...just like mum and dad. Now with babies gone off to further a field I ponder whether mum and dad will be back for round 3. At least I have my life back for a little while that is.....there's a pair of Blue Wrens and Swallows starting at my front door.

Karen Thomas , Land For Wildlife member in Mandurang, central Victoria.

Nature Conservation Blogs

How many blogs are there about nature conservation? This is not a trick question, but it led me to Ian Lunt's website again, where I found the perfect article about nature conservation blogs. Why invent the wheel when someone else has already done it? Remembering Ian's offer to share anything on his website for the LFW newsletter, I have taken the liberty of sharing it with you.

"To my eye, ecology blogs in Australia are far too ephemeral, faint and disconnected. It's hard for readers to find new blogs and equally hard for bloggers to find an audience, especially for new writers. Collectively, the whole is smaller than the sum of the parts. Until now, that is."

If you use Facebook, you can now enjoy [Australia's Best Ecology Blogs](#). This Facebook page contains links to over a hundred posts by many Australian bloggers, and new stories are added regularly. All of the stories are written for a general audience, not specialist researchers.

Please visit, like and share the page, so others can enjoy the blogs and our enthusiastic bloggers can enjoy a larger audience. Write a message on the Facebook page or in the comments box below to suggest new blogs and authors to add to the site.

By joining the dots between the blogs, we can replace 'ye olde air pump in the sky' with two new, intertwined, heavenly constellations: The Joyous Blogger and Reader."

Click on the blue link to visit Ian' Lunt's Ecology blog: [Ian Lunt Ecology Website](#)

(On the [Resources Page](#), I have listed several Nature Conservation Blogs)

Reptiles: Craving For Paving

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Reptiles: Craving for paving

Undisturbed “bush-rocks” provide shelter for wildlife, and are an important part of wildlife habitat and should be left wherever possible. Loose rocks are particularly important and should be left un-touched. The removal of "bush-rocks" for landscaping urban gardens has contributed to the decline of many species of reptiles. Where rocks are absent concrete pavers and roof tiles (concrete and terracotta) are good materials to use as artificial cover objects in place of rocks as habitat for reptiles.

Research and field trials have demonstrated that artificial cover objects (pavers, tiles, boards) can be used as both a monitoring method and as replacement habitat for reptiles. The research studied a combination of paver sizes and positions over one year and recommended large pavers (30-45cm wide, 5-10cm thick) with a variety of crevice sizes (up to 10mm) to maximise the diversity of retreat sites. If you have larger lizards, then sizes may have to be adjusted. Placing the pavers in both exposed and shaded positions also allowed reptiles to choose a thermally suitable site. Roof tiles or thick, wide boards can also be used.

Crevice size can be manipulated by gluing four small pieces of wood onto the corners of each artificial cover object, which can also be painted on the outside to match the surrounding terrain. Artificial cover objects can also be grouped to provide larger areas, and work well when placed in groups of three. They may also be arranged in a grid pattern with each cover object spaced about one or two metres apart.



A. Grey pavers with spacer board for crevices



B. Terracotta roof tiles placed upside down.



C. Thick wide boards with crevice support.



D. Profile of terracotta tile with fluted side down for crevice access.

Blue Ants: The Full Bottle

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The Blue Ant (aka, Blue Bottle)

Despite its name and appearance, the Blue Ant (*Diamma bicolour*, is also known as the Blue-ant Wasp or Blue Bottle) is a species of solitary parasitic wasp known generally as flower wasps. The Blue Ant is found in urban areas, forests and woodlands throughout Australia.

Identification

Blue Ants have a distinctive metallic blue-green body, with red legs. The female ranges up to 25mm in length, is wingless and ground dwelling, and hunts other ground dwelling and burrowing insects, such as mole crickets and beetle larvae. The prey is paralysed with the female's sting and an egg laid upon it so the wasp larva has a ready supply of food. The male is smaller, approximately 15mm, and has wings. Adults feed on nectar, and pollinate various native flowers.

It is the sole member of the subfamily Diamminae, and is both morphologically and behaviorally unusual among members of the family Tiphidae. Females become very aggressive when disturbed and the sting can cause a severe burning sensation and swelling in humans, in rare cases it can cause a life threatening reaction (such as anaphylaxis).

Feeding and Diet

When the eggs hatch, the larvae feed on the paralysed insects. Adult Blue Ants feed mainly on nectar.

Life cycle

The female Blue Ant makes a burrow for her eggs and hunts for beetle larvae and other ground dwelling insects, such as mole crickets. She paralyses these with her sting, and lays her eggs on them in the burrow.

Mating and reproduction

Many species of flower wasps have wingless females, including the Blue Ant. In these species, mating occurs on the wing, with the male wasps carrying the female wasps.

Reference and further information: [Australian Museum](#).



Saving Wildlife On Private Land

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Private land owners manage some of the most significant habitats for threatened wildlife. They also provide critical habitat links between public land. But, is this enough to prevent the apparent ongoing decline and disappearance of our native wildlife?

Understanding the causes for the decline in wildlife populations can assist us to change the way in which we manage land so that we make a positive contribution to the conservation of wildlife. At the same time we can look at better ways of managing the land for sustainable production without harmful side-effects.

Wildlife conservation and wise land use are compatible and can be complementary. For example, encouraging birds and bats (by retaining and restoring habitat) can reduce pasture insects, thereby improving overall productivity. Without changing the way we manage private land the loss of wildlife species will continue.

The principal causes for the decline in wildlife populations are:

- Habitat destruction and loss
- Habitat change and degradation
- Introduced animal competitors and predators.

How to maintain wildlife habitat - a list of threatening processes.

Clearing or habitat removal is obviously disastrous for wildlife as all food, shelter and breeding sites are completely removed. Erosion and salinity are other problems associated with clearing native vegetation. Native vegetation clearing controls have been in place in Victoria since 1989. If you want to remove native vegetation, contact your local council before doing so. You may need a permit.

Isolation and fragmentation of wildlife habitat limits the movement of wildlife species and can result in patches of habitat with smaller populations of a species in each patch. Such populations may be less viable because of the limited resources and mates available, and can die out. Habitat corridors along rivers, roads and between properties can reduce this threat.

Grazing animals (sheep, cows, goats, horses, rabbits, etc) may selectively remove young plants, reduce seed set by eating flowers and destroy cover used by many species of wildlife. Large animals can also compact the soil so that water cannot penetrate and microscopic soil plants and animals are killed. This can prevent new plants growing. The overall result is a major change in the structure and composition of vegetation which can be to the detriment of wildlife. Grazing can, in effect, be de facto clearing, due to lack of regeneration, if continuous over a long period.

Fencing provides protection of natural vegetation, limiting stock access to non-sensitive times (e.g. after flowering and seed set). This will reduce the impact of stock without completely closing off the area to production.

Predation by introduced predators such as foxes, cats and dogs is a major threat to wildlife. Control of foxes, feral cats and dogs and alternative management of your pets, such as restraining them at night, should be considered.



Weeds can replace local native species and invade native bushland, changing its structure and composition. They are assisted in doing this by soil disturbance (either mechanical or by introduced animals) and the application of fertilizers. Introduced plants (plants foreign to Australia or native but not naturally growing in your area) are generally less desirable for wildlife conservation because the local wildlife has not evolved to make use of them. Stock can spread weeds either in their faeces or through feed.

Avoid disturbance to natural bushland. Plan to control or remove weeds from wildlife habitat. Prevent stock grazing in sensitive or special areas. Avoid using sheep, horse, cattle or similar manure fertilizers.

Changes to the soil

The return of nutrients to the soil through decay is vitally important to the health of vegetation. Soil microorganisms assist this process and improve the structure and composition of the soil for plants. Allow fallen leaves, branches and logs to lie on the ground and rot, away from your dwelling. These also provide wildlife with shelters, food and cover when hunting.

Altered flood regimes/ drainage of wetlands.

Floods play an important role in rejuvenating the soil, creating habitat for waterbirds and providing areas for tadpoles and young fish to grow. The management of wetlands on a property may need to be considered with the catchment management authority. Flooding through irrigation can be detrimental to the soil and wildlife habitat because of the extensive areas covered and the frequency of these artificial 'floods'. Allow wetlands to flood. Avoid drainage. A natural flood regime is desirable for wildlife.

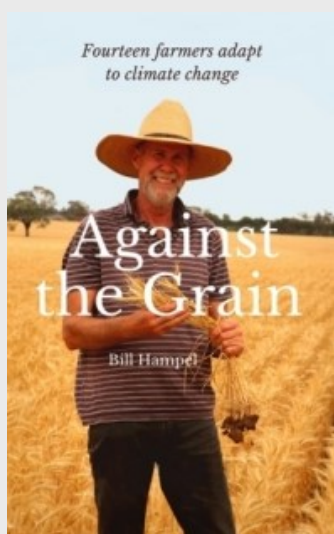
Other significant threats operating across the landscape include:

Rock Removal, Firewood collection; Soil compaction & disturbance; Pesticides & Fertilisers; Disease / dieback.



Recent Publications

16



Against The Grain 14 Farmers adapting to climate change

Can we humans simply ignore the fires, floods and increased deaths climate change is bringing? Fourteen farmers – those bearing the brunt of climate change – who accept the science, tell how they have observed or recorded the unpredictable weather events, the reduction in rainfall and its shift to the hotter months when is less useful to plants.

Far from contributing to the problem with their farming practices, these farmers demonstrate how to reduce their greenhouse gases – to zero or below in some cases – and remain profitable. They are all committed to pass on their farm in a better condition than when they bought or inherited it.

Crops or livestock, big or small, they have worked co-operatively, mostly through Landcare, to plant thousands of trees and daily enjoy, and in one case meticulously record, over 100 bird species. Several have blocks of mature trees just for posterity.

These inspiring and informative farmer stories open up a world new to most city dwellers. A summary of climate change impacts and an ac-

Available from Rosenberg Publishing, Box 6125 Dural Delivery Centre 2158 .

[Click here for more information.](#) Or copy and paste the following website address:

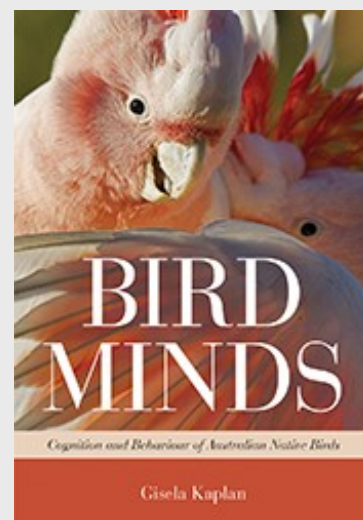
<http://www.rosenbergpub.com.au/handleProduct.asp?id=193&catid=26>

Bird Minds : Cognition & Behaviour of Australian Birds

In her comprehensive and carefully crafted book, Gisela Kaplan demonstrates how intelligent and emotional Australian birds can be. She describes complex behaviours such as grieving, deception, problem solving and the use of tools.

Many Australian birds cooperate and defend each other, and exceptional ones go fishing by throwing breadcrumbs in the water, extract poisonous parts from prey and use tools to crack open eggshells and mussels.

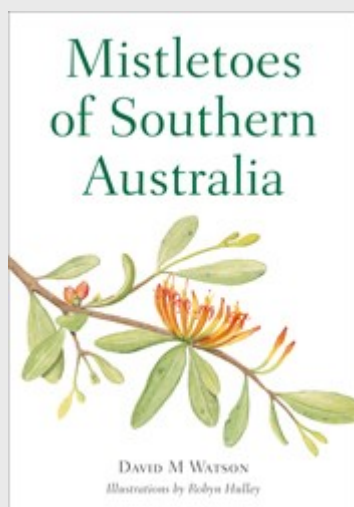
Bird Minds is the first attempt to shine a critical and scientific light on the cognitive behaviour of Australian land birds. In this fascinating volume, the author also presents recent changes in our understanding of the avian brain and links these to life histories and longevity.



Available from CSIRO Publishing. [Click here for more information.](#) Or copy and paste the following website address into your internet browser: <http://www.publish.csiro.au/nid/18/pid/7130.htm>

Recent Publications

17



Mistletoes of Southern Australia

Mistletoes are an enigmatic group of plants. Lacking roots and depending on other plants for their livelihood, they have inspired a range of beliefs throughout the world. Some people regard them as mystical plants endowed with magical properties, others as destructive weeds that devalue native habitats, and still others as beautiful native plants that support wildlife.

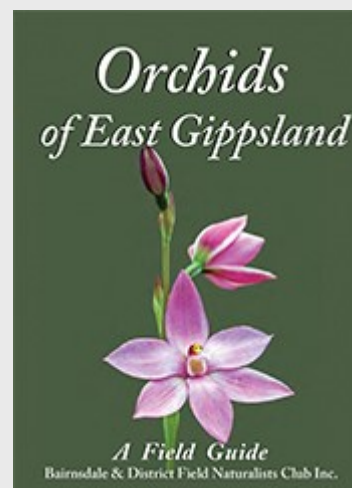
Mistletoes of Southern Australia summarises the evolutionary origin and global distribution of mistletoes, highlighting diversity patterns in Australasia, and describes the ecology and life history of mistletoes, detailing the variety of animals that depend on them for food and shelter. There is a guide to identifying mistletoes, including detailed species accounts for all 46 species found in southern Australia.

Available from CSIRO Publishing. [Click here for more information.](http://www.publish.csiro.au/pid/6436.htm) Or copy and paste the following website address into your internet browser: <http://www.publish.csiro.au/pid/6436.htm>

Orchids of East Gippsland: A Field Guide

This is an accurate record of all orchid species and hybrids found in the East Gippsland region as observed by local field naturalists over 50 years. Introductory chapters include orchid structure, pollination and habitat description. The main chapter is a description of species in generic order and contains 1-3 photos of each species, leaf, stem and flower features, flowering time, distribution, similar species, special notes, and status if rare and endangered.

While this guide covers only orchids found in the East Gippsland region, it is of significance to other regions in observation of the populations and variants found in this region. East Gippsland is a diverse region geographically spanning coastal habitats, lowland, rainforest as well as alpine habitats.



Available from CSIRO Publishing. [Click here for more information.](http://www.publish.csiro.au/nid/18/pid/7427.htm) Or copy and paste the following website address into your internet browser: <http://www.publish.csiro.au/nid/18/pid/7427.htm>

LFW Properties For Sale

Adjacent To The Grampians National Park

18

This property is bounded by the iconic Grampians National Park. In a predominantly natural state with direct access to Grampians National Park.

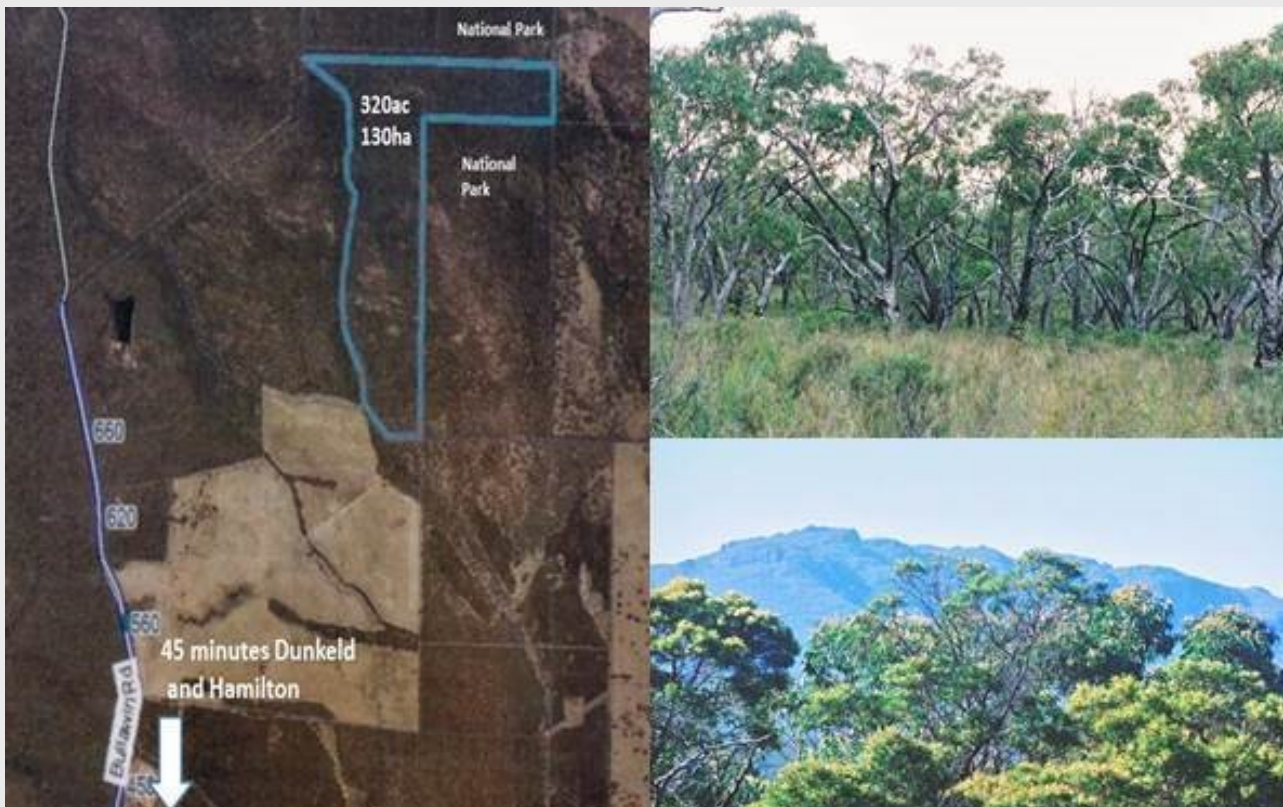
A haven for nature lovers, potential house sites (STCA) with a rich diversity of Grampian's flora and fauna.

Enjoy spectacular wildflower displays, and access a wide range of outdoor recreational opportunities, and Aboriginal rock art sites in the Grampians National Park. As an island of bushland in a largely cleared agricultural landscape, the Grampians support over 975 native plant species, representing over one third of the total Victorian flora. Many of these species are only found here.

During spring the property puts on a colourful display of wildflowers, including Grampians boronia, blue pin-cushion lily, Grampians parrot-pea, and Grampians thryptomene. The location is abundant in 'bacon and eggs' pea flowers, and a high diversity of orchid species. This incredible biodiversity is due to the wide variety of rock and soil types and environmental niches.

45 minutes to Dunkeld and Hamilton. Price guide \$220,000.

Contact Noel Gunn 0448 721 550.



LFW Properties For Sale

620 Baw Baw Tourist Road, Noojee, Gippsland

Name: "Dingoes Den" Address: 620 Baw Baw Tourist Road, Noojee, Gippsland

Price: \$430,000

Contact: Please contact Sam Bozic on (03) 95712470

or via email: wongarbozic@gmail.com

Size: 27.69ha

This property has virgin old-growth forest with trees that are a thousand years old. There are patches of rainforest, fern-tree gullies that are abundant with wildlife (wallabies, wombats, possums, bandicoots, goannas, lyre-birds and many other birds). There are perpetual mountain springs and streams on-site. The property is under a native vegetation offset agreement, which is on-title, and the owner will receive over \$100,000 in payments over a 9 year period to undertake specific land management works, such as weed and rabbit control. There is an old house with a small orchard within a 1.5ha Domestic Area of the conservation covenant area. The house is across the road from the Latrobe River. There are two driveways, town water supply, land-line telephone, underground power cable and a street light outside the main gate. For last 40 years it has been used by Australian author B. Wongar where he wrote his Nuclear Quintet and other books published internationally.

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Resources & Events

Land for Wildlife Contacts

Land For Wildlife Extension Officers and Contacts are at the following Department of Environment, Land, Water & Planning Offices:

Alexandra, Benalla, Wangaratta, Wodonga & Upper Murray Areas

Dave Smith
57611514
dave.smith@delwp.vic.gov.au

Bairnsdale & Orbost

Faye Bedford
(03) 5152 0400
faye.bedford@delwp.vic.gov.au

Ballarat

Elsbeth Swan
(03) 5336 6856
elsbeth.swan@delwp.vic.gov.au

Bendigo

Graeme Tennant
(03) 5430 4414
graeme.tennant@delwp.vic.gov.au

Central, South & West Gippsland

Kylie Singleton
(03) 5172 2123
kylie.singleton@delwp.vic.gov.au

Heywood, Portland & Warrnambool

(03) 5527 0406
peter.johnson@delwp.vic.gov.au

Horsham & Grampians

(03) 5362 0765
felicity.christian@delwp.vic.gov.au

Melbourne & Port Phillip Geelong & Colac Areas

(03) 5430 4358
peter.johnson@delwp.vic.gov.au

Interstate & International

Peter Johnson
Tel: (03) 5430 4358
International +61 3 5430 4358
peter.johnson@delwp.vic.gov.au

Statewide Integrated Flora and Fauna Teams ([SWIFFT](#))

[SWIFFT](#) aims to maintain and develop knowledge and skills in relation to the protection of threatened species and biodiversity across Victoria.

How to Participate:

You can attend quarterly [SWIFFT](#) video conferences held around Victoria. Contact your local LFW Extension Officer for your nearest centre to participate. Book early as seating is limited.

Nature Conservation Blogs / Websites ([See page 11](#))

- [Ben Cruachan – natural history](#)
- [Clear as Blog: Conservation, Landscape Ecology and Restoration](#)
- [EVC 23 Herb-rich Foothill Forest, Boho South](#)
- [Friends of the Box-Ironbark Forests](#)
- [Gouldiae's blog](#)
- [Ian Lunt's Ecological Research Site](#)
- [Lirralirra](#)
- [Loddon Plains Landcare Network](#)
- [Muckleford Landcare](#)
- [Nature Blog Network](#)
- [Natural Newstead](#)
- [Strathbogie Ranges – Nature View](#)
- [Victorian Flora](#)
- [Walmer South Conservation Reserve](#)
- [Wedderburn CMN](#)

Phone the Department of Environment, Land, Water & Planning on the following freecall number if you have any questions relating to natural resources and the environment: **136 186**