

Gardens for wildlife

Tall native trees

A tall native tree will meet all wildlife needs, providing insects, nectar, pollen, seed, nest sites, night roosts and eventually hollows.

Big trees containing hollows, whether living or dead, are necessary for shelter and breeding sites for birds, small native bats, possums, gliders and reptiles.

Birds that use hollows are usually brightly coloured and need to be inconspicuous and protected during the breeding season.

For smaller gardens dwarf native tree species are available.



Indigenous trees in Cardinia Shire

Brown stringybark (*Eucalyptus baxteri*)
River Red gum (*Eucalyptus camaldulensis*)
Silver-leaf Stringybark (*Eucalyptus cephalocarpa*)
Mountain Grey Gum (*Eucalyptus cypellocarpa*)
Broad-leaf peppermint (*Eucalyptus dives*)
Green centbark (*Eucalyptus fulgens*)
White Stringybark (*Eucalyptus globoidea*)
Long-leaf Box (*Eucalyptus goniacalyx*)
Yellow Box (*Eucalyptus melliodora*)
Messmate (*Eucalyptus obliqua*)
Swamp Gum (*Eucalyptus ovata* var. *ovata*)
Snow gum (*Eucalyptus pauciflora* ssp. *pauciflora*)
Narrow-leaf peppermint (*Eucalyptus radiata* ssp. *radiata*)
Mountain Ash (*Eucalyptus regnans*)
Candlebark (*Eucalyptus rubida*)
Silver-top Ash (*Eucalyptus sieberi*)
Coastal Manna Gum (*Eucalyptus viminalis* ssp. *pyriformis*)
Manna gum (*Eucalyptus viminalis* ssp. *viminalis*)
Yellow stringybark (*Eucalyptus muelleriana*)
Strzeleckii gum (*Eucalyptus strzeleckii*)
Hickory wattle (*Acacia implexa*)
Black wattle (*Acacia mearnsii*)
Blackwood (*Acacia melanoxylon*)
Silver wattle (*Acacia dealbata*)
Black she-oak (*Allocasuarina littoralis*)
Drooping she-oak (*Allocasuarina verticillata*)
Cherry Ballart (*Exocarpos cupressiformis*)
Swamp paperbark (*Melaleuca ericifolia*)
Scented paperbark (*Melaleuca squarrosa*)
Silver banksia (*Banksia marginata*)
Coastal banksia (*Banksia integrifolia*)
Hairpin banksia (*Banksia spinulosa*)

The Value of a Tree

Wolfgang Klein

Trees influence climate

Trees moderate flooding

Trees are amongst the longest living organisms on earth

Trees recycle nutrients and have a positive effect on improving the quality and the health of soils

Trees are an integral part of the soil/air/water cycle

Trees maintain biological diversity – from soil flora and fauna through to higher animals and plant species

Trees provide habitat and food for a range of plants and animals

100,000 native trees could offset 15,000 tonnes of carbon emissions equal to taking 5000 cars off the road

Gardens for wildlife

Patch of natural mulch

A deep mulch of leaves, bark, twigs, dead flowers and pods provides homes, shelter, breeding sites and food for a large variety of insects, beetles and worms.

These insects in turn attract insect eating wildlife such as birds, skinks, microbats, lizards and frogs.

Establish balanced layers of predator/prey wildlife in your garden and eliminate the need to use harmful poisons to protect your cherished plants from over grazing by insect pests. Insects form part of the diet for all native birds.

Even small honeyeaters eagerly devour as many as 200 insects a day. Silvereyes, blue wrens, finches, fantails and thornbills forage in the leaf litter and lower levels, feeding on insects and reducing plant pests.

The larger wattlebirds prefer to feed on larger creatures like beetles, moths and cicadas.

Skinks and lizards have a voracious appetite for snails, slugs, moths, beetles and flies, and microbats eat enormous amounts of insects each night.

Garden plants benefit from mulch because:

- **Mulch breaks down** and recycles nutrients back into the soil.
- **Mulch minimises moisture loss** at the soil surface.
- **Mulch protects roots** from temperature extremes.
- **Mulch suppresses competition** from weed growth.



Photo: Garden skink by Thomas N, Natureshare



The local soil, leaf litter and decomposing plants matter provide all the nutrients local native plants require

Photo: Spotted Marsh Frog by Andrew Brown, Natureshare



Gardens for wildlife

Clump of dense shrubs

Small birds use dense thickets of shrubs and trees with sharp or prickly foliage as a refuge from weather, larger birds, cats, foxes and foxes when they come down to drink, feed or bathe.

Provide a densely planted clump of local native shrubs and trees at various levels low-medium-high – as some species may feed at one level but shelter or breed at another.

Shrubs with prickly foliage e.g. Hedge Wattle (*Acacia paradoxa*), Prickly Moses (*Acacia verticillata*), or shrubs with sharp foliage e.g. banksias and tea tree, provide havens for smaller birds who would otherwise be driven out by larger more dominant honeyeaters. These plants are particularly attractive for wrens and spinebills when feeding, nesting and fledging their young.

An absence or shortage of secure shelter will limit the range of wildlife that visits your garden.

The suggested plants listed below can be used to create connected layers of smaller and larger shrubs.

Dense shrubs for birds

*denotes prickly plants

Hedge Wattle* (*Acacia paradoxa*)
Sweet Bursaria* (*Bursaria spinosa*)
Prickly currant bush* (*Coprosma quadrifida*)
Prickly Moses* (*Acacia verticillata*)
Spike Wattle* (*Acacia oxycedrus*)
Burgan (*Kunzea ericoides*)
Swamp Paperbark (*Melaleuca ericoides*)
Silver Banksia (*Banksia marginata*)
Hairpin Banksia (*Banksia spinulosa*)
Victorian Christmas Bush (*Prostanthera lasianthos* var. *lasianthos*)
Woolly Tea-tree (*Leptospermum lanigerum*)
Heath Tea tree (*Leptospermum myrsinoides*)
Prickly tea-tree (*Leptospermum continentale*)
Scented Paperbark (*Melaleuca squarrosa*)

A cat proof bird bath will attract wildlife to your garden and planting a nearby thicket will also provide a refuge for them and encourage them to stay.



Small dense shrubs

Common Correa (*Correa reflexa*)
Hop Goodenia (*Gooednia ovata*)
Victorian Christmas Bush (*Prostanthera lasianthos* var. *lasianthos*)
Dusty Miller (*Spyridium parvifolium*)

Small trees

Blackwood (*Acacia melanoxylon*)
Lightwood (*Acacia implexa*)
Muttonwood (*Rapanea howittiana*)
Hazel Pomaderris (*Pomaderris aspera*)
Bayalla (*Pittosporum bicolour*)
Myrtle Wattle (*Acacia myrtifolia*)
Golden Wattle (*Acacia pycnantha*)
Black She-oak (*Allocasuarina littoralis*)
Austral Mulberry (*Hedycarya angustifolia*)

Native birds in Cardinia Shire range from the tiny Blue Wrens to larger Kookaburras through to big Wedge Tail Eagles. Identify the birds in your garden by checking out our local bird guide www.cardinia.vic.gov.au/localbirdguide

Photo: Prickley Moses by Chris Clark, Natureshare



Gardens for wildlife

Nectar plants

Honeyeaters and lorikeets have long brush tipped tongues to access nectar from a broad selection of trees and shrubs: banksias, hakeas, eucalypts, paperbarks, bottlebrushes, tea trees and correas. Eating too much seed wears down the fine hairs on the tongues and prevent them accessing nectar.

To attract many species of nectar feeding birds, both large and small, to your garden plant a variety of native shrubs and trees to produce flowers at different times of the year. Shrubs like correas that produce flowers all over their branches and not just at their tips are particularly attractive to small honeyeaters as the foliage provides protection as the small birds feed.

Different species of flowering plants will attract a diversity of nectar feeding insects, which is a boon, as even honeyeaters need to eat copious amounts of insects and many birds rely on insects to feed their chicks.

Avoid using just hybrid grevillea varieties as their constant supply of large nectar laden flowers encourages dominance by larger honeyeaters and miner birds that, with their territorial behaviour, chase away other smaller birds.



Photo: Banksia Marginata by Kevin Sparrow, Natureshare

A banksia is a rich source of nectar. It also provides seeds and attracts insects. No matter what the dietary requirements, a banksia should cater for most native birds!

Wrens, thornbills and pardalotes eat insects. Small honeyeaters eat insects and well as nectar. Finches eat seeds and insects. The number of small birds in our gardens is unfortunately decreasing.



Plants to attract small honeyeaters

- Common Correa (Correa reflexa)
- White Correa (Correa alba)
- Hairpin banksia (Banksia spinulosa)
- Silver Banksia (Banksia marginate)
- Mountain Grevillea (Grevillea alpina)
- Furze Hakea (Hakea ulicina)
- Yellow Hakea (Hakea nodosa)
- Scented Paperbark (Melaleuca squarrosa)
- Swamp Paperbark (Melaleuca ericoides)

Photo: Common Correa by Chris Clarke, Natureshare



Photo: Eastern Spinebill by Chris Clarke, Natureshare



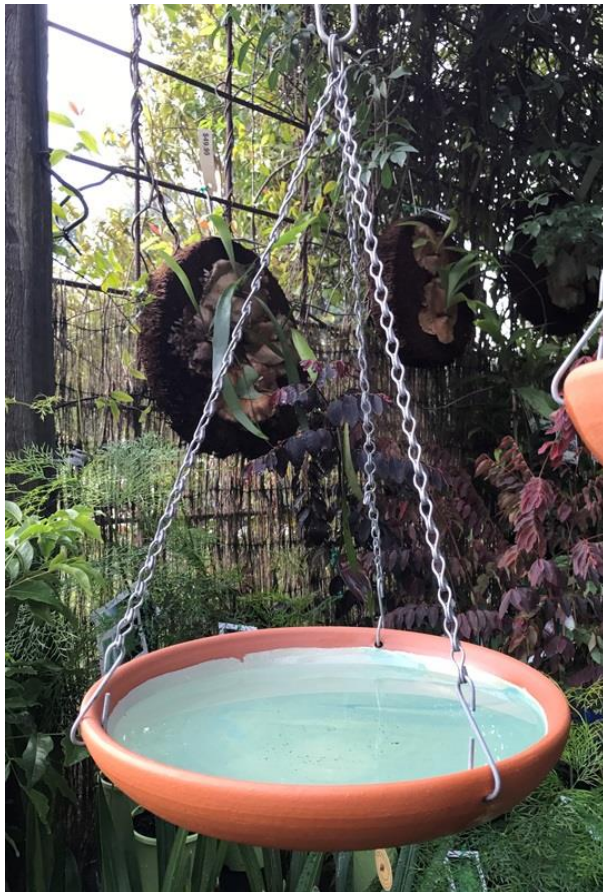
Gardens for wildlife

Bird bath

Birds that eat seed need to drink twice daily, you can help them by creating a cat proof bird bath.

Birdbaths should have:

- Clean and shallow water.
- Non slip surfaces.
- An overhanging perch (branch).
- Protection from cats.
- Shade from midday and afternoon sun to keep both water and birds cool.
- Provide a dense, prickly bush near the birdbath where birds can quickly hide from cats or hawks.



Pet cats kill on average 16 mammals, 8 birds and 8 reptiles per year so providing a safe refuge for native wildlife is very important



Cat safe bird bath

Cats very quickly become aware of bird-feeding and drinking times and lay in wait. Hosing cats with water can be very effective in discouraging wandering cats from visiting your garden.

1. **Pipe and bowl** (or something similar)

- A second-hand terracotta pipe (or something similar) about 1.5-2 metres tall with a flange at one end.
- Star picket(s).
- Shallow bowl large enough to sit comfortably at the flange end.

Dig a circular hole wide enough and deep enough to accommodate the opposite end of the pipe from the flange.

Hammer a star picket (or several if necessary) into the hole to ensure the terracotta pipe cannot topple over. Place the pipe over the star picket(s) with the flange clear at the top of the star pickets. Finish off by placing a terracotta dish on top of a size that the flange can support comfortably.

2. **Wooden post and bowl**

- wooden post 1.5-2 metres tall, wide enough for a water bowl to sit on
- water bowl at least 20cm wide
- Araldite

Dig a hole deep enough to accommodate the post and ensure stability. Glue the bowl to the top of the post.

3. **Hanging bowl (pictured left)**

- A small, shallow bowl about 3cm deep with rope or wire attached to allow for hanging.

Suspend the water bowl within the foliage of the prickly thicket. This provides security to small birds whilst they drink and bathe.

Hang the small bowl within foliage of a prickly thicket to provide security to small birds whilst they drink and bathe.

Gardens for wildlife

Frog friendly pond

Many gardens already have frog visitors but they need a pond or bog to breed. Tadpoles grow to frogs in water and feed on algae and decaying plant matter, then as frogs they mainly eat insects.

Important

- Do not relocate tadpoles or frogs as it risks spreading disease
- Do not introduce fish or turtles into a pond as they eat frog eggs and tadpoles
- Frogs absorb water and air through their skin so insecticides, heavy metals and herbicides harm them, their soft eggs and tadpoles.
- Create gently sloping pond walls/edges as many frogs cannot climb steep pond walls

Frog ponds should be located in a sunny spot; however shady spots are acceptable. There is no minimum area pond required by frogs, the bigger the pond the better. A series of smaller ponds is also acceptable.

The frog pond should be 50cm+ deep, but shallow ponds are also useful as they dry up in summer killing any predator invasive fish that are threatening your frogs.

Frogs like water, tall native grasses and ground covers and rocks to sun themselves on. Adding these four ingredients will attract frogs. Once you create a frog pond you need to plant a range of local indigenous plants both on the edge of the pond and in the pond. Frogs need plants inside the pond and on the pond's edge to hide from predators

Do not plant deciduous shade trees near the pond as they will block up the pond.



Growing Grass Frog



Emergent plants

A plant which grows in water but which pierces the surface so that it is partially in the air.

Water ribbon (*Triglochin procerum*)*

Cumbungi (*Typha orientalis*)

Tall spikerush (*Eleocharis sphacelata*)

River clubrush (*Schoenoplectus validus*)

Water plantain (*Alisma plantago-aquatica*)

Mud dock (*Rumex bidens*)

Submergent plants

A plant that is completely beneath the surface of water. Most submergent plants are firmly rooted in the soil.

Common spikerush (*Eleocharis acuta*)

Curly pondweed (*Potamogeton crispus*)

Blunt pondweed (*Potamogeton ochreatus*)

Fennel pondweed (*Potamogeton pectinatus*)

Hornwort (*Ceratophyllum demersum*)

Eelgrass (*Vallisneria gigantean*)

Floating plants

A plant that floats on the surface of the water with its roots trailing in the water

Water ribbon (*Triglochin procerum*)*

Floating pondweed (*Potamogeton tricaratus*)

Swamp lily (*Ottelia ovifolia*)

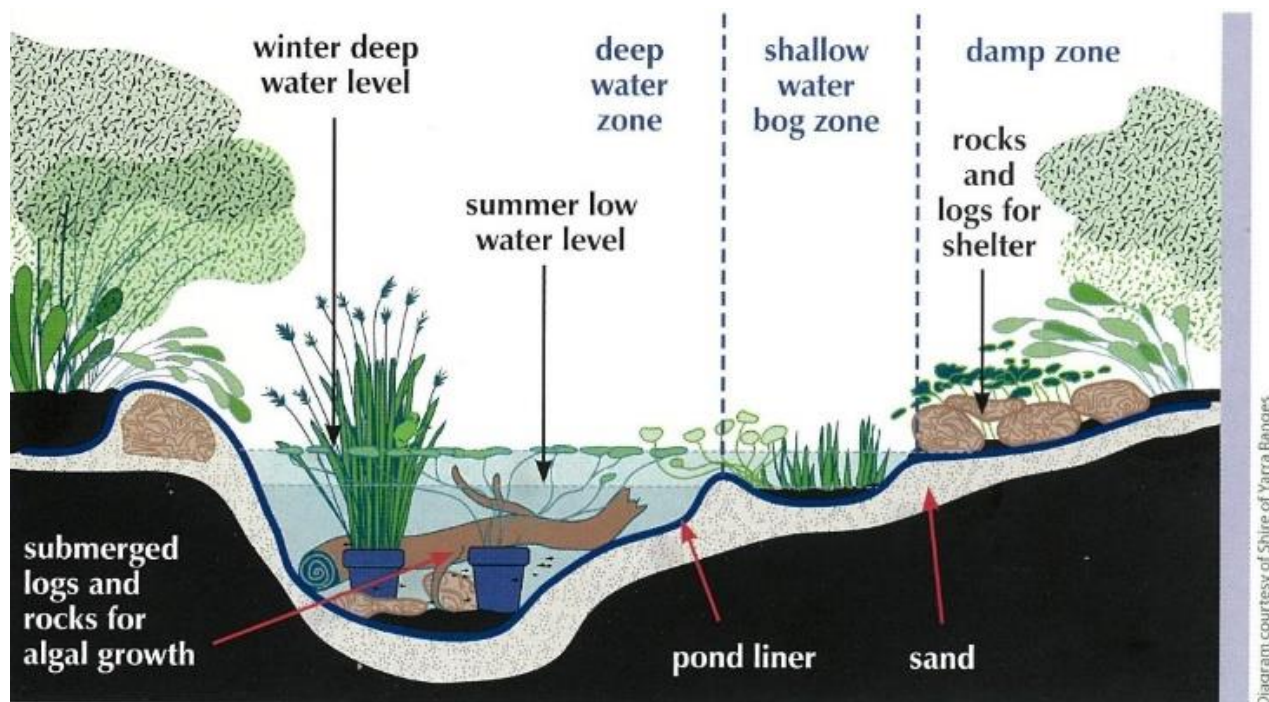
Ferny azolla (*Azolla pinnata*)

Floating duckweed (*Lemna spp.*)

*Water ribbon occurs in both emergent and floating forms.

For more information, check out Southern Dandenong Community Nursery's brochure
<http://sdcn.org.au/wp-content/uploads/2017/09/FROGPONDS.pdf>

Encourage frogs to your pond by providing:



There are eight frog species found in Cardinia. Click on the links below for information about each species and listen to their unique calls.

- [Growling Grass Frog](#) (*Litoria raniformis*)
- [Southern Toadlet](#) (*Pseudophryne semimarmorata*)
- [Striped Marsh Frog](#) (*Limnodynastes peroni*)
- [Spotted Marsh Frog](#) (*Limnodynastes tasmaniensis*)
- [Southern Brown Tree Frog](#) (*Litoria ewingi*)
- [Common Froglet](#) (*Crinia signifera*)
- [Whistling Tree Frog](#) (*Litoria verreauxi*)
- [Pobblebonk or Eastern Bango Frog](#) (*Limnodynastes dumerili*)

For more information about each frog, including listening to their call, click on the frog's common name or check out www.frogs.org.au/frogs



Water ribbons by Chris Clarke, Natureshare



Southern brown tree frog by David Francis, Natureshare

Gardens for wildlife

Warm sheltered corner

Common urban lizards, skinks and geckos eat small insects, worms and pests such as snails and are in turn food for birds, bigger lizards and scorpions.

Lizards are cold-blooded, so they cannot control their own body temperature and need to bask in the sun or lie on warm surfaces to absorb energy from the sun to provide them with the energy to move and digest food.

They avoid overheating by sheltering under vegetation, below ground or in water.

Invite a lizard to your place

- **Set aside a warm sheltered corner** of the garden covered with a thick layer of mulch
- **Furnish with some logs**, fallen branches, leaf litter, piles of rocks, boulders, natural cracks in the soils and undercover plants such as native grasses and daisies.
- **Add some recycled corrugated iron** which will radiate heat to reptiles sheltering underneath when the cooler temperatures of autumn and spring limit opportunities for lizard to gain enough warmth.

These many basking and sheltering opportunities for lizards create great habitat for small mammals, birds, frogs.

Photo: Large tree goanna by David Francis



Blue-tongue lizards are slow-moving animals and are often attacked by domestic dogs and cats, often killed outright, or can die from the stress of the attack.

Photo: Blue tongue lizard by James Booth



Photo: Warm sheltered corner



The largest of our lizards is the massive Tree Goanna (picture left by David Francis). To encourage goannas, retain dead trees and old trees with hollows. To ensure they have future homes plant indigenous gum trees

Gardens for wildlife

Butterfly attracting plants

There are 24 butterfly species native to Melbourne see how many you can find in your garden. Butterflies feed on nectar.

Attracted by scent and colour, they prefer yellow, orange, blue, violet, purple or white flowers. The petals of daisies make great landing pads to access nectar.

Invite butterflies to your garden

- **A tangled dense bank** of flowering plants and shrubs in a sheltered sunny corner, for sunning during the day and hiding at night.
- **A moist shady patch** beneath local native shrubs and trees.
- **Native grasses and sedges** so caterpillars can hide undisturbed – remember caterpillars are part of the diet of birds, predatory beetles, lizards and frogs. Victorian Skipper and Brown Butterflies feed on nectar of native grasses. A favourite grass of butterflies is the *Gahnia* spp.
- **Some open ground** with leaf litter and a few rocks for butterflies to sun themselves.
- **Variations in ground levels** and in the height of shrubs and trees.
- **Variation in flower timing** to provide continuous food in active butterfly season the warm days of spring, summer, autumn.



Swordgrass brown butterfly by Russell Best

Butterflies have taste buds on their feet so if they land on surfaces affected by insecticides or toxic substances this causes instant death



Nectar plants for butterflies

Silver Banksia (*Banksia marginata*)
Hairpin Banksia (*Banksia spinulosa*)
Swamp Daisy (*Brachyscome cardiocarpa*)
Cut-leaf Daisy (*Brachyscome multifida* var. *multifida*)
Blue Pin-cushion (*Brunonia australis*)
Sweet Bursaria (*Bursaria spinosa* subsp. *spinosa*)
Yellow Buttons (*Chrysocephalum apiculatum*)
Common Billy Buttons (*Craspedia variabilis*)
Common Heath (*Epacris impressa*)
Yellow Box (*Eucalyptus melliodora*)
Furze Hakea (*Hakea sericea*)
Bushy Needlewood (*Hakea ulicina*)
Satin Everlasting (*Helichrysum leucopsideum*)
Button Everlasting (*Helichrysum scorpioides*)
Burgan (*Kunzea ericoides*)
Prickly tea-tree (*Leptospermum continentale*)
Woolly Tea tree (*Leptospermum lanigerum*)
Silky Tea tree (*Leptospermum myrsinoides*)
Swamp Paperbark (*Melaleuca ericifolia*)
Scented Paperbark (*Melaleuca squarrosa*)
Long Purple Flag (*Patersonia occidentalis*)
Bootlace Bush (*Pimelea axiflora* subsp. *axiflora*)
Curved Rice-flower (*Pimelea curvifolia* var. *sericea*)
Small Rice Flower (*Pimelea humilis*)
Tall Rice-flower (*Pimelea ligustrina*)
Creamy Candles (*Stackhousia monogyna*)
Small Grass-tree (*Xanthorrhoea minor* subsp. *lutea*)

More plant information

Southern Dandenong Community Nursery's brochure has more grass species suitable for butterflies to lay their eggs on.

<http://sdcn.org.au/wp-content/uploads/2017/09/BUTTERFLIES.pdf>

Gardens for wildlife

Weed control

Environmental weeds are non-indigenous plants that impact on indigenous vegetation by competing for space, nutrients, water, light and pollinators.

Gardens are a big source of environmental weeds in Australia. By not planting these weedy species in your garden we can prevent the threat they pose to native wildlife.

- 28,000 introduced species of plants in Australia
- 16,000 naturally occurring plant species
- 3,300 plant species indigenous to Victoria
- 2,500 of introduced plants are now weeds and
- 10 new weed species each year.

How do weeds spread?

- **Water** – during rainfall seed is washed down slope and can spread rapidly along streams.
- **Vegetatively** – weeds can become “blankets” smothering other plants
- **Berries** – birds eat the berries and deposit the seed some distance from the source.
- **Wind** – the seed maybe carried a considerable distance in the direction of the prevailing wind.
- **Humans** – dumping garden waste can spread weeds.

Weeds reduce habitat for native animals and they also attract feral animals by supplying them with food or shelter. During blackberry season a fox's diet can consist of up to 75% blackberries!

More information about controlling weeds on your property can be found on Council's website www.cardinia.vic.gov.au/weeds

Weed grants for residents

Weed control grants are available to help landowners and community groups control noxious and environmental weeds on private property, both in agricultural areas and areas of high environmental value. Weed control grants open at the start of each financial year. More information is available on Council's website www.cardinia.vic.gov.au/weedcontrolgrants

Thank you to Natureshare website for images of weed species



Photo Blackberries by Russell Best



Photo Sweet Pittosporum by Chris Clarke



70% of weeds are garden escapees

Gardens for wildlife

Native bees

Australia has over 1,500 species of native bees that have evolved side by side with Australian plants. They are valuable pollinators of native plants and excellent pollinators for home fruit and veggie gardens. Some native bees don't sting. Those that do are solitary, non-aggressive and often too small to give an affective sting.

To encourage native bees to your garden, provide:

- Food plants (nectar and pollen)
- Eucalyptus, brachyschomes, grevilleas, tea tree and hibbertia.
- Sheltered home
- dead pithy stems, hollow stems and canes, deep narrow holes in logs or timber.

Native insects

In 2007 the Upper Beaconsfield Conservation Society in conjunction with Council produced the *No Legs or Many – spineless and wild* booklet www.cardinia.vic.gov.au/insectsandbugs

This booklet provides pictures and names for many of the common insects in the Shire and what habitat some of them are found in. If you are not sure what insects you have in your garden, check it out!

Insects can be attracted to your garden for many reasons. Many insects need leaf litter and rocks for habitat.

Photo: Eastern Spinebill by David Francis



Photo: Grevillea Alpina by Chris Clarke



Photo: Blue banded bee by David Francis



European honeybees collect 90% of available nectar and pollen but pollinate only about 5% of our plants

Thank you to Natureshare website for fauna images

Thank you to Knox City Council for their assistance in compiling this factsheet.

Gardens for wildlife

Nest boxes

Birds, microbats and mammal often live in tree hollows and crevices in trees. You should keep large trees and especially dead trees with hollows to provide vital habitat for birds to live and nest in. An alternative is to add nest boxes to your garden as homes for local birds, microbats and mammals.



Make your own nesting boxes

- Birds in Backyards, nest box plans
www.birdsinbackyards.net/Nest-Box-Plans
- Birdlife Australia, nest boxes technical information
http://birdlife.org.au/images/uploads/education_sheets/INFO-Nestbox-technical.pdf
- River connect, nest boxes for wildlife
www.riverconnect.com.au/education/resources/curriculum/nest-boxes

Purchase nesting boxes

- Latrobe University
www.latrobe.edu.au/wildlife/nursery/nestboxes
- Kurunga Native Nursery, Mount Evelyn
www.kurunga.com.au/native-nursery/

Photo: Nest box



Photo: Spotted Pardalote by Don Petty

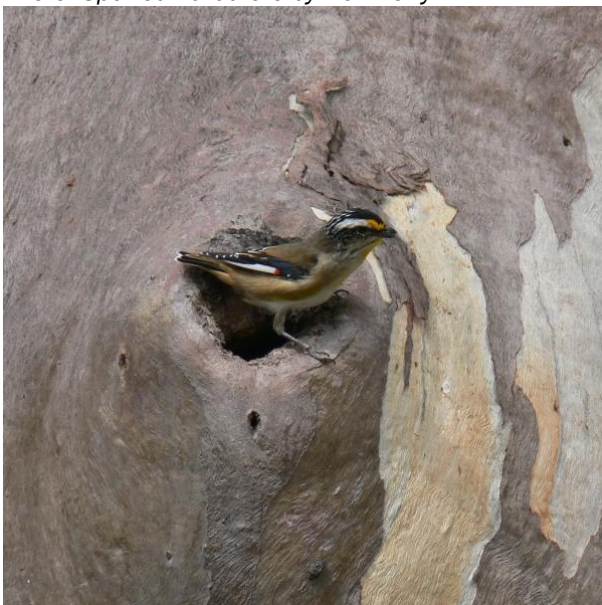


Photo: Nest boxes, different sizes and shapes



Gardens for wildlife

Microbats

Many people are familiar with the large flying foxes that live in people's fruit trees and are pretty noisy. Did you know that Cardinia Shire has a range of smaller microbats?

These bats live in small cracks, crevices and hollows in trees.

You can attract these tiny bats to your garden by planting a range of large indigenous trees.

Whilst your trees are growing you can also install bat boxes (next boxes – check out our factsheet on nest boxes for more information).

Common microbats in the shire

- [Little Forest Bat](#) (*Vespadelus vulturnus*)
- [Chocolate wattled bat](#) (*Chalinolobus morio*)
- [Gould's wattled bat](#) (*Chalinolobus gouldii*)
- [Large forest bat](#) (*Vespadelus darlingtoni*)
- [Lesser long-eared bat](#) (*Nyctophilus geoffroyi*)
- [White stripped free tailed bat](#) (*Austronomus australis*)
- [Gould's Long-eared Bat](#) (*Nyctophilus gouldi*)

To find out more information about these and other microbats check out either the Victorian Museum (museumvictoria.com.au) or Australian Museum (australianmuseum.net.au) websites

Photo: Hollow bearing tree



Thank you to Natureshare website for images of bats

Thank you to Knox City Council for their assistance in compiling this factsheet.



Photo: Goulds Wattled Bat by Chris Lindorff



Photo: Little Forest Bat by Chris Lindorff



Microbats are nature's pest controllers.

One bat can eat 600 insects per hour!