Your hidden native garden

Meet native plants and animals that may be hidden in your garden

iewf

NSW Environmental TRUST

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This booklet has been created by a local Sydney woman to help people find and restore local native plants in their gardens.

A complimentary website:www.knowyourgardensnatives.org has further photographs and information on native plants, animals and weeds. It also has exercises to help you find your native plants, and photographs of what other people have found in their yards.

Your Hidden Native Garden has been developed by Karina Hanemann and is supported by the International Environmental Weed Foundation.

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For more information on IEWF go to: www.iewf.org

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Know your garden's natives

Have you ever seen a plant or animal in your yard and wondered what it was?

Many native plants and animals (as well as weeds) will try to grow in your yard. Some may succeed!

Local native plants can be growing naturally (unplanted) in your yard. A common visitor to Sydney gardens is the native violet (above).

You may find many different native plants growing in your yard once you start looking, from groundcovers and ferns, to shrubs or trees.

Use this booklet to help find your native plants, help them and local wildlife to survive, as well as identify and remove competing weeds.

Where do the native plants come from?

Native plants may grow from seeds in your soil that were blown in, dropped by birds who have visited your yard from nearby bushland, or they may come from ancient soils that survive in your yard today.

What is special about local native plants?

Local native plants are valuable. They are often beautiful and useful. They can provide us with medicines and foods. They can also provide for native animals. Native animals find food, homes and shelter in many native plants. Even one single tree (eg a bottlebrush) can provide food for various birds during the day, and then for possums at night (as well as shelter for both).

Local native plants can also reflect what was growing in the area before your suburb (or house) was built - when it was natural bushland. Native plants can provide significant Heritage value: preserving a piece of Australia's history.

What can a natural, native garden look like?

Well, this depends on what you find growing in your yard.

At Hillman Orchard (below) they have a lawn of native grasses and cyperus, with ferns and violets growing along the side of the house (Vienna Cottage).

How do I find the native plants in my yard?

Well, we will show you how to try.

When you find natives in your yard, they could be in many shapes and sizes. They could be well maintained (like the fern and juncus above), or they could be mown over and hidden in the lawn.

Nearly all natives can be uncovered and restored to good health.

Good places to look for natives include any untouched, neglected or messy areas in your yard.

Try looking:

- Behind the shed.
- Along fence lines.
- Under old trees.
- In areas that are not mown.

Here natives, as well as weeds, may flourish.

You can also find many small natives hidden in your lawn, even if you mow it. This is a common place for native groundcovers, grasses and violets. They are so small, they can survive here.

Take this booklet and go for a walk in your yard to see what you can find!

Kidney weed

Dichondra repens

A spreading groundcover that can grow to be 10cm high. It has kidney shaped leaves. Small white flowers appear from Spring to Summer.

Often found in moist shady areas, in both sandy and clay soils.

Native kidney weed is often found hidden in your lawn. It pops up and grows (very well) when the lawn is shaded and dies off.

Often confused with: native violet *Viola hederacea* and many small herby weeds.

Native violet

Viola hederacea

A spreading or creeping groundcover. Has toothed hairless leaves about 1 to 3cm wide. Its flowers are purple and white and appear for most of the year, especially in Spring.

Often found in moist, shady areas, on both sandy and clay soils. They can grow to form a carpet.

Similar native species: purple violet *Viola betonicifolia* (rare - found mostly on the Cumberland plain) and tiny violet *Viola sieberan*a (found near the Royal National Park).

Often confused with: dichondra *Dichondra repens.*

Commelina

Commelina cyanea

A spreading groundcover which can grow vigorously. Sometimes considered to be a weed in gardens. Its leaves are slightly wavy and fleshy or watery. Blue flowers appear in warmer months.

Prefers to grow in moist shady places.

Lives in both sandy and clay soils.

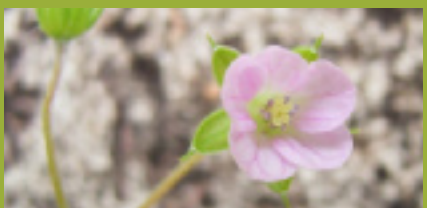
Dies back a little in Winter.

The blue flowers of commelina can attract the native stingless blue-banded bee. The leaves can provide habitat for small lizards and frogs.

The young shoots were cooked and eaten over 200 years ago, as an antidote to Scurvy (a disease caused by a lack of vitamin C).

Often confused with: trad or wandering jew *Tradescantia fluminensis* (which has white flowers, is more fleshy, breaks off and spreads easily).

Native geranium



Geranium homeanum

A delicate, spreading groundcover. It has hairy leaves and small (~1cm) pale pink to white flowers that are usually found in pairs. Flowers appear from Spring through to Summer.

It spreads into an easily manageable and soft-looking ground cover.

Prefers clay soils.

Similar native species: *Geranium solanderi* (which has narrower segmented leaves).

Tender brake

Pteris tremula

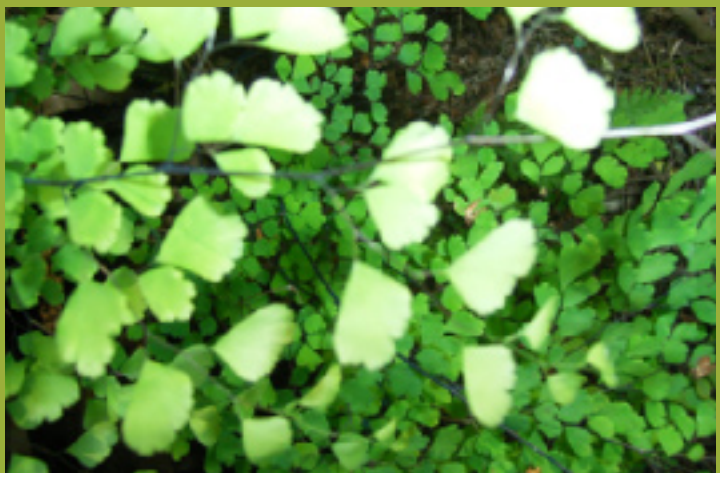
A tufted fern, which grows 50 to 120cm high. Its fronds are a light to medium colour green. The stalk is brown and shiny with a deep narrow groove.

Found in moist and rocky areas on sandstone. Often found next to structures such as sheds, fences and plant pots. Also found on clay.

Tender brakes, like most ferns, are useful to have in your garden. They help to retain moisture and create a sheltered micro-climate for birds and other wildlife to visit.

Similar to many other ferns.

Maidenhair fern – common



Adiantum aethiopicum

A very pretty and delicate fern. Grows 15 to 40cm high. Likes wet and shady spots. The fronds are 3-8mm long and green. The stalk is thin, dark, smooth and shiny.

Can often be found along water courses, or under the house in damp and shady areas.

Commonly sold as an indoor plant.

Bracken

Pteridium esculentum

An erect fern with harsh, stiff fronds.

Grows 1 to 1.5m high. The stalk is red-brown and rough.

Bracken grows in both moist and dry areas on sandstone and clay soils.

It can form a dense mat in disturbed areas, helping to nourish the soil (by making nitrogen more available).

Small birds such as blue wrens may seek shelter or make nests in clumps of bracken.

Crushing a young leaf or juicy stem and applying it to ant or other insect bites can help to alleviate their pain. This is Aboriginal bush medicine.

Slender sedge

Cyperus gracilis

A small sedge, 10 to 20cm tall.

Found in moist clay or disturbed sandy soils. Often found in lawns. Can be grown as a lawn.

Looks like a short grass and is luscious and soft when moist.

Can die back when dry, in full sun or when heavily walked upon.

Spreads via it's seeds.

Similar species: many, including local weed Mullumbimby couch *Cyperus brevifolius* (you can tell the difference by looking at the seed head, *C. brevifolius* has a larger, rounded, fluffy and white seed head).

Weeping grass

Microlaena stipoides

A lovely weeping grass. Small and slender, grows 15 to 70cm high.

Its leaves are flat, thin and often slightly rough to touch. Its seeds are long and thin and wrapped in a pointy sheath which can easily stick to clothing.

It is found in both sandy and clay soils.

Microlaena can provide protection for lizards from predators, food for native bees and butterflies, as well as seed for birds.

Similar weed species: ehrharta (which has rounder, smaller seeds and smooth leaves).

A microlaena leaf, when felt from the tip to the stem should be rough, whereas the weedy ehrharta leaf will be smooth.

Basket grass

Oplismenus aemulus

A small, soft grass, with short, broad, wavy leaves and ascending or sprawling stems.

Likes wet and shady places. Grows in sandy or clay soils.

It often pops up and grows well, when the lawn is shaded and starts to die off.

Basket grass, when grown tall, provides good cover for insects and lizards.

Similar native species: *Oplismenus imbecillis* (has thinner stalks and more slender leaves).

Often confused with: native commelina *Commelina cyanea*, or weed trad *Tradescantia fluminensis* (both of which have larger, more fleshy leaves than basket grass).

Kangaroo grass

Themeda australis

This grass has a tuft of slender light green leaves, with long wiry, flowering stems up to 1m high. It has distinctive brown and purplish spikelet clusters.

When fully grown, kangaroo grass can provide seed for birds and protection for small reptiles and amphibians.

It is a striking feature in your garden and takes on a lovely bronze appearance when mature.

It is common on all soil types, yet is often out-competed by introduced species.

Pixie orchid

Acianthus fornicatus

This is a very common orchid. It flowers from March to August. It has a hooded, spider-like flower that is approximately 10mm long and 5 to 7mm wide.

It has a heart-shaped leaf, which is green on top and red to purple underneath.

Pixie orchids like to grow in sheltered areas, often on sandstone based soils.

It is dormant (only a tuber) during extremes of heat or dryness in Summer.

Small flies pollinate the flowers when they feed on the nectar.

Glycine

Glycine microphylla

A slender twiner, with leaves in sets of three. Has pretty mauve flowers from Spring to Summer.

Often found in moist areas amongst dense under-growth, such as grasses.

Similar native species: the love creepers *Glycine clandestina* and *Glycine tabacina*.

Hardenbergia

Hardenbergia violacea

A scrambler or twiner with rich purple pea-flowers that are yellow in the centre. The flowers grow from one stalk and appear in Spring in great numbers.

Leaves appear rectangular at one end and pointy at the other. When growing on an exposed area, the leaves are erect in the heat of the day, then return to be flat at night.

Seedlings may spring up after a fire, or from soil disturbance.

Hardenbergia like to grow in sandstone-based soil.

Butterflies love to feed on the flowers of hardenbergia.

A variety of hardenbergia is sold commercially as ‘happy wanderer’.

Bleeding heart

Homalanthus populifolius

A shrub which grows 2 to 4m high. Its heart-shaped leaves turn a magnificent deep red on maturing. Flowers are tiny and in late Spring.

Grows in wet areas and on sandy or clay soils.

Very opportunistic.

May be seen colonising bushland areas after fire.

Sydney green wattle

Acacia parramattensis

A shrub or small tree growing to 8m high.

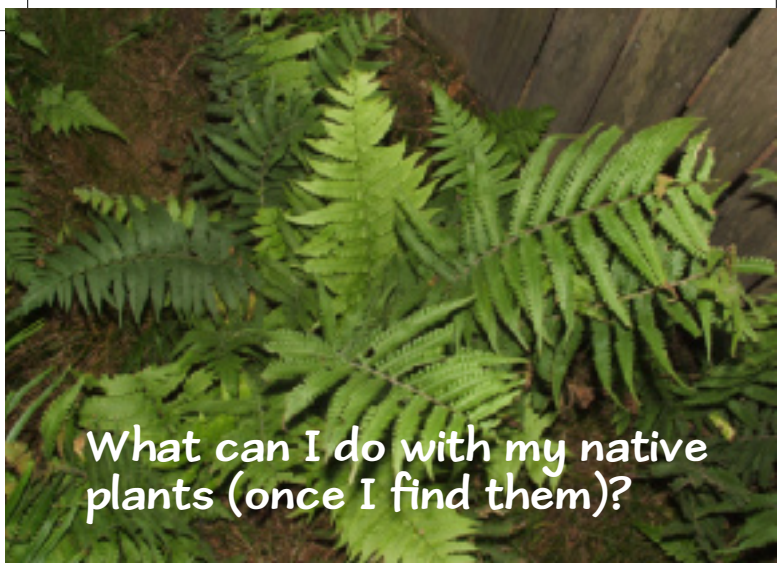
This wattle has pale yellow flowers, mostly between late November and February. Its leaves are very fine, dark green and placed opposite each-other on the stem.

The Sydney green wattle is found in woodland on dry, shallow, sandy or clay soils.

Most wattles are quick-growing and opportunistic, appearing in areas after fire or disturbance. They help nourish the soil for future species to grow.

Wattles can provide seed for birds and ants as well as nectar for native butterflies and bees. Some can provide shelter for small birds.

The word ‘wattle’ comes from their use in ‘wattle and daub’ huts a couple of hundred years ago.



What can I do with my native plants (once I find them)?

1. Nothing?
2. Protect them?
3. Promote and encourage them?

If you wish to promote them, you can do so in a variety of ways. Try:

- Not walking on, or damaging your plants.
- Keeping away fertilisers, paints, and other chemicals that are toxic to native plants.
- Removing competing species (weed around the natives - see our section on weeding).
- Maintaining them. Make sure they have the water, sunlight or shade (the conditions) they need to grow well.

You are welcome to send us a photo of the natives in your yard so we can show other people what they may look like in an urban setting.

If there is something you have found in your garden, but it is not in this booklet or on our website, please send us a photo of it. We will try to identify it for you. Contact us at: info@knowyourgardensnatives.org

You can also look on the PlantNET website (www.rbgsyd.nsw.gov.au) if you think the plant might be a native, or on the Web Weed Lookup (www.iewf.org) if you think it may be a weed.

What if I don't find any native plants?

If you haven't found anything at all: don't despair!

You may still have native seeds in your soil that are ready to sprout when nurtured.

There are many ways to regenerate these seeds. The simplest of all is to stop mowing an area, or to leave it undisturbed and see what grows. If the soil has been compacted, you can disturb it a little by breaking up the surface.

The best areas to try are original pockets of land, that have not been changed dramatically. The plants may take a while to grow.

Note: if a seedling appears, it may be either a native or a weed (or one of your garden plants). It is important that you know what it is, BEFORE you remove or promote it. Do not let it seed or spread before identifying it, just in case it is a weed.

If you have tried to find and restore natives, but have had no luck, and you still want natives in your yard, then perhaps you could try planting local natives.

Ask your local council's Bushcare Officer or a local bushland regeneration group where you can buy native plants that have been grown from locally collected seed in your area.

About native wildlife

Native wildlife may be living in your yard, from birds and butterflies, to insects and possums.

They may be nesting in your trees, eating leaves, fruit or insects, perhaps even raising their young.

By providing them with some of their needs (such as food, shelter and water) we can help them to survive.

Each animal has its own special needs. You can try to attract the wildlife you like by creating the right environment for it.

Under many photos of animals in this booklet, the foods that each one likes to eat, as well as nesting details are mentioned.

As native wildlife live, eat and survive in your yard, everything you do in it can affect them.

The trees you choose to plant, the way you tidy up, if and how you use chemicals on your plants all affect wildlife.

For example: if you spray your plants or place baits in your garden to kill grubs, the birds that eat the grubs can also be poisoned. Many tawny frogmouths have died this way in Sydney.

Having even one native plant or tree in your yard can be valuable for native wildlife. For example: a grevillea may provide food for both birds and possums – for birds during the day, and for possums at night.

It is best to provide wildlife with the trees and environment that creates their natural food source, rather than feeding them yourself with other food. This is because our modern and processed foods can actually make them sick and susceptible to disease.

A disease 'runners' in rainbow lorikeets has become very common today. Artificial feeding (which lowers the immune system), together with a reduced number of clean, available tree-hollows, makes the birds more susceptible to disease. Once they have 'runners', they can no longer fly, and fall prey to cats and dogs. Also, some cockatoos have had their beaks rot when fed sugar regularly.

Nearly all native wildlife living in our gardens need our help. See our wildlife friendly gardening tips for more ideas on attracting them to your yard, and assisting their survival.

Note: If you find a sick, injured or orphaned native animal that is at risk, you can call Sydney Wildlife or WIRES to collect, care for and hopefully re-release the animal into the wild.

While you have the animal in your care, make sure it is in a warm, dark, quiet and safe place, free from any stress. Stress can kill the animal. Do not force-feed it, as this can also kill the animal. It needs to rest. Speak to the wildlife carers for advice.

You need a licence to look after native wildlife long term. Wildlife carers have this. If you would like to become a wildlife carer, helping to rehabilitate injured or orphaned wildlife, then contact Sydney Wildlife or WIRES (their phone numbers are at the back of this booklet).

Rainbow lorikeet

Trichoglossus haematodus

A rainbow coloured parrot with a blue head, orange chest and green on top of its wings and back. Grows to be 30cm (from head to tail).

Can make noisy and chattery sounds.

Eats nectar and pollen (sometimes fruit, seeds and insects as well).

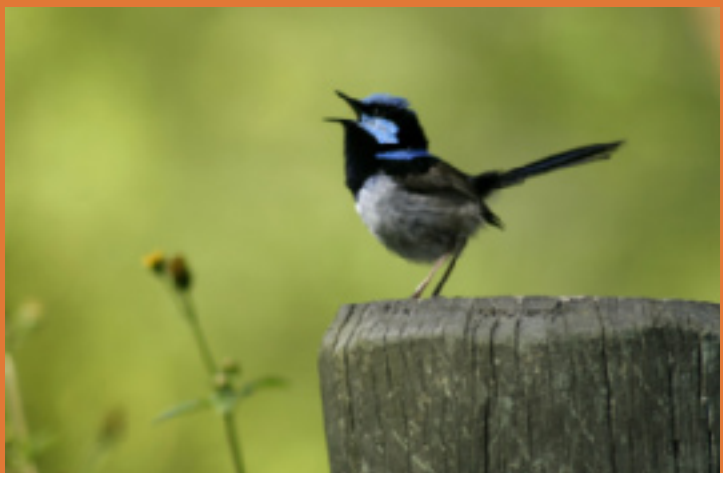
Nests in tree hollows or hollowed out termite nests. Breeds from June to January.

Can fly over 30km per day.

Native plants that will give them nectar include: grevilleas, bottlebrushes and flowering gum trees.

Issues: when rainbow lorikeets, like other wildlife, are fed processed foods such as bread, sugar or honey, their health can decline and this makes them susceptible to disease. It is best to provide them with their natural food source.

Superb fairy wren



Malurus cyaneus

Fairy wrens are about 14cm in length. Adult males develop bright blue and black feathers on their head and throat during breeding season. They remain grey-white below their chest. They have a black bill and brown legs. Females and young have a more light-brown plumage, with a brown beak and reddish stripe over their eye. You may see a hint of green in the adult females tail.

Fairy wrens may be seen in gardens, darting between low, dense shrubs. They are often seen together with others from their group. They eat mostly small insects and spiders, catching them on the ground, or from small bushes.

The female builds a dome-shaped nest with grasses and other materials, usually in low-lying shrubs or grasses.

Groundcovers and groups of small prickly bushes in your yard can suit them. They'll also need insects. Perhaps some mulch or leaf litter amongst your groundcovers can attract insects.

Issues: without small prickly bushes around, affording them protection from larger birds and animals, they are unlikely to visit, or survive in your garden.

Noisy minor

Manorina melanocephala

Mostly grey, with a black crown and cheeks, yellow beak and feet, with yellow also behind the eye. Average length is 26cm.

It has a bold personality, and can often be heard calling loudly together with it's group when disturbed. It makes a loud, piping 'pee pee pee' sound when alarmed.

Very common in Sydney.

It eats nectar, fruit, insects and sometimes small lizards. They feed from trees, or sometimes from the ground, usually in large groups.

Noisy minors breed in colonies. They may rear several broods in one season. Together, males, females and helper birds may feed the young.

Noisy minors are often confused with Indian mynas, which are brown and an introduced species.

Issues: their population has been increasing in Sydney, pushing out many smaller birds. This is thought to be brought on by the prevalence of hybrid grevilleas (pictured above).

Tawny frogmouth

Podargus strigoides

A large bird, 45 to 50cm long. Its feathers are a mottled silver-grey colour. It has yellow eyes. Sounds a soft, deep, continuous 'ooo-ooo-ooo'.

They fly silently through the night, catching insects, worms, snails, slugs, lizards and small mammals to eat.

During the day, they perch on a tree, and are often hard to distinguish from it.

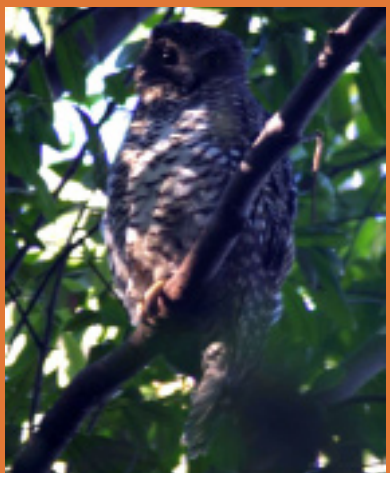
They are nocturnal.

Tawnys breed from August to December and nest in a loose platform of sticks created on a forked tree branch.

Found in most habitats, but not usually rainforests.

Issues: if they eat poisoned or sprayed snails, slugs or insects, they too are slowly poisoned. Try using organic pest-control...or let the wildlife be your pest-control (you will need to provide for the wildlife's other needs - shelter, nesting sites and fresh water - to attract them).

Powerful owl



Ninox strenua

A large owl, 55cm from head to tail. Classed as a 'vulnerable' species in NSW. Their colour is a dark grey to dark grey-brown above, with white barring, and off-white below. Has yellow eyes. Sounds a deep, double hoot 'woo-hoo'.

Feeds at night on small possums, mice and other mammals (mostly those who live in trees). It is the largest nocturnal bird.

Breeds from April to September and mates for life. Can live to be over 30 years old. Nests in 'old growth' trees – there are not many of these left in Sydney.

They mostly live in remnant bushland, alongside creeks or rivers. They are also seen in open areas near forests, such as parks and suburban areas.

Issues: if their natural foods are poisoned (such as possums and mice), they too can be poisoned.

They are largely at threat in Sydney due to loss of habitat.

Brushtail possum (common)

Trichosurus vulpecula

Has greyish fur, a pink nose and pointy pink ears. Has a dark (black) fluffy, bushy tail. Their body is 35-55cm long and their tail 25-40cm. Possums can sometimes be heard hissing and calling out loudly.

They eat leaves, fruit, flowers and buds. They like to feed on many plants and trees, including grevilleas, bottlebrushes and gums.

Being marsupials, brushtail possums carry their young in their pouch, yet later offer a piggy-back ride, where young learn necessary survival skills. They can breed in two seasons: Spring (Sept – Nov) and/or Autumn (March – May).

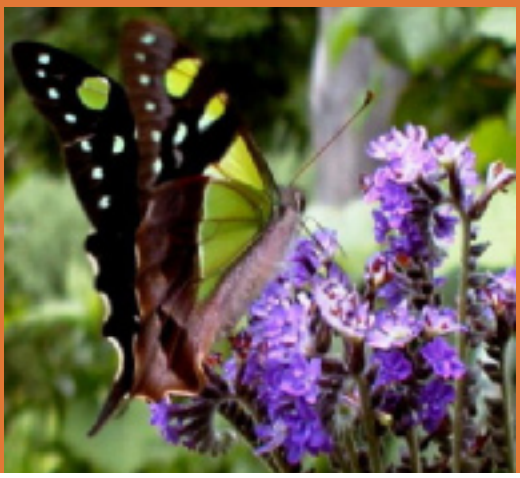
In the wild, brushtail possums usually sleep in a tree-hollow. These are formed in old gum trees and are not always available in suburban backyards. They may then seek other suitable shelter.

Sometimes they can try to nest in your roof. See our website for advice on how to evict a possum from your roof and provide an alternative nest-box.

Often confused with a ringtail possum, which is smaller and has a white-tipped tail.

Issues: a lack of connecting tree branches may mean they have to come down to the ground, where they are vulnerable to attack from cats, dogs and foxes.

Macleay's swallowtail



Graphium macleayanum

Macleay's swallowtail is a beautiful butterfly, with small 'tails' on it's hind wings and green on the underside of its wings. It can grow to 6cm.

It is commonly seen around Sydney from August to April.

It begins it's life in a tiny egg, which its mother lays on a feed plant. It emerges as a caterpillar and feeds on a variety of plants including the introduced camphor laurel Cinnamomum camphora. It later pupates into the beautiful butterfly you see above.

The adult butterfly feeds on the native sassafras Doryphora sassafras as well as a variety of showy, nectar rich flowers, often found in gardens.

Cicada – yellow Monday

Cyclochila australasiae

An insect with a stout body, two pairs of wings and three pairs of legs. They are harmless to humans and eat tree sap. There are many varieties.

In Summer, you may hear the ear-piercing sounds of the cicada. You may also see the empty shell from which it emerges (above).

The song you hear is that of the males trying to attract females. The sound can reach120 decibels.

Before they are winged, cicadas live underground for up to seven years. When fully grown, they dig their way out and shed their skin (the shell you find on trees). They then have wings. Once above ground, they only live for a few weeks. They reproduce and the cycle begins again.

Native bees

There are over 200 species of native bees living in Sydney. They range in shape and size and are needed for the pollination of many native flowers. They can even help to pollinate your veggie patch.

They eat nectar and pollen, and unlike the introduced honey bee, many do not sting.

Resin bee *Megachile* (left)

There are a variety of resin bees. Some are plain and black, others are very colourful. This one is striped with black and yellow.

Resin bees nest in pre-existing holes in timber or stone. They get their name from their habit of collecting resin to use in their nests.

Teddy bear bee *Amegilla* (right)

The teddy bear bee is round and fluffy, like a child's toy. They grow 7-15mm long.

They build shallow nest-burrows in soft soil, sometimes under your house.

Teddy bear bees are one of the few native bees that are known as 'buzz-pollinators'. They can shake out pollen from flowers, where others can't.

Like most native bees, these two like to feed on the flowers of gum trees, tea-trees, bottlebrushes, grevilleas and many garden vegetables.

Eastern blue-tongue

Tiliqua scincoides

A stout, long bodied lizard with short legs and a blue tongue. It has silvery-grey and browny-black bands across both it's body and tail, with a black stripe behind the eye. It can grow up to 60cm long.

Most gardeners enjoy seeing blue-tongues in their yard, as a blue-tongue's favourite foods are snails, slugs and plant-eating insects! Having a blue-tongue in your garden will help to control these pests.

Blue-tongues enjoy foraging in leaf-litter. They seek shelter in groundcovers, tussocky grasses, dense low-lying shrubs, disused pipes as well as under logs, rocks or even a house.

They are usually friendly and not aggressive, but, like any creature, may bite if they feel threatened. It is best to leave them alone.

Issues: if garden snails and slugs are baited, the lizards may also be poisoned (when they eat the pests).

Use organic gardening methods in your yard to help them.

Check for them on your driveway, or in your lawn before you mow it.

Cats, dogs and birds may also kill these lizards.

Wildlife friendly gardening tips

Mulch one or more areas in your garden. This will not only save water by helping your soil to stay moist, but it will also help to suppress weeds and improve your soil. In turn, this will create food for birds and other wildlife (small insects and worms may be encouraged to live here, which are food for many native birds).

Use weed-free mulch to a depth of about 10cm for best results, and leave a little gap around the base of plants, so they can breathe.

Create hiding and sunning spots for lizards in your yard by placing rocks, logs or bricks in sunny areas, near some shelter. Make sure that your materials are not removed from bushland, where other animals can be using them. Lizards can attract some meat-eating birds.

Use organic gardening and pest control methods as many common pesticides can harm or kill native wildlife.

Be careful not to 'over-tidy' your yard. Twigs, branches, leaf-litter, hollow-logs, trunks or rocks, if left, can provide nesting materials or even a place to nest in for local wildlife.

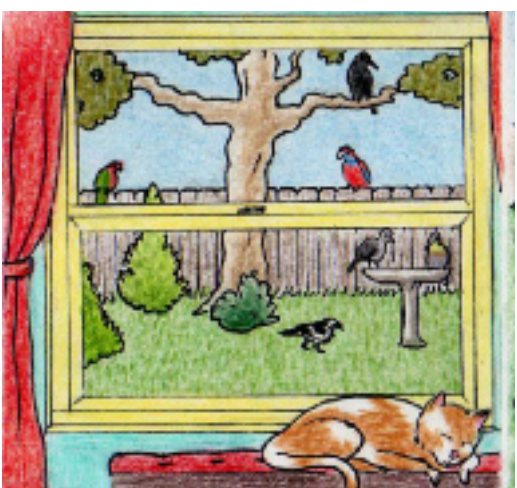
Install a nest-box for possums, native birds or other wildlife that may be lacking a tree-hollow to live in (see our website for further information).

Keep your cat indoors before dusk and until after dawn, to protect nocturnal (night) wildlife (such as owls and possums). Otherwise, cats may try to eat them. Even a scratch from a cat can kill wildlife (as cat bacteria is poisonous to them).

You may like to consider keeping your cat indoors as much as possible. During the day, cats can eat wildlife such as lizards, butterflies and birds.

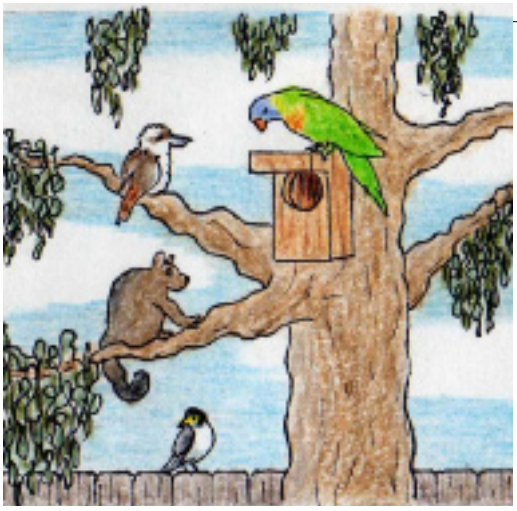
Add a water source (such as a basin or bird bath). Place it in a safe area, high off the ground or suspended from a tree, where cats or dogs cannot access it easily.

- Place your birdbath near a shrub or tree which can be used as a lookout or to run into for protection if needed.
- Replace the water source regularly...but not too regularly, if you want to avoid them becoming dependant, and getting thirsty when you go away.
- Clean your birdbath with fresh water only.
- Placing the clean, empty dish in direct sunlight for a few hours can help to sterilise it.



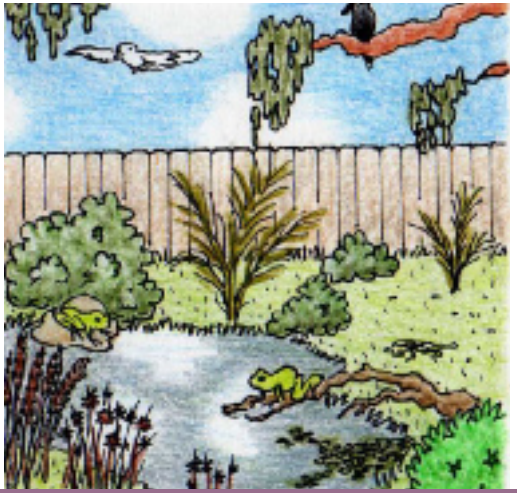
Create frog-friendly habitat in your garden by building a pond.

- Vary the depth of the pond and place a branch from the land into the water to allow other wildlife to get in or out of the pond easily.
- Create an island in the pond from which wildlife can drink safely.
- An overhanging tree can provide further shade as well as a vantage point for birds.
- Shrubs next to the pond may provide protection for visiting wildlife.
- Make sure you build the pond away from any bedrooms (yours and your neighbours), as some frogs can be noisy!



Attract butterflies or native stingless bees by planting or growing seasonally flowering, non-hybrid grevilleas, bottlebrushes and other nectar-producing native plants.

Avoid feeding wildlife processed foods such as bread or sugar. Sugar can corrode birds beaks, and like bread, can upset their bodies and make them susceptible to disease. It is best to grow native plants so they can feed naturally. If a native plant is there, the wildlife is sure to come!



What is a weed?

A weed is a plant out of place. To a gardener, this might be a plant you don't want growing in your garden. To a bushland regenerator, it may be something that destroys bushland. To a farmer, it may be something that destroys their crop.

For the purposes of this booklet, we have included weeds that are bad for everyone: gardeners, bushland regenerators and farmers.

How do weeds spread?

Weeds can be spread in many ways, including by: wind, water, wildlife, humans or equipment.

- Wind may blow light seeds around.
- Stormwater may carry weeds as well as nutrients to help them grow.

trees and shrubs

Large-leaved privet - fruit and leaves. Control: hand pulling, cut and paint, stem injection.

Small-leaved privet - flowers and leaves. Control: hand pulling, cut and paint, stem injection.

Ochna - leaves and fruit. Control: stem scraping.

- Birds may consume the fruit of weed plants, then deposit them somewhere else.
- People may carry seeds on their clothing or shoes...or even dump weeds in the bush (only helping them to spread).

Why get rid of weeds?

Apart from helping your garden plants and newly found natives to grow, removing weeds will also help local bushland.

If weeds enter bushland, they can smother existing vegetation and out-compete local native species. This can change the structure of the bushland. Many native animals find it hard to survive, and biodiversity declines. Fire regimes are altered and threatened plants may become even less common.

Cotoneaster - leaves and fruit. Control: hand pulling, cut and paint.

Lantana - flowers and leaves. Control: hand pulling, cut and paint.

Many environmental weeds come from people's backyards. These are called garden escapes.

For all of the abovementioned reasons, it is important to both support native species in your yard, as well as to try and remove weeds.

Note: often weed species are being used by native animals, for lack of choice. If you remove the weed they may have nothing left to live in or on. Always ensure you have a suitable replacement plant for native animals when removing weeds.

How can I effectively control my weeds?

Have you ever tried to remove a weed only to have it regrow? If you have, you may not have been using the correct removal technique for that weed.

Each weed has a specific removal method that is suited to that plant. These methods are listed under each photograph of a weed in this booklet. There are helpful illustrations at the back.

When you remove a weed, you help any plant that is not removed, and if you weed around native plants then you help them as well as the wildlife that needs them, to grow.

grasses and groundcovers

Ehrharta - leaves and seeds. Control: hand removal.

Note: be sure you know what something is BEFORE you remove or promote it! If you do not correctly identify a plant before removing or promoting it, you could mistakenly remove the native plants that you desire, or spread the weeds you don't want. (See the references and links section for further help identifying plants).

Use the following weeding techniques to promote your hidden native plants:

- Weed from the native plants outwards, towards the competition.
- You may make a 5 to 10cm weed-free ring around each native. This creates a buffer where nothing else can compete with the plant you are trying to grow.
- Minimise your disturbance of the soil when removing the weed.
- Try to remove the weed without removing any soil from the ground (get bare roots). (If soil is left on the weed, it may continue to grow when thrown aside, as well as deplete the soil of important bacteria).
- Keep any weed seeds/flowers/nuts/fruit away from natives. Place them in the bin.
- Use the correct weed removal techniques.
- Pace your weeding (plants may grow back to cover an area quicker than you think – and quicker than you can remove them).

Trad - flowers and leaves. Control: vines and scramblers - hand pulling, or try raking.

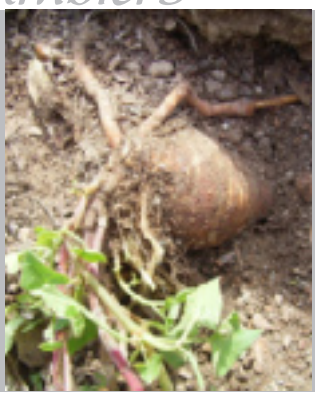
Further weeding tips:

If you are clearing a large area, try to scale your works. That is, remove a bit at a time, perhaps work in a 'mosaic' or chequerboard pattern, ensuring there are always some areas with vegetation, so the wildlife can use it and move between the areas without being too exposed.

Try to take and leave a variety of different species where possible. For example: leave a few large trees in an area, so birds can still perch. Leave a few shrubs, for smaller birds to hide in, and shady areas for them to keep away from the heat.

vines and scramblers

Honeysuckle - leaves and flower. Control: hand pulling, stem scraping.



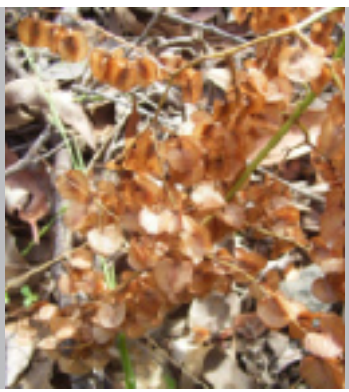
Turkey rhubarb - leaves and underground tuber. Control: dig out tubers, bag seeds.

Purple morning glory - leaves and flowers. Control: hand pulling, stem scraping.

Staggering your removal of plants can also help to prevent erosion, loss of topsoil and the general degradation of your site.

Almost anything can be a home (or useful) to wildlife. Trees, boxes in the garden, messy twigs left aside...most things can provide something useful to wildlife (whether it is natural or unnatural, native or not). A messy garden may be a great home for wildlife.

Examine how something may be used before removing it from your yard. For example: a pile of bricks may be protecting skinks, that spiky overgrown tree may be providing protection for small birds from cats, etc.



Turkey rhubarb - seeds.

Balloon vine - leaves and fruit. Control - hand pulling, stem scraping.

Madeira vine - flowers and leaves. Control: stem scraping and dig up tubers.

Madeira vine - aerial tubers.

Control of small hand pullable plants

Examples: small, soft weeds e.g. fleabane, crofton weed and small grasses.

Seedlings of any weeds including privet, lantana and moth vine.

Method: hand removal (minimal disturbance)

1. Gently remove any seeds or fruit and carefully place in a bag.
2. Grasp stem close to the ground.
3. Rock plant backwards and forwards to loosen roots, then pull out gently.
4. Carefully tap the roots to dislodge any soil and pat down.

Considerations

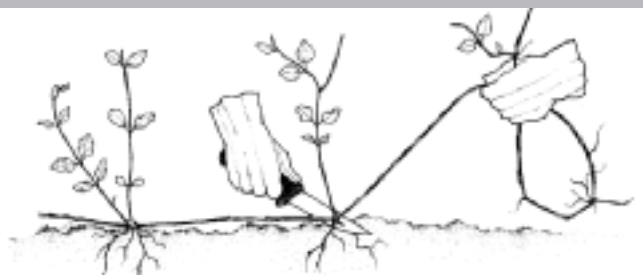
Leave weeds in a place where the roots do not make contact with the soil e.g. on a rock, hung from a tree (for small debris) or removed from the site.

Vary your body position regularly when using hand removal over long periods, to avoid fatigue.

Control of vines and scramblers

Examples: balloon vine, morning glory, honeysuckle, cape ivy, jasmine, madeira vine and blackberry.

Method 1: hand removal



1. Take hold of one runner and gently pull it along the ground towards you.
2. Check points of resistance where fibrous roots grow from nodes. Cut roots with a knife or dig out with a trowel and continue to follow the runner.
3. The majority of root systems need to be removed manually or scraped/cut and painted with herbicide.
4. Bag any reproductive parts.

Method 2: stem scraping

1. With a knife, scrape 15 to 30cm of the plant to reach the layer below the bark.
2. Immediately apply herbicide along the length of the scrape.

Considerations

A maximum of half the stem diameter should be scraped. Do not ring bark.

Larger stems (>1cm) should have two scrapes opposite each other.

Aerial tubers on madeira vine should die with the plant when stem scraping is used. Those that fall from the plant need to be bagged.

Vines can be left hanging in trees after treatment.

Control of woody weeds

Examples: lantana, bitou bush, cotoneaster, privet (use cut and paint).

Camphor laurel, ochna and cassia/senna (use stem scraping).

Useful for small to medium sized woody plants up to 10cm basal diameter.

Method 1: cut and paint

1 Make a horizontal cut close to the ground with secateurs, loppers or a bush saw.

2 Immediately apply herbicide to the exposed flat stump surface.

Considerations when using herbicide

Read the label before opening the container and follow the instructions.

Wear protective clothing as directed on the label.

Wash hands after use and before eating, drinking or smoking.

Cuts should be horizontal to prevent herbicide from running off the stump. Sharp angle cuts are hazardous.

Do not get dirt on the cut as it may neutralise the herbicide.

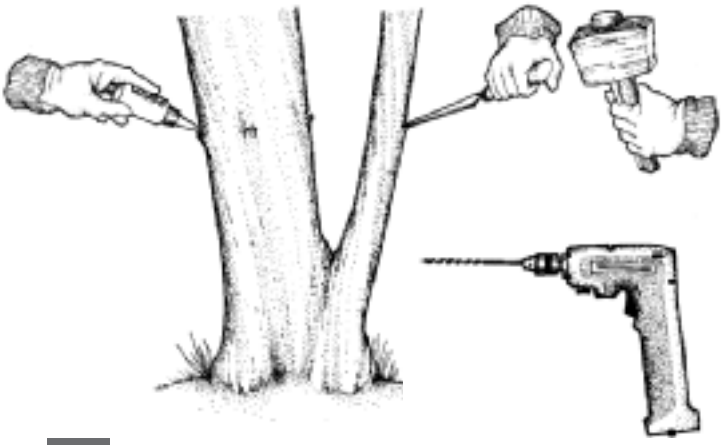
Herbicide must be applied immediately, before the plant cells close and translocation of herbicide ceases.

If plants resprout, cut and paint the shoots after sufficient regrowth has occurred.

Stem scraping can be more effective on some woody weeds.

For use on larger shrubs or trees above 10cm in diameter and in inaccessible sites where removal is a problem. Please contact your local council if you are considering removing trees of this size.

Method 2: stem injection
Method 3: frilling or chipping



1 INJECTION: At the base of the tree drill holes at a 45 degree angle into the sapwood at 5cm intervals.

OR

FRILL/CHIP: Make a cut into the sapwood with a chisel or axe.

2 Fill each hole/cut with herbicide immediately.

3 Repeat the process at 5cm intervals around the tree.

Considerations

Plants should be healthy and actively growing.

Deciduous plants should be treated in Spring and Autumn when leaves are fully formed.

For multi-stemmed plants, inject or chip below the lowest branch or treat each stem individually.

Herbicide must be injected immediately before the plant cells close and translocation of herbicide ceases (within 30 seconds).

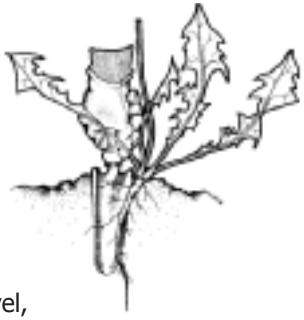
Control of weeds with underground r

Examples: Weeds with

- *Tap roots - catsear and dandelion.*
- *Rhizomes - asparagus fern and ginger plant.*
- *Bulbs and corms - oxalis, onion weed, Watsonia, freesias and montbretia.*
- *Tubers - madeira vine and turkey rhubarb.*

Method 1: hand removal of plants with a taproot

Examples: catsear, dandelion and fleabane.



1. Gently remove and bag seeds or fruit.
2. Push a narrow trowel or knife into the ground next to the taproot. Carefully loosen soil. Repeat this step around the taproot.
3. Grasp stem at ground level, rock plant backwards and forwards and pull gently.
4. Gently tap the roots to dislodge soil. Replace disturbed soil and lightly pat down.

Method 2: crowning

Examples: many grasses, asparagus fern.

1. Gently remove and bag stems with seed or fruit.
2. Grasp the leaves or stems together so that the base of the plant is visible.
3. Insert, at an angle, a knife or lever, close to the crown.
4. Cut through all the roots around the crown. Remove and bag the crown.

NB: a mattock is useful for plants such as phalaris, that form large clumps.

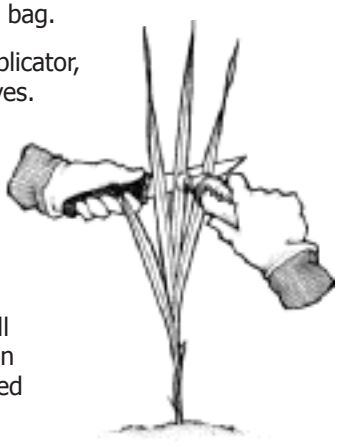
Examples: onion weed, watsonia, turkey rhubarb and montbretia.

Method 3: removal of plants with bulbs corms or tubers

1. Move leaf litter away from base of plant, dig down next to the stem until the bulb or tuber is reached.
2. Remove plant and carefully bag the bulk or tuber.

Method 4: herbicide – stem swiping

1. Gently remove any seed or fruit and carefully place into a bag.
2. Using a herbicide applicator, swipe the stems/leaves.



Considerations

Further digging may be required for plants with more than one tuber (e.g. arrow head vine).

Some bulbs (e.g. oxalis, onion weed) may have small bulbils attached or present in the soil around it. These need to be removed.

It may be quicker and more effective to dig out the weed. Make sure native plants and seedlings will not be affected.

Learn and understand how the herbicide works - for bulb and corm species the most effective time is after flowering and before fruit is set.

Have you addressed all safety issues ?

References, links and contacts

Books

Native plants

Field Guide to the Native Plants of Sydney. Les Robinson. 2nd ed. 1994. Kangaroo Press.

Native animals

Field Guide to the Birds of Australia. Ken Simpson, Nicolas Day and Peter Trusler. 6th edition. 2000. Penguin Books Australia.

The Mammals of Australia. Ronald Strahan ed. 1998. Reed New Holland/ Australian Museum.

The Nestbox Book. 1997. Gould League of Victoria Inc.

Native plant regeneration

Bringing Back the Bush. Joan Bradley. 1988. Lansdowne-Rigby.

Bush Regenerators Handbook. 2005. National Trust of Australia NSW.

Bush Regeneration: Recovering Australian Landscapes. Robin Buchanan. 1989. TAFE Student Learning Publications.

Weeds

Bush Invaders of South-East Australia: A guide to the identification and Control of Environmental Weeds Found in South-East Australia. Adam Muyt. 2001. R.G and F.J Richardson, Victoria, Australia.

Environmental Weeds: A Field Guide for SE Australia. Kate Blood. 2001. CH Jerram and associates, Mt Waverley.

Websites

Native plants

Australian Musuem
www.amonline.net.au/explore/index.cfm (Explore Australia's willdlife, history, culture and more).

Royal Botanic Gardens
www.rbgsyd.nsw.gov. au
(Use their databases, such as PlantNET for information on plants).

Native animals

Backyard Buddies
www.nationalparks.nsw.gov.au/npws.nsf/content/backyard+buddies
(Learn about native wildlife that may be living in your yard).

Birds in Backyards
www.birdsinbackyards.net
(Birds and their needs).

Birds Australia
www.birdsaustralia.com.au
(Birds and their needs).

The Australian Native Bee Research Centre
www.aussiebee.com.au
(Meet and learn about many of our wonderful native bees).

Wildlife of Sydney
www.faunanet.gov.au
(Information on native wildlife).

Native plant regeneration

Australian Association of Bush Regenerators
www.aabr.org.au
(Support and information for native plant regeneration in bushland).

Know Your Garden's Natives
www.knowyourgardensnatives.org
(Find your garden's hidden native plants and meet local wildlife).

Weeds

International Environmental Weed Foundation
www.iewf.org (Information on environmental weeds).

NSW Department of Primary Industries
www.dpi.nsw.gov.au/agriculture/noxweed (Noxious weeds in Sydney).

Sydney Weeds Committees
www.sydneyweeds.org.au
(Sydneys weeds and their control).

Phone numbers

Wildlife rescue and rehabilitation

Sydney Wildlife (02) 9413 4300

WIRES 1300 094 737

This project has been assisted by the New South Wales Government through its Environmental Trust.

NSW Environmental TRUST

our environment it's a living thing