

Creating a wildlife friendly garden



Government
of South Australia



Natural Resources
Adelaide and Mt Lofty Ranges

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Healthy and attractive urban landscapes

This booklet describes how you can attract native animals to your garden by creating a natural habitat garden or backyard for wildlife.

Creating a wildlife friendly garden is part of a series of gardening guides produced by Natural Resources Adelaide and Mt Lofty Ranges and funded through the NRM levy.

The other guides are:

- *Adelaide gardens – a planting guide*
- *Coastal gardens – a planting guide*

They are available from

www.naturalresources.sa.gov.au/adalaidemtloftyranges, natural resources centres and various nursery outlets.



Knobby Club-rush (*Ficinia nodosa*) is a hardy native sedge with interesting foliage – a great addition to any garden.

Backyards for wildlife

Gardening is one of our favourite pastimes and is a great way to stay active and healthy. What we do in our gardens has the potential to benefit or harm the natural environment. By choosing to develop and maintain a garden in a wildlife-friendly way it is possible to:

- reduce your garden maintenance costs
- decrease gardening and time commitments
- conserve local native plants and animals
- make our urban areas more ecologically sustainable.

If we can learn how to lessen our ecological footprint in our own backyards, then we can apply those same skills and knowledge to improve the natural environment in our suburb or local district.

The need to conserve water is also making us more aware that what we do in our gardens

and homes has the potential to have an impact on the wider natural environment.

The plants we choose to grow, how we structure our garden and the pest control methods we use will determine whether our gardens are friendly to visiting wildlife or not.

Establishing a natural habitat garden helps you encourage native animals like birds, bats, lizards, frogs, butterflies and other insects to your garden. Enjoying the sight of our unique and precious wildlife using your garden is a real pleasure and providing natural habitats in the urban landscape is a generous gift to the future.

Read on and discover how to create a natural habitat garden and become an environmental volunteer in your own backyard!



Before: 2009 native garden and lawn preparation
South Brighton, SA
Photo: S. Kennedy



After: 2011 native garden and lawn
South Brighton, SA
Photo: S. Kennedy

What sort of garden will you create?

Having built or bought your new home, you are faced with deciding what to do in the garden. Many homeowners will opt for a conventional garden with an area of lawn surrounded by garden beds containing hardy exotic plants such as roses, agapanthus, dwarf conifers and shrubs. While these types of gardens are popular, they can be expensive to maintain with high water use, mowing costs and the need to apply fertilisers and sprays. In addition, they generally offer little to our native wildlife in terms of food or habitat.

Backyards for Wildlife offers an alternative that both looks back to our past natural heritage as well as forward to a more environmentally sustainable future. No matter how big or small

your backyard, you can create a natural habitat garden that will provide a home for our native animals and plants. So why not create a special garden that will enable you to experience nature and enjoy the changing seasons?

With the help of the local plant selector and other informative resources available on our website, you can garden using native plants that were local to your suburb and help to grow a greener future for all of us (see page 29 for details).

A close-up photograph of purple Variable Glycine flowers, showing the intricate details of the petals and the central reproductive parts. The flowers are in various stages of bloom, with some fully open and others as buds. The background is a soft, out-of-focus green, suggesting a natural garden setting. The image is framed by a white, curved border that follows the shape of the text blocks.

Variable Glycine (*Glycine tabacina*), a threatened species of the Adelaide and Mount Lofty Ranges

Adelaide's original bushland

The next time you are in your garden, try to imagine what your suburb might have been like prior to urbanisation. What kind of plants would have grown there and which native animals might have lived in your area?

The Adelaide Plains were one of the most biologically diverse regions in South Australia. The early European settlers encountered an array of different environments – Red Gum forests, Grey Box woodlands, heathy shrublands, grasslands, swamps and wetlands as well as coastal sand dunes and mangrove forests.

These many different environments across a relatively small landscape provided niches that supported a wide variety of native plants and animals.

Since 1836 around 97% of the Adelaide and Mount Lofty Ranges region has been cleared for agriculture and urban development. Of the original 725 native plant species, 20% are now locally extinct and over 50% are rarely seen.

Protecting areas of remnant native vegetation is essential to preserve and maintain biodiversity. You can help by planting local native species in your garden.



White Goodenia
Goodenia albiflora
Photo: Jerry Smith

How to create a natural habitat garden

Do you currently have a good variety of native animals visiting your garden or just a few?

In a good habitat garden you would expect to see a wide variety of animals such as bats, birds, moths, lizards, frogs, butterflies and other insects either living in, or visiting, your garden from time to time.

You can encourage native wildlife to return to our urban environments by creating natural habitat gardens that offer shelter, breeding sites and food throughout the year. By following some basic principles for creating a backyard for wildlife you will see how easy it is.

Growing local native plants

Planting local natives, that is species that once called your suburb home, is a key factor in creating a natural habitat garden. These plants will help to recreate the connections that originally existed between plants and the local native wildlife. Local native species are naturally adapted to the soils, rainfall and temperatures in your area. This means they will be hardy and drought tolerant in your garden.

With many hundreds of plants to choose from there is a local native species suited to every garden situation across greater Adelaide. They come in a large variety of forms, shapes, flower colours and foliage types. See page 29 for a list of useful resources to help you choose plants, garden designs and habitat features to suit your home.

Flowers throughout the year

No matter what the season, there is always something flowering in the bush. This habitat feature provides a food source for wildlife all year round. By mimicking nature and choosing native plants for your garden that flower across the seasons you will encourage local wildlife to visit your garden throughout the year.

Autumn- and winter-flowering plants are often missing from our gardens, so try to include some of these in your plant selection. A key to a balanced garden is to have several nectar-producing species located around your house block. Watch out for 'bird-friendly' cultivars and high volume, nectar producing

non-natives as this will create an imbalance in the garden and attract large numbers of aggressive and loud bird species.

Visit the local plant selector online (see page 29) to discover beautiful flowering plants for your habitat garden.

Garden layers

In natural bushland there are five main structural layers (or storeys) where wildlife feed, shelter or breed. Four of the layers comprise vegetation cover and the fifth is the leaf litter, logs and rocks found on the ground. In developing your natural habitat garden, try to mimic these different layers.



Running Postman
Kennedia prostrata
Photo: Chantelle O'Brien

Garden layers

Layer	Description	Examples
Upper storey	tall trees (> 5 m)	eucalypts, large wattles (acacias)
Middle storey	smaller trees and tall shrubs (to 5 m)	wattles, banksias, sheoaks, tea trees, bottlebrushes, native pines
Understorey	shrubs (0.5 to 1 m)	low wattles, correas, hop-bushes, hakeas, bush peas
Ground	small shrubs and herbs (< 0.5 m)	sedges, rushes, lilies, grasses, creepers, groundcovers, orchids, saltbushes, ferns, fungi, lichen
Litter	ground elements that provide habitat and where animals can forage or shelter	leaf litter, twigs, fallen branches, logs and rocks

Landscaping features

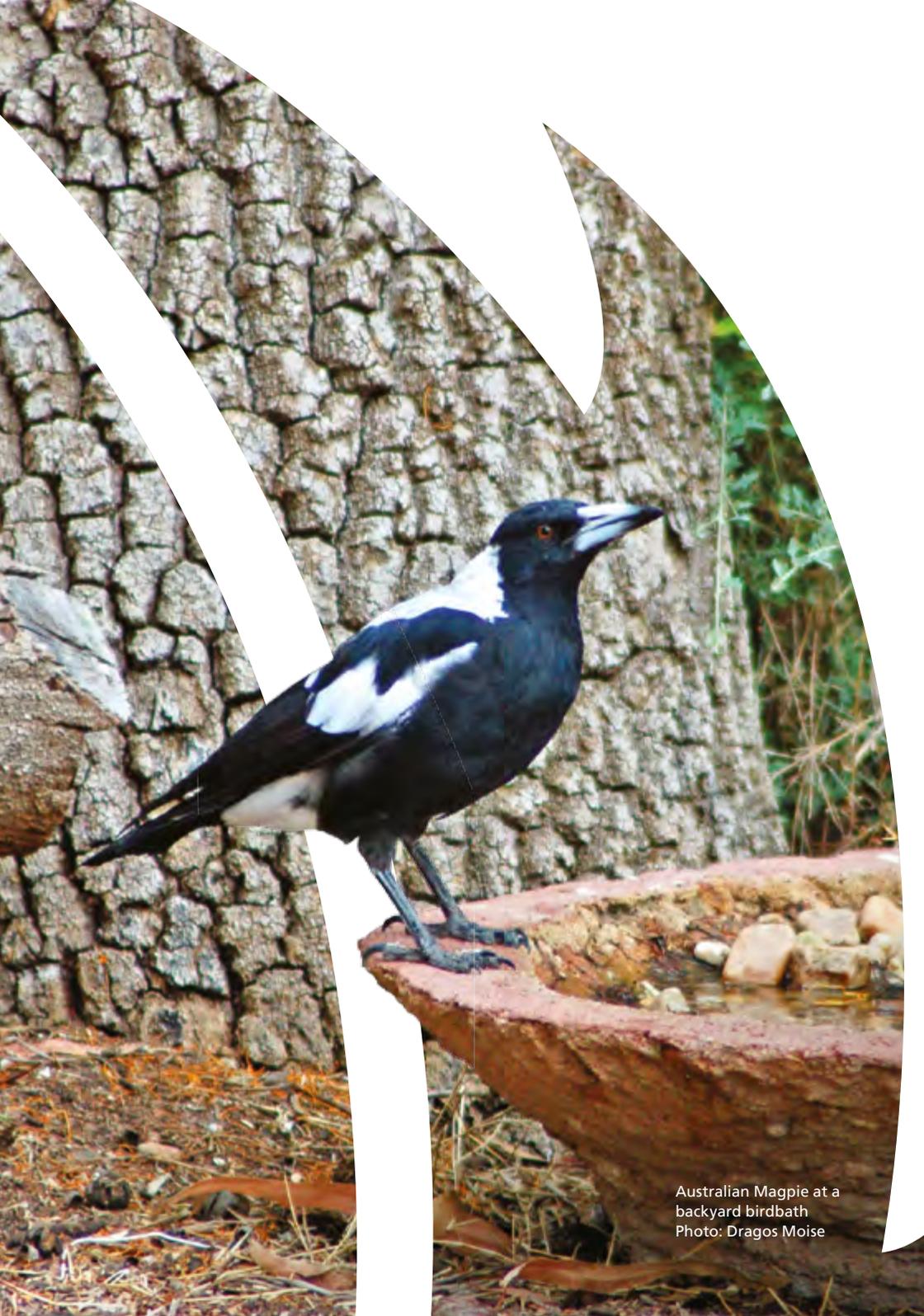
As well as choosing the right local native plants to attract wildlife to your garden, there are a number of landscaping elements that can increase the range of wildlife that will use your habitat garden. Remember that food, water and shelter are critical to all animals.

Rocks, logs and mulch

Hollow or rotten logs, rocks and branches are important in bushland and provide a refuge for frogs, reptiles, echidnas and insects. Adding logs and rocks to your garden is a great way to create habitat and encourage wildlife to visit. Surface mulch will ensure that there are plenty of worms and soil insects to provide food for native birds and other animals.

Always obtain your logs, mulch and rocks from a reputable supplier. They should not be sourced from bushland areas where they are already providing habitat.





Australian Magpie at a
backyard birdbath
Photo: Dragos Moise

Birdbaths and ponds

We all know that our supply of fresh water is under increasing pressure as climate change and drought reduce the inflows that our catchments and rivers receive. In response to this, we have to change the way we use water in our homes and gardens. As we feel the pinch, spare a thought for the water needs of our native wildlife. You can provide them with a source of clean water and, at the same time, add an attractive feature to your garden.

Birdbaths are a simple way to attract birds to your garden, especially during hot weather. Birds will become familiar with a regular source of water so keeping it topped up and clean will enhance its attractiveness to them. Scrub out monthly with a hard plastic brush to remove algae.

Locate the birdbath in an open area where birds will be safe from predation by other animals. However, a prickly shrub planted nearby can also help provide protection.

Ponds can support a range of local native plants both aquatic and semi-aquatic. These plants will remain green all year round and also provide habitat for frogs and invertebrates. Ponds can be big or small and are a great addition for that slightly boggy area of your yard. A solar pump can add movement to your pond.

Nesting boxes

Australia's wildlife has the highest rate of hollow dependency in the world, with twice the number of native bird species nesting in hollows compared to Europe, southern Africa and North America. Every attempt should be made to conserve existing hollows, and as new ones take many decades to form, an alternative is required.

The removal of mature trees, logs and fallen limbs from suburban areas has resulted in the loss of natural hollows. This has affected many bird, possum, bat and reptile species that rely on hollows for shelter and breeding.

Artificial nesting boxes can help recreate homes for urban birds, bats and other mammals. When installing a nest box always locate it high above the ground (4 m to 8 m) to avoid predation by dogs, cats, rats and foxes. The box entrance should face away from the hot westerly aspect but also be positioned to avoid the wind and wet (in greater Adelaide a north-easterly direction is preferable).

Nesting boxes should also be checked occasionally to make sure they have not been occupied by introduced species including non-native bees, Common Starlings or Sparrows.



Planning and planting your natural habitat garden

Waterwise and drought tolerant gardens

Water is a valuable and increasingly scarce natural resource – we all need to use it wisely! Some people have used up to 70% of household water on their garden. However, new water regulations have helped us to better plan and manage our gardens. Using local native plants will help to drought proof your garden, save water and attract local wildlife.

Local provenance

The plants you buy from a nursery will have been grown either from a seed or a cutting. The source of that seed or cutting is referred to as a plant's provenance. Local forms have, over many millennia, adapted to local conditions. The best native plants for your garden are those grown from seeds or cuttings from your suburb's local provenance. By using local provenance in your garden, you are also creating a seed bank and conserving these local genes for future generations. Find a list of nurseries which supply local native plants at www.naturalresources.sa.gov.au/adelaidemtloftyranges.

Planning your garden

Creating a variety of plantings – for example a shrubby area, a grassland area and a wetland area – adds more potential habitat to your garden. A patch of densely planted prickly shrubs is great for wildlife to shelter in or under. This is particularly important for small birds. However, if there is minimal space in your own garden for many different plantings, remember that you are part of the bigger landscape, and those reserves, council trees and your neighbours' gardens are also providing habitat for urban wildlife. Every little bit of local provenance we put back in urban areas helps us conserve this important and ever declining original vegetation for future generations to enjoy.



Many native plants are sensitive to water logging, so putting the right plants in the right places is essential for a successful garden. Determine where your soil drains freely or poorly and locate plants accordingly. For example, place your pond or wetland features in a naturally damper area of the garden where sedges, rushes and pond plants would thrive. Clump other plants with similar watering needs together to reduce water use.

To achieve a natural look avoid planting in neat rows, mix different species together and, on occasions, clump some plants of the same species together. This will look more natural and has greater habitat value. However, you can use local native plants to create any look and feel you are going for in a home garden – from cottage to formal and bush to courtyards. The next section has some great garden design ideas.



Native garden with Tom Thumb (*Dichondra repens*) and Small-leaved Clematis (*Clematis microphylla*)

Natural habitat garden designs

No matter what size your garden or budget is, there are many ways that you can create a natural habitat garden with plants native to your area.

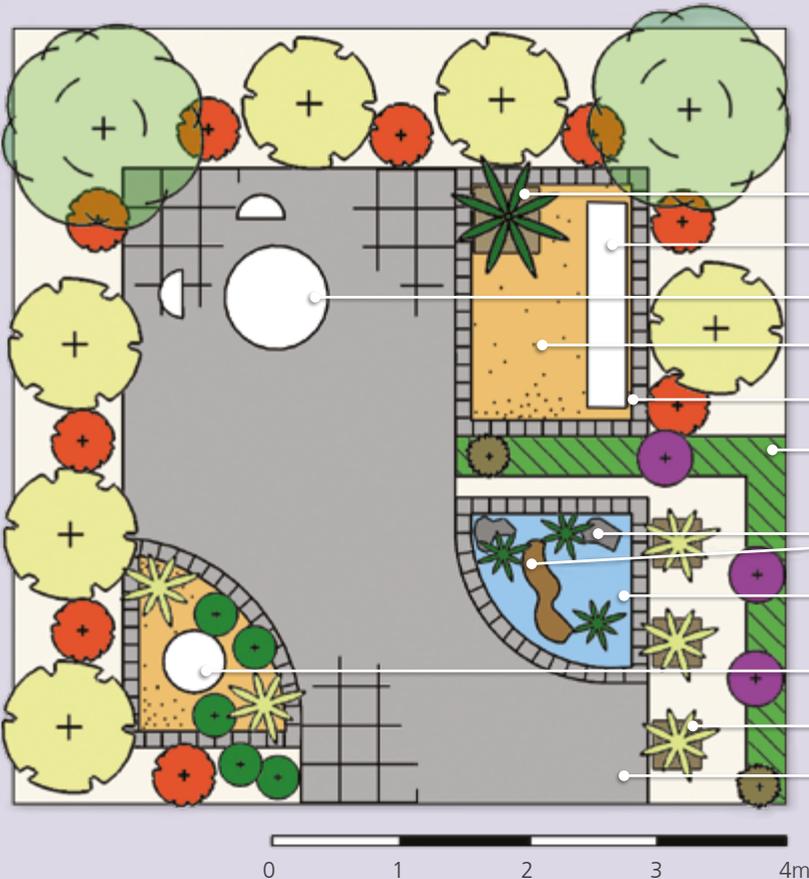
Refer to the Adelaide or coastal gardens planting guides for additional landscaping designs. (see page 29 for details).

Bush

When most people think of a native garden, they think of the bush. Bushgardens are low maintenance and usually left to 'go wild', rather than having a manicured or structured layout. They are created with the complete range of layers and some natural landscape features to best mimic bushland habitat.

Cottage

The old-fashioned, charming cottage style garden is soft and round with lots of wildflowers. Plants are usually chosen for their pretty flowers, colours, shapes, textures and



perfumes, as well as different heights, from groundcovers to climbers. It is easy to make sure you have colour year round, as a range of local native plants flower in each season. There is also a great variety of leaf colours and shapes to make a quaint and interesting local native cottage garden.

Contemporary

A contemporary or modern garden is simple, geometric and structured. Choosing only a few species of native plants with bold forms or strong colours, along with the use of hard materials (i.e. stone, metal, wood) will give you a sleek modern look.



Formal garden design

- Yacca in square pot
- Bench
- Table and chairs
- 14 mm Yankalilla gravel
- Paver edging
- Green wall 1800 mm mesh trellis
- Habitat log and rocks
- Frog pond with liner 300 mm depth
- Bird bath
- Flax-lily in square pot
- Large format pavers

Courtyard

Generally speaking, a courtyard garden is surrounded by at least three walls. When designing a courtyard garden, discipline is essential because every centimetre counts. Often using just a few plant types (e.g. climbers to make use of vertical space and some pots), courtyard gardens are simply laid out amongst paving and walls. Add a lovely water-feature to enhance the serenity of this native oasis.

Formal

A formal garden starts by placing plants in patterns such as lines, squares and circles, and create a symmetrical design with local native plants (yes, most CAN be pruned; particularly those with compact forms and dense foliage). It often employs hedging and topiary. Unlike the contemporary style, limit your use of hard materials to one type and keep a similar colour palette rather than mixing and matching to create the desired formal effect.

Raingardens

Building a raingarden is a simple way to help the environment and the health of our local waterways while providing a self-watering garden for your backyard.



Tree



Climber



Shrub



Native lawn



Herb



Gravel



Grass



Seat



Sedge

Planting out

To plant native seedlings in autumn and winter is a good rule. Planting at this time will give them a chance to establish using natural rainfall. Water your new plants about once a week during their first two summers until they are suitably established.

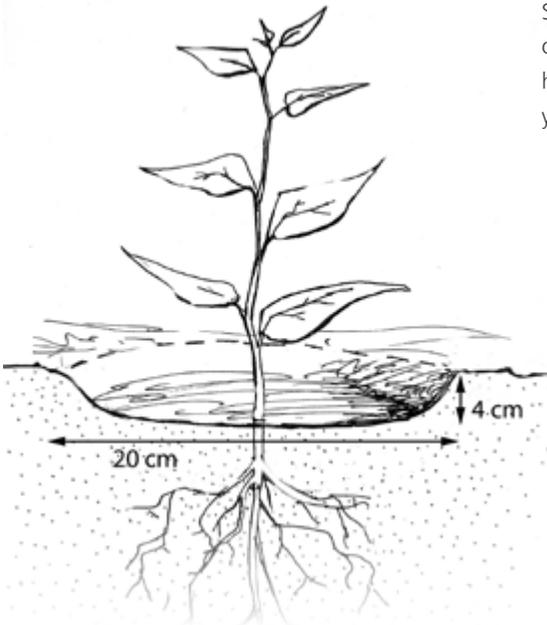
Native plants can be slow to adjust after being transplanted from a pot, but thrive once established. To increase the success and encourage healthy growth of your new seedlings use the following steps when planting out:

1. Soak the soil around the root ball by placing the pot or tube in a bucket of water and seaweed extract for a few minutes, until air bubbles cease. Try not to submerge the foliage.

2. While the pot is soaking prepare the hole. The ideal hole is a bit deeper than the pot and about two times as wide to allow roots to become established. Fill the empty hole with water and allow it to soak into the ground before putting your plant in.

Note: In compacted soils or soils with high clay content it is important to avoid glazing, that is creating a hole with hard, smooth sides with an almost polished look. The glazed surface will restrict root growth and cause the plant to become 'hole-bound'. Use a garden fork to loosen the soil around the walls and base of the hole.

3. Remove the plant from the pot, being careful not to disturb the roots any more than necessary. The soil and root ball should come away easily; if not, tap the pot lightly with a small garden tool. Support the base of the seedling with one hand and use your other hand to hold the roots and soil together as you place it in the hole.



Create a basin when planting out



4. Backfill soil around the root ball and tamp firmly without compacting the soil. Allow for a small depression around the plant to hold water. Once planted give the seedlings a good watering to settle the soil and reduce transplant shock. Newly planted seedlings need to be soaked – not sprinkled with water. A good soaking reduces evaporation and encourages the roots to grow deeper to seek moisture.
5. Soaking once a week in summer (depending on weather conditions) is better than a daily spray. Watering should also be done in the cool of the morning or evening to reduce loss through evaporation. Create a bowl around the plant to help capture rainfall.



Many natives are attractive in pots.



Backfilling a Happy Wanderer
(*Hardenbergia violacea*) seedling
during planting

Helpful hints

Small seedlings available as tubestock will generally establish faster and quickly outgrow those planted using more advanced (and expensive) plants.

Adding a layer of mulch to the surface of your soil can reduce evaporative water loss by over 70%. A thick layer of mulch (>10 cm) will reduce weed growth and increase the number of soil invertebrates and microbes that maintain soil structure and productivity. It will also provide habitat for small insects that can be food for native animals. However, be careful not to mulch too closely to the stems of your new plants as this may encourage stems to rot.

Small gardens and use of pots

A collection of potted plants can work well in small yards or apartment blocks. There are many wonderful local native species that suit pots. Be sure to use a potting mix suitable for native plants. These plants will need a bit more maintenance than those in the ground, so regular watering, a good pruning after flowering or shaping up when necessary, as well as the occasional native fertiliser will keep your pot plants looking great!

Plant names are subject to change over time so check www.flora.sa.gov.au for updates and former names

Local native plants for pots

Bushes and trees

Local wattles (*Acacia* species)
e.g. Golden Wattle (*A. pycnantha*)

Native Apricot (*Pittosporum phylliraeoides* var. *microcarpa*)

Southern Cypress Pine (*Callitris gracilis*)

Shrubs

Mallee peas (*Eutaxia* species)

River Bottlebrush (*Callistemon sieberi*)

Senna (*Senna artemisioides*)

Small local wattles (*Acacia* species)
e.g. Round-leaved Wattle (*A. acinacea*)

Twiggy Daisy-bush (*Olearia ramulosa*)

Trailing plants

Bindweeds (*Convolvulus* species)
Not Common Bindweed (*C. avensis*) a weed from Eurasia

Native Holly (*Platylobium obtusangulum*)

Native Lilac (*Hardenbergia violacea*)

Native Pigface (*Carpobrotus* species)
Not Hottentot Fig (*C. edulis*) a weed from South Africa

Old Man's Beard (*Clematis microphylla*)

Grasses and tussock plants

Kangaroo Grass (*Themeda triandra*)

Knobby Club-rush (*Ficinia nodosa*)

Mat-rushes (*Lomandra* species)

Rushes (*Juncus* species)
Not weedy juncus species

Tussock grasses (*Poa* species)

Windmill Grass (*Chloris truncata*)

Yacca or Grass Tree (*Xanthorrhoea* species)

Flowering herbs

Bluebell (*Wahlenbergia* species)

Fan-flower (*Scaevola* species)

Flax-lily (*Dianella* species)

Native Flax (*Linum marginale*)

Caring for the environment

Here are some simple things you can do to improve your local environment.

Responsible pet management

It is estimated that over 60% of Australian households have one or more pets. Whilst pets are great companions we should be mindful that they can disturb or kill our native wildlife.

If you own a dog or cat make sure that it is not a predator in your garden or neighbourhood.

Cats and dogs are natural hunters and even those that are well fed are capable, when allowed to roam, of killing large numbers of birds, lizards, frogs, small mammals and insects.

When taking your dog out, be mindful that they can also chase ground- and water-birds away from their nests, disturb wildlife, introduce weed seeds (attached to their coats) and their droppings can introduce nutrients that encourage the growth of weed species.

You can help by only walking your dog on a lead in designated areas, keeping to tracks and picking up its droppings (this is required under the *Dog and Cat Management Act 1995*). You can also contact your local council to find out if they have a designated dog park for you to visit in your area.

You can also help by getting your pets desexed to avoid unwanted litters and not feeding strays. Keeping your pet indoors, confined to a cage (e.g. cat run/aviary) or a fenced off outdoor area is recommended, for the safety of native wildlife as well as your pet.





Cats are natural hunters

Safe chemical use

If chemical sprays (herbicides, pesticides and fungicides) are not used with due care they can have deadly effects on organisms other than those you wish to control. This is known as off-target damage. Many beneficial predatory insects can be affected as well as sensitive species like frogs.

For the safe use of chemicals:

- read and understand the label, taking special note of the rate of application, preparation instructions and safety directions
- do not use any chemical for purposes other than for which it is legally registered (as stated on the label); also check Safety Data Sheet online at www.safeworkaustralia.gov.au

- do not spray in adverse weather conditions, e.g. on very hot and/or windy days
- avoid spraying when fatigued to ensure careful and purposeful application
- be particularly careful when using chemicals near waterways or stormwater drains to prevent run-off and harmful contamination
- take appropriate personal safety precautions
- store your chemicals in a dry, cool shed or cupboard dedicated to that purpose.

Chemicals must be kept in sound original containers that are fully labelled and tightly sealed.



Painted Lady
(*Vanessa kershawii*)

Seeking alternatives

There are alternative means for controlling weeds and other pests, including a range of 'eco-friendly' sprays on the market.

Other non-chemical approaches to weed control are the use of:

- hand weeding
- plant competition
- mulching
- biological control agents
- hoeing, cultivation or other mechanical methods
- rotation of garden beds
- grazing, mowing or slashing
- quarantine or sanitation practices (e.g. pruning to prevent seed set)
- organic weed control alternatives.

Controlling weeds

A weed is any plant growing in an area where it does not naturally occur and is not wanted. Weeds compete with native plants for water, light and nutrients. Most have few natural pests or diseases that would have kept them under control in their natural environment. Many of South Australia's weeds originated from areas with a similar climate such as southern Africa, Central America and the Mediterranean. However, not all of our weed species are from overseas; some are from other parts of Australia.

Many bushland weeds are species that have escaped from suburban gardens. Weeds are one of the most significant threats facing Australia's biodiversity; they invade bushland and displace native species thus depriving native fauna of a source of food and habitat. They also require costly control programs.

What you can do

- avoid purchasing species known to be environmental weeds
- do not plant introduced species that have berries or fruits readily distributed by birds
- dispose of garden weeds by placing them in a green waste or compost bin
- find out if any of your garden plants are environmental weeds and replace them with attractive local native species (see page 29 for more detail).



Attracting wildlife to your garden

The best way to attract native wildlife to your garden is to provide the natural habitat needed for them to live, feed or breed in. It is best not to artificially feed native wildlife as they may become sick from inappropriate food sources or, after a time, they may

become dependent on you as a food source and will starve if feeding ceases. An artificial diet may not provide the nutrients they require, but planting a variety of native plants can provide them with adequate food and habitat resources.



Red-browed Finches at a birdbath
Photo: Martin Stokes

Birds

Over 270 bird species have been recorded in the Adelaide region, of which 16 are introduced and 76 have conservation significance (meaning they are rare, endangered or threatened). By meeting the habitat needs for local birds you will be rewarded with their presence and help play an important role in the conservation of our local native birdlife.

Providing a clean and reliable water source is essential to encourage birds to visit your garden. Your garden could include a variety of plants with different structures to meet a variety of habitat requirements. Each bird species has specific dietary needs so you could incorporate a variety of local native plants to provide an assortment of foods. Nesting boxes can help recreate homes for hollow-nesting birds when natural hollows are not present.

Butterflies

Butterflies enhance any landscape with movement and colour. They play an important role in the local ecosystem as a pollinator. About 20 butterfly species are common in suburban gardens.

Specific native plants play key roles in the different stages of a butterfly's lifecycle. You can attract butterflies by incorporating food plants for the larvae (caterpillars) and nectar for the adult butterfly. Also provide them with a water source such as a boggy area with wet sand or mud. Do not spray pesticides when caterpillars or butterflies are around.



Native butterfly on a Poa grass

Frogs

Frog populations are in decline and human activities are thought to be largely responsible. Frogs are highly sensitive to chemicals and pollutants that make their way into the environment. The use of insecticides and herbicides, the loss of suitable habitat through the drainage of wetland areas and the degradation of watercourses have negatively affected frog populations.

Native frogs can be attracted to your backyard by building a pond where they can feed and breed. Ponds do not need to be large, as frogs only use them as a place to lay their eggs and will spend a lot of their time hiding in your garden. Provide a mulched or densely planted area to keep the frogs moist and attract insects for food.

Once you've created a frog area in your garden, be patient. Don't be tempted with buying frogs or tadpoles that aren't native to your area, as they can cause big environmental problems. If frogs are slow to arrive, wait for a hot, humid night and play a recording of frog calls. Once one arrives, others will quickly follow!



Lesser Long-eared Bat (*Nyctophilus geoffroyi*) in flight
Photo: Terry Reardon

Bats

Greater Adelaide has nine insectivorous bat species that are nocturnal (active at night) or crepuscular (active during twilight hours at dawn or dusk). Under natural conditions, bats seek shelter in tree hollows or under bark. Bat boxes, specially designed with a landing pad and entry slot along the bottom of the box accommodates roosting, and will reward you with environmentally-friendly, natural insect control.



Native fish

Most native fish species are small and are ideally suited to aquariums and backyard ponds. Native fish are an excellent alternative to ornamental and exotic species, some of which have established in our watercourses with devastating impacts on native aquatic species.

Some species to consider include Murray-Darling Rainbowfish (*Melanotaenia fluviatilis*) and Purple-spotted Gudgeons (*Mogurnda adspersa*). Ensure that your pond does not flow into a waterway (directly or indirectly) before stocking it with fish. Contact South Australian Native Fish Association for advice (see page 29 for details).



An Empire or Carp Gudgeon (*Hypseleotris kluningeri*) can be a great addition to your pond; it will eat mosquito larvae and is a fantastic alternative to a goldfish. Photo: Scotte Wedderburn



Eastern Blue-tongued Lizard (*Tiliqua scincoides*) sunning itself on a brick wall

Lizards

A rustling in your garden probably means that a reptile is about, looking for a sunny spot or foraging for food. Species commonly found include Eastern Blue-tongued and Shingleback Lizards as well as smaller species such as skinks and geckos.

By providing food and habitat (especially cover) you will encourage lizards to visit your garden. Cover includes leaf mulch, hollow logs, bark, rocks, and vegetation such as groundcovers or small shrubs where lizards can forage for food and retreat from predators.

For a lizard-friendly garden avoid using pesticides that will kill insects, snails and slugs (lizards may also be killed if they consume snail bait or through eating insects affected by such chemicals).

The presence of amphibians is a great indicator of healthy wetland environments

Living with native animals

Possums

Possums are the only native marsupials that have survived in our urban environment. Originally four types of possum were present in Adelaide, however today only two species remain – the Common Brushtail and Ringtail Possums. It is their arboreal (tree-living) habit and their adaptability that has made this transition possible.

Most people do not deliberately attract possums to their garden, so how do we live with them? Possums have most of their food, water and shelter requirements met by their arboreal territories. Brushtails will occasionally venture to the ground to feed, however ringtails rarely move down from the safety of the tree. Both are principally leaf eaters in the wild, but suburban gardens have allowed them to significantly expand their foods to include fruits, vegetables and ornamental shrubs (e.g. roses).



Common Ringtail Possum with young
Photo: Bruce and Maria Pointon

Their modified feeding habits can bring possums (particularly brushtails) into conflict with suburban residents, and increase their population in some areas. To avoid attracting unnaturally high numbers of possums do not deliberately feed possums, or allow them access to rubbish bins or discarded organic waste.

Planting native species that are preferred by possums is likely to reduce the impact on certain garden plants and support a smaller number of animals. Eucalypts provide an important source of food and shelter (including hollows).

The installation of nesting boxes is unlikely to increase the possum population in your area but may reduce the likelihood of one taking up residence in the roof of your house.

Possums may use up to six 'hollows' in their home ranges, so offering them the option of a nest box or two will hopefully provide them with what they are missing in nature and keep them from getting into places where you do not want them.

Pets, particularly dogs, will annoy possums and the lack of vegetated corridors will reduce the possum's ability to travel safely throughout its territory. Responsible pet ownership is important for possums as well as domestic pets, and will reduce the level of noise associated with any nocturnal visits.

Snakes

Depending on where you live you may find your garden attracting snakes. How do we learn to safely live with them and at the same time protect their habitat?

The most common species in the Adelaide and Mount Lofty Ranges are the Red-bellied

Black Snake and the Eastern Brown Snake. Black snakes are generally associated with streams and swamps, while brown snakes occur more widely. Both species feed on small animals, including frogs, introduced mice and rats. They are naturally timid animals and are rarely aggressive unless threatened. Your best protection from snakes is to be aware and observant at all times when you are in your garden, long grass or in the bush.

Keep dense undergrowth and building materials (e.g. sheets of tin) away from buildings or areas where children play. Undertake regular vermin (mouse and rat) control, especially if you have aviaries, chickens or other caged animals. If at any time you have a problem, contact a licensed snake control company through your local council or online search.

Echidnas, koalas and kangaroos

These three animals are commonly encountered on the margins of our urban area. How do we learn to live with them and at the same time protect their habitat?

Echidnas largely lead solitary lives within a home range of about 50 hectares. They are generally active during the day, but during hot weather are more active in the cooler evening. Seeing an echidna in the wild is great, but do not attempt to handle the animal.



Echidna feeding at base of a Eucalypt.

Historically in South Australia, koalas only occurred in the south-east but in the 1920s fears of their demise led to their introduction to other areas including the Adelaide Hills. Koalas have adapted well and their numbers have been steadily increasing.

If a koala turns up in your garden enjoy the unique encounter that some people travel across the globe to experience; please do not attempt to handle it. Koalas will generally move on within a few days.

Kangaroos are becoming more common in parts of the outer areas of Adelaide. Western Grey Kangaroos are grazing animals with a preference for grasses and herbs, but they will also browse on leaves from bushes and trees. Whilst not being strictly nocturnal they will spend most daylight hours sheltering in the bush only moving out into open grazing areas in the late afternoon through to early morning. This is when they run the risk of being hit by vehicles as they cross roads or feed along roadsides.

Habitat loss poses the greatest threat to echidnas, koalas and kangaroos. Protecting remnant habitat and planting native vegetation will help these animals to remain a part of our urban environment. If you live close to a population of any of these animals you can contribute to their well-being. For example, practice responsible pet ownership and take an active role in protecting remnant native vegetation on your property, local reserves and roadsides.



Southern Brown Bandicoot
Photo: Kirstin Abley

Bandicoots

Eight species of bandicoots and the bilby once occurred in South Australia. Of these, only the Southern Brown Bandicoot remains in the wild. In the Mount Lofty Ranges this species lives mainly in stringybark eucalypt forests where there is very dense understorey.

Southern Brown Bandicoots forage for food mainly by digging in the leaf litter and soil to find insects, fungi, plant root nodules and bulbs. They will also eat fruit, seeds and other plant material found above ground. They are active during the day and night.

The biggest threat is the loss or modification of their habitat due to urban and agricultural development. Clearance and modification of dense vegetation has exposed them to introduced predators, such as foxes, as well as feral and domestic cats and dogs. If you live close to a population of bandicoots you can contribute to the well-being of this species by not letting your cats or dogs roam in native bushland.

Useful resources

These resources are complementary to this guide. From picturesque images to more in-depth gardening resource material, they may provide further inspiration and information. Happy planting!

The following information is available from the Natural Resources Adelaide and Mt Lofty Ranges website: www.naturalresources.sa.gov.au/adelaidemtloftryanges. Look for 'Urban biodiversity'.

- wildlife in your garden – fact sheets
- environmental weeds of the Adelaide and Mount Lofty Ranges
- local online plant selector (create shopping lists, find out where and how they grow best, see photos and descriptions of native plants)
- local native plant nurseries list (local suppliers)
- garden design templates
- *Coastal Gardens – a planting guide*
- *Adelaide Gardens – a planting guide*
- local native vegetation maps (historical plant associations)
- threatened native species – fact sheets and education resources.

The following also have good information on wildlife:

- Adelaide Bat Care: www.adelaidebatcare.com.au
- Atlas of Living Australia: www.ala.org.au
- Birds SA: www.birdssa.asn.au
- Bugs n Slugs: www.bugsnslugs.com.au
- Butterfly Conservation SA: <http://users.sa.chariot.net.au/~bcsa>
- Discovery Circle Citizen Science: www.discoverycircle.org.au
- Fauna Rescue SA: www.faunarescue.org.au
- Minton Farm: www.mintonfarm.org
- SA Herpetology Group: www.saherpetologygroup.org
- SA Native Fish Association: www.sanfa.org.au

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