

# Garden Weeds & Bushland Invaders



Identify

Control

Monitor



## Legend

Weed of National Significance



**Method of control:**

Cut and Swab, Drill and Fill



Spray



Hand Pull



Dig/Grub



**Spreads Via:**

Bulbs and Corms



Seeds



Cuttings (Vegetative Spread)





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This booklet identifies some major weeds in the Cities of Campbelltown and Tea Tree Gully, including plants which are still regularly found in gardens and nurseries.

## What is a weed?

To a gardener, a farmer or a botanist, a weed can mean different things.

Generally, a weed is a plant growing outside its natural environment which has an adverse impact on the environment. The majority of weeds in Australia are from overseas but some native Australian plants can also become weeds.

Weeds are plants growing in the wrong place, so responsible gardening can keep weeds in our environment under control.

### Weeds:

- > Can smother native plants or prevent them from growing after a disturbance (e.g. fire) by competing for available nutrients, water, space and sunlight;
- > Can affect native animal populations by reducing the availability of their usual food sources and habitat; and
- > Often survive better than native plants as the pests or diseases that would normally control them in their natural habitats are not present.

The majority of our troublesome weeds were introduced into Australia for their aesthetic value, as aquarium plants, for agricultural and horticultural purposes or due to previously inadequate quarantine restrictions. Once away from their natural environments and free from predation, these plants were able to establish and thrive.







## How do weeds impact on the environment, the economy and people?

Weeds can be very difficult to remove and may spread rapidly. Uncontrolled, they can spread into neighbouring land where they quickly establish at the expense of existing plants.

### Weeds can:

- > change, take over or destroy natural ecosystems and farmlands;
- > degrade recreational areas;
- > cause health problems such as poisoning and allergies to people and animals;
- > increase costs to farmers and graziers who produce our food; and
- > increase weed control and maintenance costs to local government, which are then passed on to ratepayers.

## How garden weeds become bushland invaders

Some plants, while excellent within our gardens, can become damaging pests if allowed to spread.

Plants such as gazanias, olives, couch and kikuyu grasses are regularly found in gardens, but are extremely invasive and a serious pest in natural areas.

Birds spread olive seeds far and wide and once established, the trees are very difficult to remove.





While olives are a popular garden plant, growing sterile cultivars or keeping birds off fruit will help keep olives in the garden and out of natural areas.

Grasses such as couch and kikuyu can spread quickly through cuttings, particularly when lawn clippings are disposed of in natural areas. The best ways to keep grass where it belongs is to keep it cut so it doesn't seed, and ensure that clippings are disposed of correctly.

Your green organics collection or home compost bins are a perfect way to make sure garden waste is properly treated.

The same applies to sweeping weeds, leaf litter and lawn clippings into stormwater drains. This spreads weeds through our waterways, creating weed infestations at parklands and reserves along creeks.

## How do weeds spread?

Many of today's weeds were introduced to Australia as **garden plants** and have since "escaped" into the natural environment.

Some plants are particularly good at "escaping" from the garden and becoming weeds in natural areas, including some which are still sold in garden centres. When selecting plants for your garden, check if the plants you have chosen are in this booklet. If so, chances are they will spread quickly from your garden and become a problem somewhere else. Plants that are not invasive are a good choice for your garden – check with your council or local nursery for the plants that they recommend.





## Weeds can spread in many ways, such as:

### Birds

Birds eat fruit and seed, which they carry to nearby bushland - birds can carry weed seeds many kilometres

### Humans and Animals

Weed seeds from the garden can be carried to bushland on your clothing and shoes, or on your pets fur.

When out for a walk, check your clothing, socks, cuffs, jumpers and boots etc., after walking through weedy areas. Dogs and cats can pick up seeds on their coats and spread weeds, so check them too.

### Wind

Wind can blow seeds many kilometres. For example, Pampas Grass can produce 100,000 seeds per plume and be carried more than 30 kilometres.

### Water



Seeds and plant parts including bulbs, corms and dumped garden waste can wash down stormwater drains to other areas. The weeds then grow and spread into areas which may not have had weeds previously.

### Vegetative



Many weeds have the capacity to spread vegetatively through roots, cuttings, bulbs and corms. Dumped garden cuttings and lawn clippings over the back fence or in local bushland can lead to infestations of weeds or unwelcome garden plants such as couch and kikuyu. Once established, these grasses are very difficult to remove.

If a plant has rhizomes (underground stems) or stolons (stems or runners that are above ground), this is an indication that the plant can reproduce vegetatively. Similarly bulbs, corms (like bulbs) and tubers also indicate that a plant could reproduce vegetatively.



## How do I prevent garden weeds from becoming bushland invaders?

We all have to be responsible for weed problems. Here are a few ways to control the spread of weeds:

### **Remove weed species from your garden**

Replace garden plants known to be invasive and avoid using plants that may spread into nearby bushland. Local nurseries and your council can recommend alternatives.

### **Don't dump garden waste**

Dispose of garden waste responsibly. Never dump it. Have it collected through your green waste collection where it will be treated and made into compost, or you can shred and compost garden waste yourself.

### **Keep weeds out of waterways**

Sweeping garden waste into the drain spreads weeds through waterways, which can become clogged with weeds such as grasses, Arum Lilies and Ash trees that establish on the banks.

### **Join a volunteer group**

Care groups such as Landcare, Friends Groups and Trees for Life care for soil, water, plants and wildlife affected by degradation. Many groups work to reduce the impact of environmental weeds. Find out more about local groups from your council.







## Methods for controlling weeds

Acting quickly to identify weed infestations and choosing the most appropriate control method are the best ways to keep weeds from growing out of control. As well as chemicals (herbicides) there are many non-chemical control methods available.

If a possible weed is found, figuring out what it is will help determine what action should be taken. If you can't identify it, ask a friend, your council, your local garden centre or the Botanic Gardens.

Weeds can be removed using different techniques outlined below.

### Hand Removal



Removing weeds by hand is one of the most effective ways to control weeds in your garden. This is best done when soil is damp, allowing for easy removal of weeds.

Hand removal should only be attempted if the species is suited to this technique or is small enough so that removal does not cause significant soil disturbance.

1. Bag seed heads and flowers using a plastic or paper bag if you think removing the plant will disperse seeds.
2. Grasp the plant firmly from the base of the stem or alternatively you can use a knife, screwdriver or weeding tool to push into the soil at the base of the plant. Gently lever the handle towards the plant and slowly remove the knife. Repeat around the base of the plant until the weed is loose enough to remove.
3. Gently pull the plant out with constant pressure and shake off any excess dirt attached to the roots.
4. Try to leave the soil as undisturbed as possible while ensuring all of the weed root or bulb system is removed.
5. Collect all the removed weeds and place them in your green waste collection or compost bin.



## Digging/Grub



Dig or grub is similar to hand weeding, but may be used for larger plants or plants with bulbs or corms, requiring the entire plant to be removed. It involves digging out the whole plant, ensuring that the roots etc. are removed.

## Cut and Swab



Cut and swab is one of the most common weed control techniques for controlling small woody shrubs through to large trees. A chemical is applied in a very localised area, minimising any damage to other plants or movement of the chemical into the soil. Make sure that you have a registered herbicide for the weed you are killing and follow the manufacturer's instructions carefully.

1. Using loppers or a handsaw (depending on the size of the species) remove the entire trunk to just above ground level, leaving a horizontal surface so the herbicide does not run off.
2. Within 30 seconds of cutting the stem, paint herbicide evenly across the whole surface of the open wound. Make sure that each stem has been treated in the same way.

## Drill and Fill



Drill and fill is similar to the cut and swab technique and may be used to retain a tree structure for habitat. This is particularly useful if a weed's root system is helping to prevent erosion, is keeping a steep bank stable, or when the plant is too large to be removed.

1. Choose a part of the stem (or exposed root if it is present) that is as close to the ground as possible.
2. Using a drill, drill holes into the stem of a plant in several different locations.
3. Fill the drilled holes with an appropriate chemical within 30 seconds of the hole being made.





## Herbicide Spray Application



Spray application can range from a small handheld spray bottle to a backpack spray or large spray tank mounted on a vehicle. Regardless of the size of the container, it is extremely important to thoroughly **read the label** for the rate of dilution, application rate and any safety recommendations made by the manufacturer.

Consider starting and finishing points when using sprays to ensure that sprayed areas are not trampled, potentially wiping chemicals off weed plants.

Sprays work best when the whole plant is treated and when used on healthy actively growing plants.

## Replacing weeds

After weed species have been removed, the gap needs to be filled with more desirable plants. Plant competition is an important and effective method of weed control.

Don't forget that a deep layer of mulch (at least 3cm) is a great way to keep weeds down as well as helping your garden be more water efficient.



## Monitor and follow up

Any weed control work or revegetation program should be regularly checked for reinvasion of weeds. If you see weeds coming back in your garden, take immediate action to control them before they get out of hand.

**Rainfall** - consider the last time it rained and when it is likely to rain again. Hand removal of weeds is easily done when the soil is damp, while some chemicals will not work if rain falls during or shortly after application. Also, chemicals can wash into the soil causing damage to desirable plants, or get into our waterways causing damage to the plants and animals that live there.

**Wind** - it's best to avoid chemical sprays on windy days because the spray can drift, easily damaging non-target plants.

**Timing** - The timing of weed control is as important as the technique used. Chemicals work best when weeds are actively growing. This will vary for each species. Avoid applying chemicals in hot weather or when weeds are wet from dew or rainfall.

## Declared plants

A declared plant is a weed species that has been targeted for control because they cause or can cause significant agricultural, environmental and social impacts.

You can find a list of declared plants at:

[www.dwlbc.sa.gov.au/biodiversity/pests/weeds/plants\\_list.html](http://www.dwlbc.sa.gov.au/biodiversity/pests/weeds/plants_list.html)

Declared weed species are controlled by legislation as per the Natural Resources Management Act 2004.

To find out more visit [www.dwlbc.sa.gov.au/nrm/legislation.html](http://www.dwlbc.sa.gov.au/nrm/legislation.html)



## Weeds of National Significance



In 1997 the National Weeds Strategy Committee developed an assessment procedure to identify Weeds of National Significance (WONS) and to prioritise weeds over a range of land uses at the national level.

Twenty weeds have been identified from a list of more than 3,000 non-native naturalised plants in Australia that are already causing significant environmental damage.

More information about weeds of national significance, including a complete list of such weeds and photographs of each type of weed, can be viewed at:  
[www.weeds.org.au/natsig.htm](http://www.weeds.org.au/natsig.htm)

### 40 common weeds

The following pages contain information on 40 common weeds, including the way they spread and the best method of removal. Please refer to the legend at the front of the book for an explanation of the symbols.





*Lycium ferocissimum*

### African Boxthorn

Boxthorn takes over shaded areas first and keeps spreading. The plants' sharp thorns pose a threat to the eyes of grazing animals, especially during dry times when the animals are looking for feed.



*Cynara cardunculus*

### Artichoke Thistle

Artichoke thistle is a stout, erect, greyish perennial which forms a rosette of very large leaves and usually grows to a height of 60 to 150cm.



*Zantedeschia aethiopica*

### Arum Lily

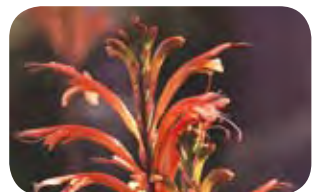
Native to South Africa and a serious weed along creek lines and in wet areas, the Arum Lily spreads quickly each growing season.



*Chasmanthe floribunda*

### Aunt Eliza

Aunt Eliza, sometimes known as South African Cornflag, has flower spikes with yellow, red or purple flowers at lengths of 1cm. It is invasive in native bushland.



*Rubus fruticosus*

### Blackberry

Scrambling plant to 2m high with canes up to 7m long and leaves which are green, reddish or purple. Blackberry spreads quickly and competes with native plants.





*Chrysanthemoides monilifera*

### Boneseed



Boneseed has the potential to invade and dominate the understorey of bushland and forest areas. Yellow clustered flowers (that look like daisy flower heads) and can grow to 3m tall.



*Asparagus asparagoides*

### Bridal Creeper



Bridal Creeper is dormant during summer, but when growing can quickly smother small plants, shrubs and small trees. A dense clump of corms can be found at the base of mature plants.



*Asclepias rotundifolia*

### Broad-leaved Cotton-bush



Native to South Africa, it is a weed of open bushland, roadsides, cleared land and riverbeds.



*Rhamnus alaternus*

### Buckthorn



Of Mediterranean origin, Buckthorn's canopy of leaves cast a dense shade which prevents the growth of trees and shrubs. Buckthorn can also impact on native animals as it shades-out their natural habitat. Buckthorn is spread by seed when the fruit is eaten by birds and animals.



*Watsonia meriana*

### Bulbil Watsonia



A tall perennial to 2m, distinguished by clusters of egg-shaped bulbils on the stem replacing the flowers. Bulbil Watsonia is a major environmental weed of disturbed bushland and roadsides, particularly near water.





*Tribulus terrestris*

### Caltrop

Producing yellow flowers with petals 2-10mm long, Caltrop is a troublesome weed in recreational use areas and cleared areas. It produces large quantities of spiny fruit in summer.



*Homeria flaccida*

### Cape Tulip

Originally introduced as a garden plant in the 1800s, Cape Tulip is a perennial bulb with orange to salmon pink flowers that are yellow in the centre. They out-compete native plants.



*Ricinus communis*

### Castor Oil Plant

Castor Oil Plant is common on cleared areas and along creek lines. Its seeds are ejected explosively and it can grow to a large plant.



*Hyparrhenia hirta*

### Coolatai Grass

Coolatai Grass grows in tufts up to 1.2m tall and can create dense swards on open sites and roadsides.



*Acacia baileyana*

### Cootamundra Wattle

Leaves are fern-like, silvery grey-blue. This weed produces prolific clusters of bright golden yellow fragrant fluffy balls to 8mm in diameter in winter to early spring. Cootamundra Wattle invades woodland, grassland and the river banks. It is moving into bushland, displacing local wattles and forming dense stands.





*Phoenix canariensis*

## Date Palm

Introduced as an ornamental garden tree, it has a solid trunk with long feathery fronds that have spikes at the base.



*Fraxinus angustifolia ssp. angustifolia*

## Desert Ash

Desert ash is a spreading deciduous tree growing to a height of 10-12m. Seeds are winged so are readily dispersed by wind. Desert ash will also spread from root suckers.



*Rosa canina*

## Dog Rose

Spreading by suckers, Dog Rose forms dense, thorny thickets which compete with native vegetation and can block paths.



*Hedera helix*

## English Ivy

A dense, hardy and vigorous evergreen creeper and climber from Europe. English Ivy blankets the ground in moist sheltered areas, prevents seed germination, excludes light, harbours disease and can smother shrubs and trees.



*Foeniculum vulgare*

## Fennel

Fennel smells very strongly of aniseed. Usually found along roadsides and riverbanks, Fennel spreads quickly and out-competes native plants.







*Acacia iteaphylla*

## Flinders Ranges Wattle

Flinders Ranges Wattle has grey-green foliage and masses of pale yellow flowers. It out-competes local native plants.



*Pennisetum setaceum*

## Fountain Grass

A highly invasive, tufted perennial grass to 1m high with purplish flower heads. It has been used as an ornamental grass in gardens.



*Gazania spp*

## Gazania

Gazania is a tough, low-growing perennial herb with lance-shaped leaves and brightly coloured daisy-like flowers in bronze, yellow and orange tones. It produces abundant wind-blown seeds and spreads rapidly. It is often spread through garden waste.



*Acacia saligna*

## Golden-wreath Wattle

Golden-wreath Wattle is a small tree which can vary considerably in size. Bright golden flowers borne profusely in spring develop into smooth brown pods. In South Australia it is invading bushland. This plant can be confused with the local native plant *Acacia pycnantha* (Golden Wattle) when it is young.



*Ulex europaeus*

## Gorse (Furze)

Gorse is a very prickly shrub to 2.5m tall, which has spines instead of leaves and competes with native plants.







*Disa bracteata*

## Monadenia

Native to South Africa, Monadenia grows readily in competition with a wide range of other flora including indigenous or rare orchids. It invades bushland and pastures and is attracted to disturbed sites. It is usually 30cm to 50cm tall.



*Genista monspessulana*

## Montpellier Broom

Montpellier Broom forms dense thickets and is particularly common on roadsides and in woodland areas.



*Tropaeolum majus*

## Nasturtium

Large five-petalled slightly funnel-shaped flowers in yellows and oranges. Leaves and flowers can be used in salads having a distinctly bitter peppery taste. Growing quickly and out-competing native plants, it is often found in shady moist areas such as creek banks.



*Olea europaea*

## Olive

Seedlings appear near established trees. Feral olive infestations form a dense canopy that competes with native vegetation and prevents regeneration of native plants. Olives can also increase fire hazard.



*Oxalis purpurea*

## One O'Clock

One O'Clock is a small weed to 10cm high. The leaves are green to reddish green and flowers are short stemmed, purple, mauve or white with a yellow throat. Competes with native ground covers.





*Asphodelus fistulosus*

### Onion Weed

Onion Weed is a perennial with thin green hollow or chive-like leaves growing from a mainly white bulb which gives off an onion smell when crushed. Flowers grow at the top of a long stalk and are mainly white. Very difficult to eradicate once established.



*Cortaderia selloana*

### Pampas Grass

Pampas Grass is a long-lived perennial that grows in a large clumping tussock. It can grow to a height of 2-3m with tall flower heads that are pink white or cream in colour and can reach up to 6m. Individual plants can form dense clumps several metres across and can rapidly colonise areas, forming dense infestations.



*Vinca major*

### Periwinkle (Blue Periwinkle)

Periwinkle grows in thick mats and can smother other ground vegetation and prevent growth of shrubs and trees.



*Opuntia stricta*

### Prickly Pear

Having broad, flat cactus-like segments up to 40cm long with clusters of bristles, Prickly Pear spreads quickly and competes with native plants.



*Piptatherum miliaceum*

### Rice Millet

Rice Millet is a large perennial loosely tufted grass, with long wiry stems. Competes with native grasses.





*Echium plantagineum*



## Salvation Jane

Salvation Jane (also known as Patterson's Curse) usually has purple flowers but can also be blue, pink or white. It can spread quickly, taking over grazing land and becoming a roadside weed. It is poisonous to some animals.



*Scabiosa atropurpurea*



## Scabious (Pincushion)

Growing to 1m, Pincushion flower heads are 2-4cm across with purple, red, pink or white flowers. Pincushion is an annual or short lived perennial which competes with native plants.



*Oxalis pes-caprae*



## Soursob

Of South African origin, Soursobs are a common garden weed. Its leaves are bright green and it has bright yellow flowers on top of a leafless stalk. Soursobs quickly establish.



*Allium triquetrum*



## Three Cornered Garlic

A bulbous perennial, Three Cornered Garlic has white, star shaped flowers (nodding) and smells strongly of onion. It is difficult to eradicate and spreads quickly.



*Salix spp. Except Salix babylonica, S. x calandendron and S. x reichardtiji*



## Willow

A deciduous tree often found adjacent to watercourses. Thick root mat and dense shade prevents the establishment of other plants. Thickets can divert water, causing flooding and erosion. Breakdown of willow leaves depletes oxygen and degrades water quality.





## Links and References

### **ABC**

[www.abc.net.au](http://www.abc.net.au)

### **Adelaide and Mount Lofty Natural Resources Management Board**

[www.amlrnm.sa.gov.au](http://www.amlrnm.sa.gov.au)

### **Campbelltown City Council**

[www.campbelltown.sa.gov.au](http://www.campbelltown.sa.gov.au)

### **City of Tea Tree Gully**

[www.teatreegully.sa.gov.au](http://www.teatreegully.sa.gov.au)

### **Department of Primary Industries (Vic)**

[www.dpi.vic.gov.au](http://www.dpi.vic.gov.au)

### **Department of Water, Land and Biodiversity Conservation**

[www.dwlbc.sa.gov.au](http://www.dwlbc.sa.gov.au)

### **Hawkesbury River County Council**

[www.hrcc.nsw.gov.au](http://www.hrcc.nsw.gov.au)

### **National Parks Association of NSW**

[www.npansw.org.au](http://www.npansw.org.au)



## Links and References (continued)

### **NSW National Parks and Wildlife Service**

[www.nationalparks.nsw.gov.au](http://www.nationalparks.nsw.gov.au)

### **Primary Industries and Water**

[www.dpiw.tas.gov.au](http://www.dpiw.tas.gov.au)

### **Randwick City Council**

[www.randwick.nsw.gov.au](http://www.randwick.nsw.gov.au)

### **Rural Law Online**

[www.rurallaw.org.au](http://www.rurallaw.org.au)

### **Urban Forest**

[www.urbanforest.on.net](http://www.urbanforest.on.net)

### **Weedbusters**

[www.weedbusters.info](http://www.weedbusters.info)

### **Weeds Australia**

[www.weeds.org.au](http://www.weeds.org.au)

### **Weed Warriors**

[www.weedwarriors.net.au](http://www.weedwarriors.net.au)



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