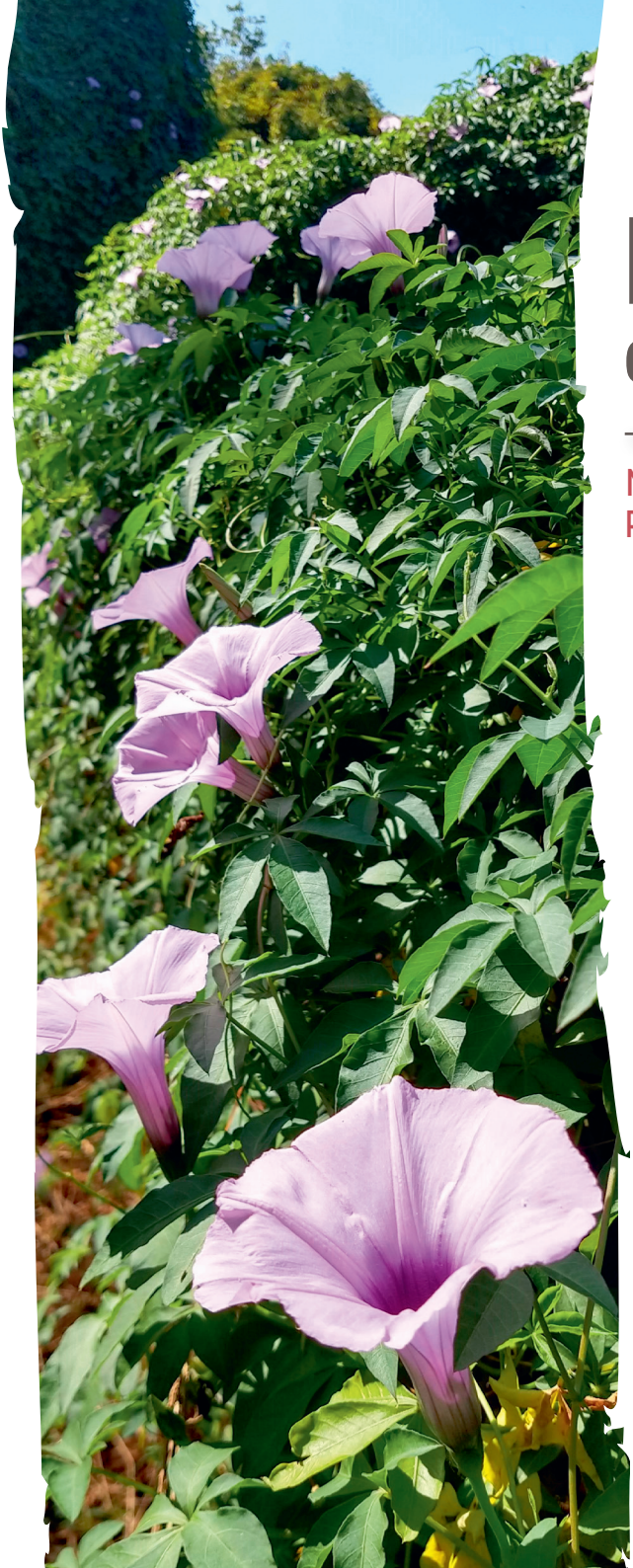

PLANTS
out of place

Managing weeds in
Perth's Eastern Region



Cotton Bush Pg. 20

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Introduction

We can all take action to solve the weed problem. This booklet aims to provide easy identification of some of the most threatening weeds that occur around the Perth hills and recommends methods of control. This compact booklet is great in the field and will help you get to know the weeds in your local area. Also available to view online for larger images and clickable links in the references and further information page. Check your local council webpage for a link to the online publication.

What is a Weed?

A weed, also known as an invasive plant, is any plant that requires some form of action to reduce its effect on the environment. A weed colonises and persists in an ecosystem in which it did not previously exist. Many garden and agricultural plants introduced into Australia in the last 200 years are now weeds, impacting on natural remnant ecosystems.

Although most of Australia's weeds are from other countries, Australian native plants can also become weeds when species are moved from within their natural habitat to new areas where they compete with indigenous plants for space and nutrients.

Why Weed?

Weed invasions change the natural diversity and balance of ecological communities. These changes threaten the survival of many plants and animals as the weeds compete with native plants for space, nutrients and sunlight. Weeds typically produce large numbers of seeds which assists their spread and they can rapidly invade disturbed sites. Seeds spread into natural and disturbed environments, via wind, waterways, people, vehicles, machinery, birds and other animals. They can establish in monocultures which can outcompete and exclude all other plant species. These areas often provide very little of benefit to our local fauna.

Weeds can dramatically alter fire regimes by adding to the available fuel load with some species also being highly flammable. Some weeds can actually benefit from fire, where fire reduces competition, and provides a window of opportunity in which the weeds can spread rapidly. In these cases the new flush of weed growth following a fire can add to the available fuel load for future fires, potentially creating a cycle of high-fuel, intense burns followed by a period of immense weed growth. Larger woody weeds can alter the behaviour of a fire by providing a ladder for a ground fire to reach the tree canopy.

The removal and control of weeds can provide better outcomes for local biodiversity and also a reduction in fire hazards.

Identification

It is important to correctly identify a weed to ensure that it is a weed and not a native plant. Correct identification is an important step in making sure that new weeds can be eradicated before they become established. Factors to consider when identifying weeds include:

- where and when the weed is growing
- what group the weed belongs to (herb, grass, shrub, bulb, vine)
- leaves – shape and size, colour of the weed
- flower, seed head or fruiting body of the weed

Along with this booklet, there are many resources such as field guides, fact sheets and websites to help you correctly identify weeds. A list of suggested resources is provided at the back of this booklet. If you cannot identify a weed using these resources, identification can be gained by sending a sample or photo to your local council Environment Officer or Landcare staff. For further assistance you can also enquire at the Western Australian Herbarium.

Best Weed Management Practices

Early detection and prevention of new invasive weeds is invariably cheaper and more successful than eradicating established infestations. In the event that weed infestations become established, procedures and methods for their control are available to reduce their impact. Here are some conservation and land management principles to help get you started:

Hygiene - we often contribute to the spread of weeds. Cleaning weed seeds from tools, equipment, machinery, vehicles (especially tyres), pets, clothing and boots is fundamental to the success of weed control. Place seed heads and plant material in bags, such as wool bale bags, shopping bags or old chaff bags. Prevent seed spread by ensuring bags are clean before taking into bushland areas.

Before removing weeds, it is important to consider the wildlife that may be using them for habitat and food. Provide natural habitat or alternative shelter before removing the weeds.

If in doubt, don't pull it out! Ensure that you have correctly identified the plant as a weed before removing it.

Consider your control technique in view of the whole ecosystem. Are you causing more harm than good? Are you achieving something to benefit the whole ecosystem?

Look beyond boundaries - most weeds don't distinguish fences. The weeds and plants that occur in bushland and in garden areas are all linked. Weeds are introduced into the bush from surrounding gardens and agriculture and once in the bushland they are able to re-invade backwards and forwards across these boundaries.

Start at the top - weed seeds and other plant parts move down into and along catchments by being carried by water and rolling down slopes. Where possible, it is more efficient and effective to start controlling weeds at the top of the catchment or watercourse so that weeds upstream do not keep re-infesting treated areas downstream.

Control Techniques

All methods of weed control include some degree of risk, mainly to the person undertaking weed control activities, but this may extend to other persons, and also the environment, depending on the control method chosen and the level of expertise of the individual engaging in these activities. Tools, machinery, manual labour and herbicides all have risks that must be managed. The most appropriate method of weed control will depend on the weed species, location, and resources available. It is always worth considering engaging a licensed and reputable weed control contractor for larger weed infestations and for the use of chemical control methods. If you choose to undertake chemical control yourself, **ensure you read and understand the manufacturer's instructions and follow all recommendations for the use of the chemical and required Personal Protective Equipment (PPE).**

There has been a recent increase in herbicides which are being marketed as organic, however this does not mean they are not hazardous. These products still have associated risks with some being highly corrosive or acidic. There is very little data available on the long term risks from exposure to these products. If you choose to use these products **ensure you read the Safety Data Sheet (SDS) for the product. Read the manufacturer's instructions and follow all recommendations for the use of the chemical and required Personal Protective Equipment (PPE).**

This guide was revised and updated in 2020 to take into account the range of control techniques currently available and the personal preferences of those who wish to undertake weed control activities. Where possible both chemical and non-chemical control methods have been provided for the weeds included in this booklet. The time taken to control the weeds and the effectiveness of these methods will vary considerably. In some cases it may take many years to effectively control some weed species, depending on the method chosen.

If you are volunteering on a Local Government reserve, please refer to your Friends Group Manual for further information on chemical weed control requirements.

Basal Barking

The application of a suitable herbicide around the full circumference of the trunk or stem of a plant to a height of 60cm. This method allows the herbicide to enter the vascular system and slowly kill the weed. The weed will die but remain in-situ, this can assist with erosion control on slopes whilst retaining ideal perching

and nesting structures that many native birds desire. Most useful on thin-barked woody weeds and younger weedy tree species. This method is best performed by a qualified and licensed contractor.

Cut and Paint or Cut and Remove Regrowth

This method allows the immediate removal of the weed and is mainly used on trees and woody weeds. It involves cutting off a tree or shrub at close to ground level using a chainsaw, hand saw, axe or brush cutter. Herbicide is then applied as soon as possible to the cut stump, with the objective of killing the stump and root system. For larger stumps the herbicide need only be applied to the cambium layer, just inside the bark.

If you prefer not to use herbicide, the regrowth from the stump can be continually removed as it emerges which will eventually exhaust the energy reserves in the root system and cause the weed to die. The continual removal of all above ground vegetative material will prevent photosynthesis and can eventually exhaust most plants including bulbs, tubers and rhizomes although this may take many years of regular follow-up.

De-Heading, Slashing and Mowing

Weed flower heads can be cut off. If seed is present, they should be sealed in a strong garbage bag and disposed of in normal waste bins to prevent spread. In most cases this method will not kill the plant but it will prevent it spreading.

Slashing and mowing of annual grasses and other herbaceous weeds can also be effective if done prior to flowering and seed set.

Drill and Fill

This method involves drilling a series of holes into the cambium layer just under the bark, approximately 5cm apart, around the base of the trunk of larger woody weeds. These holes are then filled with herbicide via a specialised tree injector, syringe or squirt bottle. As with basal barking the tree remains in-situ and slowly dies.

Foliar Spraying and Wiping

Herbicide is diluted to manufacturer recommended rates for targeted weeds and applied to the foliage, ensuring good coverage but avoiding run-off. It is important to use the recommended mixing rates, as a stronger mix may burn foliage but not kill the weed, which can lead to herbicide resistance. Spraying is most effective when weeds are actively growing and plants are not under temperature or moisture stress. Various spray units are available which can be vehicle or trailer mounted, knapsack or hand-held. Foliar spraying is suited to shrubs, grasses, dense herbs and low growing vines. Spot spraying can be used to

treat individual plants. Advantages include speed and economy, disadvantages include the potential for spray drift and off-target damage.

Wiping can be used in sensitive areas and on certain weed species, such as bulbs, located among native vegetation. A weed wand brush, which is a brush at the end of a chemical reservoir, is commercially available. Alternatively a paint brush can be used or a weed wiper can be constructed from a set of tongs with



pieces of sponge glued to the inside surface at the ends. This can be dipped into herbicide and used to grasp and wipe the foliage of the weeds.

Manual Removal

Manual control techniques encompass hand-pulling, grubbing and digging treatments using tools such as tree poppers, trowels, forks, mattocks, shovels, rakes, chisels and knives. A small screwdriver can be inserted in the ground and used to loosen soil around bulbs and smaller weeds to assist in removing the entire weed when hand pulling. A knife can be used to cut under the plant at the top of the roots of certain weeds, especially weedy grasses. Removing weeds manually can be the most sensitive method, but care should be taken not to disturb the soil excessively which may result in erosion. A tree popper is a tool which provides mechanical advantage to pull out woody weeds up to 60mm stem diameter. These are very useful tools if you have a large population of saplings to remove. Enquire with your local government Bushcare department on the availability of a Tree Popper loan service.



Mulching

The use of mulch can be very effective at suppressing weed growth. There are many different options for mulches, they can be organic, inorganic or living. Organic mulch such as wood chip or straw will break down over time. Inorganic mulch such as pebbles or recycled bricks will not break down over time and may be a better choice in areas with increased fire risk as they will not burn. Living mulch such as low growing, dense ground cover plants will provide shade to the soil.

Solarisation

Solarisation is the technique of placing black plastic sheets over weeds for a period of time during their main growth season to inhibit photosynthesis and increase temperatures beyond tolerance levels. This treatment is particularly effective on small infestations of various rhizomatous species where there is little or no indigenous ground flora present. Ensure plastic is adequately weighed down to prevent it being blown around. After treating an area, re-use the plastic on other areas or dispose of it in an appropriate manner.

African Love Grass

(Eragrostis curvula)

ORIGIN
South Africa

KEY POINTS
- An agricultural pasture escapee
- Common weed infesting road verges and degraded areas

DESCRIPTION
A large, vigorous, drought resistant, densely tufted perennial grass which grows to about 1.2m tall. The seed heads are present from November to May and are grey in colour.

CONTROL METHODS
- Seed heads should be removed and bagged to prevent spread.
- Plants can be dug out, care should be taken to remove all parts as small sections tend to break off and regrow.
- A tree popper can be used to help pull out clumps.
- Spray with 1% glyphosate mixture while actively growing during summer or before seed set. Ensure good spray coverage as the clump is made up of many small individual plants.
- Following fire, spray regrowth when it is 5-10cm high.





Annual Veldt Grass, Perennial Veldt Grass

(Ehrharta longiflora, E. calycina)

ORIGIN

South Africa

KEY POINTS

- Common weeds along creeklines and roadsides
- Perennial Veldt Grass is a weed in bushland
- Fire enhances seed germination

DESCRIPTION

Winter-active grasses growing from 30-60cm tall. Annual Veldt Grass has large spikelets which are purple and green. Perennial Veldt Grass has smaller spikelets, often purple and straw-coloured.

CONTROL METHODS

- Small populations can be easy to hand-pull, as roots are very shallow, ensuring crown removal.
- Plants can be sprayed with a grass selective herbicide or spot sprayed with a 1% glyphosate mixture, over autumn and winter, before seed heads emerge. Follow-up treatment may be necessary. Spray seedlings within four to six weeks of emergence.



Annual Veldt Grass



Annual Veldt Grass



Perrenial Veldt Grass



Perrenial Veldt Grass

False Bamboo or Giant Reed

(Arundo donax)

ORIGIN

Asia, southern Europe

KEY POINTS

- A garden escapee that is now a weed along watercourses, wetlands and moist disturbed areas
- Forms dense thickets
- Can be confused with bamboo

DESCRIPTION

A large rhizomatous grass with bamboo-like woody stems 2-8m tall. A plume-like inflorescence 30-60cm long is produced in autumn and winter.

CONTROL METHODS

- Smaller infestations can be removed manually, this can be labour intensive as all underground rhizomes must be removed to prevent regeneration. This method is more selective and may be necessary to protect nearby native plants. However, the soil disturbance may encourage erosion.
- Larger plants can be cut near the base and immediately painted with glyphosate. Re-growth should be sprayed before reaching 60cm in height with 1% glyphosate mixture + penetrant e.g. Pulse®.
- For non-chemical control, cut stems as close to the ground as possible and remove any new growth as soon as it emerges. This will eventually exhaust the rhizomes, but may take several years.



Fountain Grass

(Cenchrus setaceus)

ORIGIN

Africa, Middle East



KEY POINTS

- Introduced as an ornamental grass, now a weed of disturbed areas near drains, roads and on rocky areas
- Out competes native vegetation

DESCRIPTION

Upright, tufted perennial grass with very narrow leaves to 60cm long. Flowering stems to 1m or more high with long, cylindrical, spike-like seed heads 6-30cm long which are reddish, pinkish or purplish in colour.

CONTROL METHODS

- Small infestations can be removed by hand digging, ensure any seed heads are bagged to prevent further spread.
- Regular slashing during winter, prior to seed head development can assist in control.
- Extensive infestations can be spot sprayed with 1% glyphosate + penetrant e.g. Pulse® from spring to autumn. Slashing 8 weeks prior to spraying can improve effectiveness.
- The long lived seeds make continued monitoring and follow-up treatment of the area for emerging seedlings essential.



Haas Grass

(Tribolium uniolae)

ORIGIN
South Africa

KEY POINTS
- Introduced as a pasture grass but now infesting road verges, jarrah forest and wandoo woodlands
- Fire encourages germination of seed leading to massive seedling recruitment

DESCRIPTION
A densely tufted upright perennial grass to 60cm high. Inflorescence is up to 7cm long and is green, maturing to straw colour. Flowers October to January. Reproduces mainly by small lightweight seed. May reproduce from material that breaks off from the base.

CONTROL METHODS
- Small isolated populations can be removed by hand, ensure any seed heads are bagged to prevent spread. Loosen soil and pull plants out or use a knife to cut roots below the base of the plant ensuring all of the plant is removed.
- Spot spray with a 1% glyphosate mixture
- Follow-up will be required for up to 10 years due to long seed viability.
- Ensure follow-up after any fire to treat seedlings and prevent re-infestation.





Pampas Grass

(Cortaderia selloana)

ORIGIN

South America

KEY POINTS

- A garden escapee
- An aggressive coloniser, especially in moist and disturbed areas

DESCRIPTION

A large and long-lived tussock grass can grow to 4m high. Leaves are long, up to 2m, finely serrated, blue-green above and dark green below. It has fluffy pale inflorescence which is held high above the leaves. The seeds can be dispersed over long distances by wind or water. Flowers in winter.



CONTROL METHODS

- Manual removal is the best method of control where possible. Slash back or brush-cut the sharp leaves first. If present, carefully remove plumes and place in a large garbage bag for disposal. Plants can be dug out, ensuring to remove all the roots. Remove all uprooted plants to prevent them re-sprouting.
- Slash or brush-cut clumps prior to spraying. Small seedlings and re-growth can be sprayed with a 1% glyphosate mixture.



Sharp Rush

(Juncus acutus)

ORIGIN

Africa, Europe, North America

KEY POINTS

- Sharp Rush is a significant threat to wetlands and bushland areas
- Ensure positive identification prior to treatment as there are very similar looking native species such as Juncus pallidus.
- Be careful if collecting seed for revegetation, as it can be confused with native species
- Can be identified by the sharply pointed tips of the leaves which are painful to touch with the hand, try patting the top of the tussock with your palm. Generally native rushes can be sharp, but not painful to pat your hand on

DESCRIPTION

An erect tussock-forming perennial to 1.5m high. Salt tolerant and often found growing in saline areas. It features stiff, sharply pointed leaves and bracts, which are blue-green in colour, round in cross-section and 2-4mm diameter. These are very hard and almost impossible to squash between thumb and finger, unlike most native rushes which can be crushed. Flowers throughout the year but mostly in spring and summer.



CONTROL METHODS

- Small tussocks or small infestations can be dug up using a mattock, taking care not to disperse the seed.
- Slashing/burning alone results in low levels of mortality, but this can be useful to gain access for follow-up spraying of regrowth and seedlings. Check local burning regulations prior to disposing of weeds by burning.
- Spray with a 2% glyphosate mixture, use Roundup Biactive® in wet areas, during the warmer months, while plants are actively growing. If no surface water is present, a penetrant such as Pulse® can be added to increase effectiveness.



Tambookie Grass

(Hyparrhenia hirta)

ORIGIN

South Africa

KEY POINTS

- Introduced as an agricultural pasture grass, which is now found along roadsides, rivers and creeks
- Out competes local native plants
- Fire stimulates vigorous regrowth

DESCRIPTION

A densely tufted perennial to 1m high often forming tussocks. The seed heads are produced from November to July and are grey in colour. It spreads by seeds. Ensure positive identification, some native grasses look similar.



CONTROL METHODS

- Cut off seed heads and bag for disposal to prevent further spread.
- Hand remove small infestations, ensuring to remove the whole root.
- Larger plants can be sprayed with a 1% glyphosate + penetrant e.g. Pulse® mixture, when actively growing from spring to autumn.
- In large degraded areas, slash or brush-cut plants before seed maturity then follow-up spray the re-growth with a 1% glyphosate + penetrant e.g. Pulse® mixture.
- Care should be taken to limit off-target damage in areas with native grasses.



African Veldt Daisy

(Osteospermum ecklonis)

ORIGIN

South Africa

KEY POINTS

- Garden escapee, occasionally found growing around old settlements
- Often grows from dumped garden rubbish

DESCRIPTION

Soft, spreading perennial herb to 1m high. Leaves have a distinctive smell when crushed. Stem can be woody at the base. Flowers are purple or white. Flowering occurs in winter and spring.

CONTROL METHODS

- Remove flower heads and dispose of to prevent seed set.
- Hand remove small infestations, ensure removal of roots to prevent re-sprouting.
- Remove plant material from site to prevent it taking root.
- Spot spray with a 1% glyphosate + penetrant (e.g. Pulse®) mixture.
- Follow-up required to remove emerging seedlings.









Blackberry Nightshade

(Solanum nigrum)

ORIGIN

Europe

KEY POINTS

- A weed of wasteland, pastoral land and cropping
- Readily spread by birds into bushland

DESCRIPTION

A small short lived shrub growing to around 1m high. It produces clusters of 4-12 white flowers followed by green berries that become dull black at maturity.

CONTROL METHODS

- Prevent seed set for several years.
- Manually remove plants, if berries are present, bag and dispose of in rubbish.
- Spot spray with a 1% glyphosate + penetrant e.g. Pulse® mixture when actively growing in spring and summer.
- Seeds usually only germinate on bare ground. Encourage shrub species and leaf litter build up to reduce re-infestation.







Cottonbush

(Gomphocarpus fruticosus)

ORIGIN

South Africa, Mediterranean

KEY POINTS

- Declared pest in Western Australia
- Introduced as a garden plant, now a serious environmental weed that has spread into disturbed, moist sites and bushland
- Toxic to humans and stock, avoid contact with the toxic sap
- Spreads by light fluffy seeds and lateral root suckers

DESCRIPTION

An upright shrub to 2m tall with narrow leaves 5-12cm long. Stems and leaves produce poisonous white milky sap when damaged. It produces white flowers in small drooping clusters from spring through to autumn. Following flowering, distinctive inflated, green, swan shaped seed pods covered in soft bristles are formed which turn brown with age and open to release seeds which are topped with a tuft of silky hairs.

CONTROL METHODS

- The shallow root system means small infestations can be dealt with by hand pulling.
- All seed material should be removed, bagged and disposed of carefully to prevent spread.
- Larger infestations are best managed with a combination of slashing or brush cutting with follow-up spraying of regrowth and seedlings.









Dock

(Rumex spp.)

ORIGIN

Europe, Asia

KEY POINTS

- A robust, upright perennial with a root system that can reach 3 m in depth
- Often found along creeklines, drains and in wetlands



DESCRIPTION

Grows from a perennial, carrot-like tap-root which produces annual top growth 50-150cm high in winter. It forms a basal rosette of large leaves at ground level followed by upright flowering stems. Flowers are produced in clusters which are green to reddish in colour. The seed heads become rusty brown and conspicuous as they mature in early summer.

CONTROL METHODS

- Remove and bag seed heads to prevent spread.
- Single plants can be controlled by deep hoeing. Cut the root at least 20cm below ground level.
- Larger infestations can be spot sprayed with a 1% glyphosate + wetting agent mixture. Use Roundup Biactive® in wetland areas.





Flat-weed

(Hypochaeris radicata)

ORIGIN

Europe, Asia, north Africa

KEY POINTS

- Widespread and can be found on roadsides, watercourses and disturbed areas
- Can be toxic to horses

DESCRIPTION

Flat-weed is a perennial with a robust, deep tap-root. It produces a rosette of leaves at ground level with upright flowering stems to 50cm high. Flowers are bright golden yellow and are produced year round but mainly in spring. Can produce hundreds of fine feathery seeds, which are spread by wind, and germinate in autumn.

CONTROL METHODS

- Can be hand pulled but tends to break off in harder ground. Use a weed fork to assist in removing entire tap root.
- Spot spray with a 1% glyphosate mixture.
- Carefully remove and bag seed heads to prevent spread.







Lavender

(Lavandula stoechas)







ORIGIN

Mediterranean

KEY POINTS

- Garden escapee
- Establishes on disturbed, bare ground, often along roadsides
- Forms dense stands that exclude all other ground flora and smaller shrubs

DESCRIPTION

A small upright shrub to 1m high. Leaves are downy, greyish-green and fragrant when crushed. Flowers are deep purple in cylindrical heads, topped with a few distinctive petal-like purple bracts. Flowers are produced from July to November followed by abundant seed in late spring and early summer.

CONTROL METHODS

- Plants are easily hand-pulled or dug out, particularly in moist soil.
- To minimise soil disturbance stems can be cut and painted with a 50% glyphosate mixture.
- Foliar spray with 1% glyphosate + wetting agent mixture.

Nasturtium

(Tropaeolum majus)

ORIGIN

South America

KEY POINTS

- Garden escapee, now a weed of roadsides, disturbed areas and creeklines
- Mainly spread to new areas by the dumping of garden waste or intentional planting

DESCRIPTION

A soft, sprawling or scrambling herb, usually annual, but occasionally short lived perennial. It has fleshy stalks which are attached to the round leaves in the centre. Showy trumpet-shaped flowers are produced mainly in spring. Flowers are yellow, orange or red in colour.

CONTROL METHODS

- Hand weeding is relatively easy due to the soft stems and limited root system. If seed is present bag and remove waste.
- Follow-up required as there is often a mass germination of seedlings after the removal of parent plants.
- Remove flowers before seed set to prevent spread.
- Spray larger infestations with a 1% glyphosate + wetting agent mixture.









Paterson's Curse

(Echium plantagineum)



ORIGIN

Europe, North Africa, Canary Islands

KEY POINTS

- Declared pest in Western Australia
- Introduced as a garden plant and considered a useful fodder species in times of drought
- Widespread on agricultural land, roadsides and vacant land
- Out-competes local annual species

DESCRIPTION

Emerges in autumn and forms a large basal rosette of leaves. Upright, branched and leafy flowering stems are produced in late winter. Clusters of purple-blue or occasionally white, trumpet shaped flowers form during spring to early summer. The stems and leaves are covered in tiny, stiff bristles which can cause skin irritation if touched.

CONTROL METHODS

- Isolated plants can be hand pulled.
- Regular slashing when flowering stems emerge can supress flowering.
- Flowering and seeding plants should be destroyed (e.g. burning), as the seeds will continue to develop even after being cut or pulled. Check local burning regulations prior to disposing of weeds by burning.
- Spot spray with 1% glyphosate + wetting agent at seedling or rosette stage and while plant is actively growing prior to flowering.
- Follow-up required for several years to treat emerging seedlings.



Soursob

(Oxalis pes-caprae)

ORIGIN
South Africa

KEY POINTS
- A weed of roadsides, waterways and bushland
- Poisonous to stock
- Bulbils produced on the roots
- Smothers native vegetation
- Can form mono-culture patches and displace most native species

DESCRIPTION
A small upright herb producing annual foliage from a perennial bulb. Leaves are bright green, sometimes with dark markings, and consist of three heart shaped leaflets. It produces clusters of bright yellow, trumpet shaped flowers on tall stalks above the leaves. Flowering occurs from June to October.

CONTROL METHODS
- Solarisation of mono-culture, with no remnant vegetation, for the growing season.
- Hand pull emerging seedlings before bulbil formation, with regular follow-up to exhaust bulbs.
- Plants can be carefully dug out, but hand removal after bulbil formation will dislodge bulbils, contributing to spread.
- Chemical control is often the most practical option available for dense infestations in bushland, as it avoids soil disturbance and erosion. Spray with a 1% glyphosate + wetting agent mixture at bulb exhaustion, just on flowering.







Whiteflower Fumitory

(Fumaria capreolata)

ORIGIN

Europe, Northern Africa

KEY POINTS

- A weed of roadsides, shrub lands, crops and gardens. Colonises degraded sites
- It prefers partly shaded, moist areas, where it can form a dense groundcover or climb up and smother low growing native vegetation

DESCRIPTION

An annual climbing or sprawling herb with narrow, weak stems which grow up to 1m long. Foliage is soft, green or blue-green in colour with deeply-lobed, small, carrot-like leaves. In late winter to spring, bunches of small white tubular flowers with reddish-black tips are produced.



CONTROL METHODS

- Hand remove seedlings for small infestations.
- Larger plants can be easily hand pulled due to weak stems. Larger, more mature populations can be rolled up like a mat for removal, preferably before flowering and seed set.
- Follow-up control for seedling which emerge after initial hand weeding is required throughout the growing season.
- Spot spray with a 1% glyphosate + wetting agent mixture in degraded areas.





Arum Lily

(Zantedeschia aethiopica)

ORIGIN
South Africa

KEY POINTS
- A garden escapee which is now found in moist areas in creeks, rivers and wetlands
- Out competes local native vegetation and can impede water flow
- Can be toxic to stock
- All parts of the plant are poisonous to humans if consumed

DESCRIPTION
An annual tuft of dark green, shiny, succulent leaves arising from perennial tuberous roots. Leaf blades are heart or arrow-shaped and are 25cm long. The large, white, funnel-like flower is 10cm wide, has a yellow spike and is produced in late winter to spring. The orange-yellow berries are spread by birds and water.

CONTROL METHODS
- Glyphosate is relatively ineffective and can send tubers into dormancy for up to 5 years.
- Manual removal will cause soil disturbance which can lead to erosion. It is more effective with younger plants. All of the tuberous root must be removed.
- Cut the flowers to prevent birds spreading seed
- Continual, regular removal of all vegetative material at ground level will prevent photosynthesis and eventually exhaust the rhizome. This may take many years of regular follow-up.
- Current recommendations on chemical control methods for arum lily is available from Dept. of Primary Industries and Regional Development, formerly known as the Dept. of Agriculture ***https://www.agric.wa.gov.au/herbicides/arum-lily-control.***
- Consider using a licensed and reputable spray contractor for chemical control.



Baboon Flower

(Babiana angustifolia)

ORIGIN
South Africa

KEY POINTS
- Introduced as a garden ornamental which has escaped to become a serious weed in native bushland
- It is dispersed mainly by the dumping of garden refuse and earthworks

DESCRIPTION
Produces annual leaves and stems from a perennial corm and grows to 35cm high. Leaves are hairy, striped or ribbed and are folded lengthwise like a fan. Flower spike is produced from August to October and has 3 -10 individual flowers which are purple, blue or mauve with red to black markings. Reproduces by corms and seed.

CONTROL METHODS
- Hand weed small infestations in sensitive areas, ensuring to remove the entire corm, loosening the soil before pulling can help prevent the stem breaking off
- Spot spray larger infestations or wipe individual plants with glyphosate and wetting agent before flowering







Cape Tulip - One-leaf

(Moraea flaccida)

ORIGIN
South Africa

KEY POINTS
- Garden escapee which has now become a significant weed throughout southern Australia
- Difficult to control due to the dormancy of corms below the ground with up to 60% remaining dormant each growing season
- Highly toxic to stock and may invade pastures

DESCRIPTION
Usually produces one dark green, strap-like leaf up to 70cm long, annually from a small corm. The branched flowering stem is produced in late winter and spring and has short-lived pink to orange flowers, each flower has six petals. Reproduces by corms and seed. Prior to flowering, Cape Tulip can be recognised by the browning off of the leaf tips.



CONTROL METHODS
- Individual and small numbers of plants can be dug out. The corms and any seed heads should be disposed of by burning or bagged and placed in rubbish bin
- Can be effectively and economically controlled with glyphosate, repeated over several seasons. This is most effective just prior to flowering. Spray with a 1% glyphosate mix or wipe leaves with one part glyphosate to two parts water
- Treatment must be undertaken annually to reduce the population due to the number of corms which remain dormant each year



Freesia

(Freesia alba x leichtlinii)

ORIGIN
South Africa

KEY POINTS
- Freesia is a horticultural hybrid which is now a serious bushland weed occurring in a variety of disturbed habitats

DESCRIPTION
Tufted plants with soft, light basal leaves arising annually from a perennial corm. The erect flowering stem is bent to one side just below the lowest flower. It has white or creamy yellow flowers which have yellow to orange markings. The tubular flowers occur in spring, arranged on one side of the flower stalk and are sweet, strongly scented. Freesias reproduce by seed, bulbils and corms.

CONTROL METHODS
- Cut flowers to prevent seed set
- Repeated mowing or hand removal of plants before flowering over several years can provide good control. When hand weeding, it helps to loosen the soil prior to removal to prevent the corm breaking off
- Painting or wiping with a one part glyphosate to two parts water mix can be used in sensitive areas
- Larger infestations can be spot sprayed with a 1% Glyphosate with wetting agent mixture
- The area will require follow-up hand weeding or spraying of the tiny seedlings for several years







Gladiolus

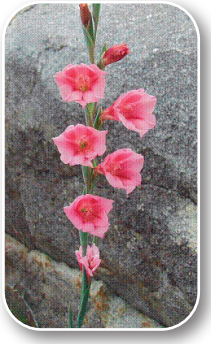
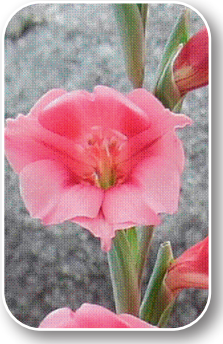


ORIGIN
South Africa

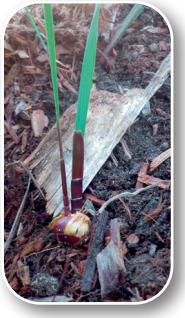
KEY POINTS
- Garden escapees
- Easily spread by soil disturbance or roadworks
- These plants can be difficult to control by hand weeding as they produce many small cormels around the main corm which usually dislodge and remain in the soil

DESCRIPTION
Gladiolus species produce 3–6 erect sword-shaped leaves annually which die back in summer to a perennial underground corm. An upright flower spike is produced above the basal leaves. Reproduction is by seed and cormels.

Pink Gladiolus *(G. caryophyllaceus)* leaves have distinct red margins, in young plants the leaves twist spirally in an anti-clockwise direction. Flowers are bright pink and occur from August to November. Spreads rapidly with large numbers of seeds produced and dispersed in addition to cormels.


Wavy Gladiolus *(G. undulatus)* leaves have purple-red sheaths at the base. Flowers are large and showy, white or cream in colour, sometimes tinged with green. Each flower has 6 pointed lobes or 'petals' which are pointed at the tip with a wavy margin along the edge. Flowering time is generally October to December.




Long-tubed Painted Lady *(G. angustus)* has white flowers with pink marking in the throat.







CONTROL METHODS

- Wipe individual leaves with a one part glyphosate to two parts water mixture in sensitive areas or spot spray infestations in degraded areas with metsulfuron methyl 0.2 g/15 L + glyphosate 1% + wetting agent just on flowering in late winter to early spring
- Plants can be dug out using a small trowel to remove the soil around the bulb which contains the tiny cormels. Ensure all soil containing cormels is sealed in bags and disposed of in normal rubbish or solarised to prevent further spreading
- Follow-up control will be required for several years to control any remaining seedlings sprouting from cormels

Three-cornered Garlic or Onion Weed

(Allium triquetrum)

ORIGIN

Africa, southern Europe

KEY POINTS

- Found in damp areas, frequently near creeks or granite rocks
- Capable of forming dense colonies, dominating native understorey

DESCRIPTION

Three-cornered Garlic has a tuft of soft leaves arising annually from a small, pale bulb. The leaves have a strong 'onion' or 'garlic' smell when crushed. A distinctive three cornered flowering stem is produced in late winter to early spring and is topped with a bunch of drooping, white, bell-shaped flowers. Reproduction is by seed and bulbs.



CONTROL METHODS

- Remove manually ensuring that all bulbs are removed
- Larger infestations in degraded areas can be sprayed with 1% Glyphosate and wetting agent mixture at flowering
- Cultivating the soil by digging or plowing between spring and autumn can help to kill bulbs but may lead to erosion
- Regular mowing, close to the ground, prior to flowering can exhaust bulbs and prevent seed set





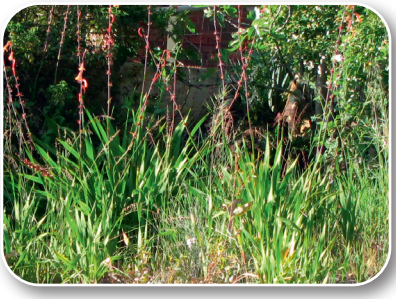
Watsonia

ORIGIN
South Africa

KEY POINTS
- A garden escapee which has become a serious environmental weed of disturbed bushland and roadsides, particularly near water
- Can form dense infestations excluding almost all other vegetation



DESCRIPTION
Watsonia, *(Watsonia spp)* and the similar African Cornflag, *(Chasmanthe floribunda)* have erect sword-shaped leaves to 1m in length which grow annually from a perennial corm. A tall flower spike with many trumpet shaped flowers is produced from late winter to early summer. The flowers can be pink, lilac, white, orange or yellow depending on the species. Reproduction can be by seed, bulbils and corms.



CONTROL METHOD
- Cut flower spikes to prevent seed or bulbil formation
- Isolated plants can be pulled or dug out but this can be difficult on larger infestations
- Individual plants in sensitive areas can be wiped with a one part glyphosate to two parts water mixture. Larger infestations in degraded areas can be sprayed with a 1% Glyphosate mixture with a wetting agent when flowering stems emerge
- Regular and repeated mowing close to the ground can provide some control and prevent seed and bulbil formation
- Cultivating soil to a depth of 10cm can assist with control if done after the old corm is exhausted and before the new corm forms or the flower spike emerges, however this may leave the area vulnerable to erosion

Blue Periwinkle

(Vinca major)

ORIGIN

Europe, northern Africa

KEY POINTS

- Garden escapee which grows in a wide range of habitats but prefers moist, fertile soils in well shaded sites
- Forms dense ground cover, supressing regeneration of native species
- Can be difficult to control because of its growth habit that effectively propagates new plants wherever it touches the ground

DESCRIPTION

A sprawling perennial ground cover, growing to 50cm high. The slender stems can be short and upright, or ground-creeping, up to several metres long and rooting at the nodes with glossy green leaves. Lilac-blue flowers occur from winter through to summer.

CONTROL METHODS

- Hand remove small infestations, ensuring the removal of all roots and follow-up for any regrowth. Any broken off stems or roots can grow into new plants
- The solarisation technique can be applied to small infestations for up to 6 months and a follow-up spray with 1% glyphosate + Pulse®
- Plants can be slashed or mown and regrowth sprayed with 1% glyphosate + Pulse®





Bridal Creeper

(Asparagus asparagoides)



ORIGIN

Southern Africa

KEY POINTS

- Weed of National Significance (WoNS)
- Major threat to biodiversity
- Forms dense root mats which impede the root growth of other plants and often prevents native seedling establishment

DESCRIPTION

Twisting, climbing, wiry green stems grow annually from an underground perennial root system. The root system is a branching rhizome with numerous fleshy tubers. The stems flower prolifically, producing red berries which are attractive to birds.

CONTROL METHODS

- Biological control agents, leaf hopper and rust fungus will not kill but can help keep populations under control. Collect pieces of infected plant material from other sites and rub on healthy plants
- Small infestations can be successfully removed by digging out the root mat. Take care to remove all rhizomes and tubers
- Repeated removal of all stems as soon as possible after they emerge will prevent flowering and seed set, and may eventually exhaust the rhizomes and tubers
- Larger infestations can be controlled by wiping with a 1 part glyphosate to 2 parts water mixture or spray with 0.02g metsulfuron plus 25mL Pulse® per 10L water. Repeat each season until all plants are gone
- Integrated management, using a combination of the above control methods as appropriate, may be the most successful





Mile-a-minute, Morning Glory

(Ipomoea cairica, I. indica)

ORIGIN
Tropical regions

KEY POINTS
- Smothers vegetation
- Garden escapee
- Common along creeklines

DESCRIPTION
Twining vines with heart-shaped or lobed leaves. Flowers are purple-blue or purplish-pink. It is particularly invasive in creekline habitats and can regrow from cuttings dumped in bushland.



Morning Glory



Mile-a-minute

CONTROL METHODS
- For small infestations cut and allow canopy to die, follow runners back to roots and dig out ensuring the removal of nodes
- Cut stems and paint with a 50% glyphosate solution
- Cut off stems leaving approximately 1m attached to plant. Lay these sections on an area of bare ground and spray or wipe with a 1.5% glyphosate mixture, monitor and treat regrowth monthly or as necessary
- Any material left on the ground is likely to reshoot. All material should be bagged and removed



Wonga Wonga Vine

(Pandorea pandorana)



ORIGIN

Eastern Australia, Papua New Guinea, Indonesia

KEY POINTS

- Garden escapee which has become established in Marri/Jarrah woodlands on the Darling Scarp and Plateau where it is becoming a serious weed
- Climbs trees and shrubs, eventually strangling the trunk and smothering the canopy
- Adds weight to tree canopy which can lead to branch failure
- Produces masses of papery seeds which are spread by the wind and establish easily in shady, damp areas

Juvenile Foliage

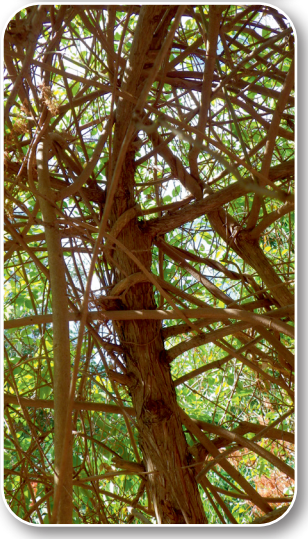


Mature Foliage



DESCRIPTION

A vigorous, long lived, perennial climber with stems that become woody with age. Juvenile leaves have 8-17 small leaflets, adult leaves have 3-9 larger glossy green leaflets. Drooping clusters of white or yellow tubular flowers, often with purple marking in the throat, are produced from winter to summer. Large seed pods are produced which open to release many papery seeds.



CONTROL METHODS

- Hand remove seedlings while small
- Cut stems at the base and allow canopy to die. Paint stumps with 50% glyphosate mixture or continually remove all regrowth. Follow stems back to ensure they have not put down roots where they make contact with the ground
- Ensure cut aerial growth is not left in contact with the ground as it may take root
- Spray smaller infestations in degraded areas with a 1% glyphosate mixture

Blackberry

(Rubus fruticosus)

ORIGIN

Europe

KEY POINTS

- A serious weed of creeklines, spreading into forest and woodland along water courses
- A Weed of National Significance (WoNS)

DESCRIPTION



A perennial, semi-deciduous plant with arching, prickly stems or canes arising from woody crown. Stems take root where they make contact with the ground, often forming dense, tangled thickets. Leaves are 3-15cm long and divided into 3 or 5 leaflets. White or pinkish flowers, with five rounded petals, are produced in late spring and summer, followed by red fruits which turn black as they ripen.



CONTROL METHODS



- Small infestations can be dug out when soil is moist or top growth cut to ground level repeatedly over the growing season to exhaust the energy reserves in the roots.
- Cut and paint stems with a 50% glyphosate mix.
- Slashing can provide better access for spraying, ensure sufficient regrowth prior to spraying.
- For larger infestations, foliar spray with a 1% glyphosate mixture and follow-up spray the regrowth over the summer growing season.
- Current recommendations on alternative chemical control methods for Blackberry is available from Dept. of Primary Industries and Regional Development, formerly known as the Dept. of Agriculture https://www.agric.wa.gov.au/herbicides/blackberry-control.

Brazilian Pepper

(Schinus terebinthifolius)



ORIGIN

Brazil, Paraguay, Argentina

KEY POINTS

- Often incorrectly referred to as Japanese Pepper
- Garden escapee, spread by birds and suckers from damaged roots
- Forms dense thickets which shade out and smother native plants
- Contact with sap and leaf resin can cause skin irritation

DESCRIPTION

A large shrub to small evergreen tree, 3-7m high. Both the male and female plants produce small cream coloured flowers, but only the female tree produces small red berries. When crushed, the dark green leathery leaves emit a strong turpentine or peppery smell. Flowers in late summer and early autumn.

CONTROL METHODS

- Brazilian Pepper seedlings can be removed by hand, ensuring that all of the root is removed
- Cutting and painting the stump only offers temporary control and usually leads to many root suckers emerging nearby
- To ensure long term control, basal bark, drill and fill or stem injection techniques will minimise suckering
- Basal bark application of a mixture containing 20ml Access® in 1L of diesel, to the bottom 50cm of the trunk in summer
- Drill and fill or stem injection with a 50% glyphosate mixture. Avoid root disturbance until tree is confirmed to be dead





Castor Oil Plant

(Ricinus communis)





ORIGIN

North east tropical Africa

KEY POINTS

- Grows along watercourses, floodplains, roadsides and in disturbed areas
- Seeds are extremely poisonous to humans and livestock
- Seed is scattered over several metres when released explosively from ripe fruits

DESCRIPTION

An annual or perennial shrub which grows to 6m high. The hollow stems and branches are dull, pale green or red in colour. The large leaves are divided into 7-9 finger-like lobes with prominent veins and pointed tips. Large elongated flower clusters are produced near the tips of branches, with both male and female flowers present. Flowering can occur throughout the year but tends to be mostly during summer. Rounded seed pods 1-3cm wide, covered with soft, blunt spines are produced. Seeds are explosively released as the pods mature.



CONTROL METHODS

- Individual plants can be removed by digging or hand pulling
- Large plants can be cut and the stumps immediately painted with glyphosate or alternatively remove any regrowth as it emerges to exhaust the root system
- Slash or brush-cut before flowering
- Bag seeds to prevent spread

Coastal Tea Tree/Victorian Tea Tree

(Leptospermum laevigatum)

ORIGIN

TAS, VIC, NSW, SA

KEY POINTS

- Introduced as a garden plant and is now a major bushland weed
- It spreads rapidly along road verges, swamps, lakes, rivers and in woodlands on sandy and lateritic soils
- The roots produce chemicals that reduce the growth of companion plants
- This plant is killed by fire, but not the seed bank

DESCRIPTION

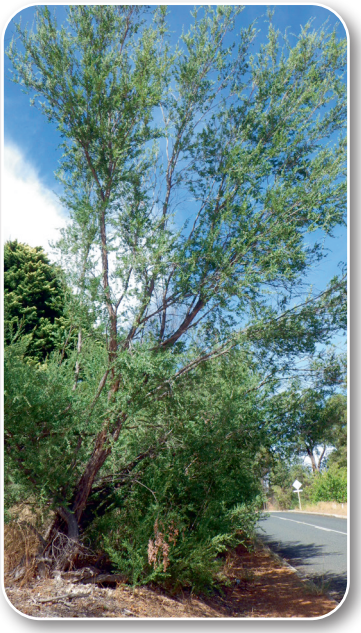
A large shrub or small tree up to 6m high. Leaves are leathery, grey-green in colour and 15-30mm long. Small white flowers with 5 petals are produced between April and October. A prolific seeder and the seeds are dispersed by wind.

CONTROL METHODS

- Hand pull small seedlings, larger ones tend to break off and regrow. Slash, fell or bulldoze larger thickets, then burn when dry. Check local burning regulations prior to disposing of weeds by burning
- Cut and paint with undiluted glyphosate for larger plants
- Cut and repeatedly remove any regrowth from the stump to exhaust the roots
- Follow-up required to remove seedlings
- Basal bark control method can be used on regrowth
- Plant shrub and tree species to increase levels of shade which may inhibit seed germination







Common Fig

(Ficus carica)



ORIGIN

Africa, Southern Europe

KEY POINTS

- Garden escapee
- Can form dense thickets along creeks and rivers
- Produces milky sap which can irritate skin

DESCRIPTION

A fast growing deciduous tree or shrub to 4m high. Leaves are green in spring and summer. The purple/green fruit is produced from summer to autumn. Figs have the ability to reproduce vegetatively, i.e. from broken off branches.

CONTROL METHODS

- Small seedlings can be hand removed
- Larger plants can be cut at ground level and stumps painted with 50% glyphosate mixture, remove plant material to prevent it taking root again
- Continual removal of cut stump regrowth every 4-6 weeks or follow-up spray with 10% glyphosate mixture
- Stem injection or drill and fill with 50% glyphosate mixture





Cotoneaster
(Cotoneaster glaucophylla, C. pannosus)



ORIGIN
China

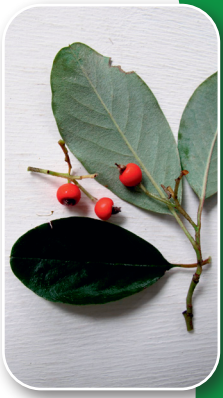
KEY POINTS
- Garden escapee
- Spread by birds, and will grow virtually anywhere a bird drops the seed
- Displaces local native plant species, thickets form under bird perching locations
- Berries are poisonous to humans

DESCRIPTION
An evergreen multi-stemmed shrub to 4m high. Leaves are oval in shape, 1.5-8cm long, dark green above and white, felt-like underneath. Clusters of tiny white flowers occur from spring to summer followed by small red berries in autumn and winter.

CONTROL METHODS
- Seedlings and small plants can be hand pulled, larger plants can be dug out
- Cut and paint stump with a 50% glyphosate mixture or continually remove regrowth to exhaust root system
- Ensure follow-up control of seedling following removal of mature plants, consider solarisation, hand pulling or spraying with 1% glyphosate mixture







Flax-leaf Broom
(Genista linifolia)

ORIGIN
Europe, Mediterranean

KEY POINTS
- A Weed of National Significance (WoNS)
- Garden escapee now a weed of native bushland and roadsides
- Produces large amounts of long-lived seeds which are released explosively from pods as they dry out
- Fire encourages germination of seed

DESCRIPTION
An erect shrub to 3m high, the stems are ribbed and covered with short soft hairs. The dark green leaves are almost stalkless and divided into 3 leaflets. The yellow pea flowers are clustered in groups of 3-16 at the ends of the branchlets. Flowers August to November.

CONTROL METHODS
- Hand weeding is an option for small and isolated plants
- Larger infestations can be slashed and the regrowth sprayed with 2% glyphosate mixture
- Ensure follow-up control of seedlings after removing mature plants. Due to longevity of seed in the soil, control of larger infestations should be considered as a long-term endeavour







Geraldton Wax
(Chamelaucium uncinatum)



ORIGIN
Mid-west Western Australia

KEY POINTS
- Geraldton Wax is regarded as an environmental weed in those parts of Western Australia where it has invaded outside its native range
- It can cause major structural changes to the plant communities that it invades

DESCRIPTION
A medium to large shrub 2-3 m high which has an open habit. The leaves are narrow, up to 20 mm long and aromatic when crushed. The white to pink flowers appear in late winter and can last well into summer.

CONTROL METHODS
- Small seedlings can be hand removed
- Larger plants can be cut at ground level and the stumps painted with 50% glyphosate mixture or regrowth regularly removed until exhaustion of roots
- Follow-up treatment of seedlings following fire is important as fire causes mass germination of seed



Lantana
(Lantana camara)



ORIGIN
Mexico, Caribbean, South America

KEY POINTS
- Weed of National Significance (WoNS) and regarded as one of the worst weeds in Australia
- Garden escapee
- Capable of forming dense thickets that take over native bushland

DESCRIPTION
An evergreen, dense, scrambling shrub to 4m tall with arching branches which can take root where they touch the ground. Young stems have stiff hairs and are prickly to touch. Leaves are rough to touch with prominent veins and a distinctive odour when crushed. Flowers are produced in compact clusters of 20-40 and range in colour from white, pink, orange red, yellow to purple. Flowers can occur almost all year round and are followed by clusters of green berries which turn purple-black as they mature.

CONTROL METHODS
- Seedlings and small plants can be hand pulled
- Foliar spraying is only effective if the plant is actively growing and less than 2m tall
- Cut stems and paint stumps with 50% glyphosate mixture or regularly remove all regrowth. Trace back branches to ensure they have not taken root where they make contact with the ground
- Follow-up spot spraying or hand weeding is essential to control emerging seedlings





Myrtle-leaf Milkwort
(Polygala myrtifolia)

ORIGIN
South Africa

KEY POINTS
- Garden escapee, invading roadsides and creeklines
- High levels of seed production and seed dormancy can lead to significant seed bank in the soil
- Seed is dispersed by birds, ants, wind, water and in dumped garden waste
- Fire encourages seed germination



DESCRIPTION
An erect, bushy shrub to 3m high. It has crowded, light green foliage which has a distinctive smell when crushed. Pink-purple and white pea-like flowers, grouped at the end of branchlets, are produced year round but mainly in late winter and early spring.



CONTROL METHODS
- Small plants can be hand pulled
- Larger plants can be cut at ground level and any regrowth removed
- Spot spray with a 1% glyphosate mixture
- Follow-up spraying or hand weeding is required for several years or after fire to remove emerging seedlings



Oleander
(Nerium oleander)

ORIGIN
South Africa

KEY POINTS
- Garden escapee, invading roadsides and creeklines
- All parts of the plant are toxic. Care should be taken when removing plants and protective long sleeved clothing, gloves and protective goggles should be worn
- Smoke produced from burning any part of this plant is toxic



DESCRIPTION
An evergreen shrub growing to 4 m high. The leathery leaves are up to 20 cm long. White to pink flowers occur between July and October. The fruit is a long narrow pod to about 25 cm in length and is filled with seeds covered in silky hairs.

CONTROL METHODS
- Young plants can be removed by hand-pulling or digging
- Larger plants can be cut at ground level and the stump painted with a 50% glyphosate mixture or regrowth removed until exhaustion of the roots
- Follow-up required for at least 5 years to remove emerging seedlings





Olive
(Olea europaea)

ORIGIN
Mediterranean



KEY POINTS
- Widely planted as a commercial crop and in home orchards and gardens, gradually becoming a serious environmental weed
- Seed spread by birds and animals. Seed germination appears to be enhanced by passage through bird or animal gut
- Often found growing along fenclines and under powerlines or large trees where birds roost
- Drought tolerant and very long lived



DESCRIPTION
An evergreen tree to 15m high with a dense, rounded crown. The leaves are leathery, glossy dark green above with a silvery underside. Clusters of small white to cream flowers are produced in spring followed by the fruits which ripen from green to purple-black in summer.

CONTROL METHODS
- Hand pull small seedlings ensuring the root does not break off
- Larger plants can be cut at ground level and the stump painted with a 50% glyphosate mixture or regrowth continually removed to exhaust the roots
- Pick fruit from trees to prevent spread by birds



Satin Bush
(Podalyria sericea)

ORIGIN
South Africa

KEY POINTS
- Garden escapee, now a weed of roadsides, disturbed areas and bushland
- Fire encourages seed germination

DESCRIPTION
A perennial, upright, silver leaved shrub to 2.5m high. It produces pink, mauve or white pea type flowers in winter to spring, followed by relatively large, inflated pea-like pods. Leaves and pods are covered in fine silky hairs giving them a silvery appearance.



CONTROL METHODS
- Seedlings and smaller plants can be hand pulled
- Cut larger plants at ground level and paint the stump with 50% glyphosate mixture or continually remove any regrowth to exhaust the root system
- Spray large infestations in degraded areas with a 1% glyphosate + wetting agent mixture
- Follow up required for several years to remove seedlings





Tecoma or Cape Honeysuckle
(Tecoma capensis)



ORIGIN
Southern Africa

KEY POINTS
- Garden escapee
- Takes root where it makes contact with the ground
- Can form dense thickets which smother or replace native vegetation

DESCRIPTION
A perennial fast-growing scrambling shrub which grows to about 3m high and puts down new roots where it touches the ground. Leaves have obvious veins and are pinnate with 5–9 leaflets. It produces bunches of showy, orange trumpet-shaped flowers throughout the year.

CONTROL METHODS
- Dig out small infestations ensuring to remove all roots
- Cut stems close to ground level and paint with 50% glyphosate mixture or continually remove regrowth to exhaust roots
- Slash infestation and spray regrowth with 1% glyphosate + wetting agent mixture





Tree Lucerne or Tagasaste
(Chamaecytisus palmensis)

ORIGIN
Canary Islands

KEY POINTS
- Garden escapee, invading winter wet areas, bushland, roadsides and creeklines
- Prolific seed producer and seed remains viable for up to 20 years
- Fire encourages germination

DESCRIPTION
Tagasaste is a large bushy shrub or small tree to 6m tall with weeping branches and softly hairy, greyish green foliage. Creamy white, pea-shaped flowers in showy clusters are produced in winter and early spring. Seed is released explosively from pods as they mature.





CONTROL METHODS
- Seedlings and small plants can be removed by hand pulling
- Seedlings can be spot sprayed with a 1% glyphosate + wetting agent mixture
- Larger plants can be cut and the stump painted with a 50% glyphosate mixture or regrowth regularly removed to exhaust the roots
- Basal bark method can also be used on larger plants



Weedy Eastern States Wattles



KEY POINTS

- Prolific seed producers with seed able to remain dormant for more than 10 years
- Capable of forming dense stands and crowding out native vegetation
- Fire stimulates mass germination of seeds

CONTROL METHODS

- Seedlings and small plants can be hand pulled, a 'tree popper' can be useful for larger infestations
- Larger plants can be cut at ground level and painted with a 50% glyphosate mixture or any re-growth continually removed to exhaust the roots. Several species do not tend to re-sprout from the cut stump of mature plants

Cootamundra Wattle

(Acacia baileyana)



ORIGIN

Southern NSW

DESCRIPTION

A shrub or small tree that grows to 10m high with a spreading crown. It has smooth grey or brown bark. Leaves are bipinnate and blue-grey in colour. The flowers are yellow, ball-shaped and arranged in 10cm long sprays. Flowers June to September.





Early Black Wattle
(Acacia decurrens)





ORIGIN
NSW, QLD

DESCRIPTION
An erect shrub or tree to 10m high. The bark is smooth and green on younger plants becoming black, grey or brown and fissured with age. The bipinnate leaves are dark green in colour with very fine leaflets. Clusters of golden ball-shaped flowers are produced in late winter and early spring.



* May re-sprout from cut stump and sucker from roots, poisoning stump immediately after cutting is recommended.

Flinders Range Wattle
(Acacia iteaphylla)

ORIGIN
SA

DESCRIPTION
A dense shrub 2-5m high with smooth greenish bark on younger plants and weeping branchlets. Foliage is blue-green with narrow, leaf-like phyllodes, 5-14cm long. The pale to lemon yellow, ball-shaped flowers are produced from April to September.





Golden Wattle
(Acacia pycnantha)







ORIGIN
VIC, SA

DESCRIPTION
A shrub or small tree to 8m high. Foliage is green with sickle-shaped phyllodes to 14cm long. Large, golden, ball-shaped flowers are produced from July to November. Australia's national floral emblem but regarded as an environmental weed in Western Australia.

Gossamer Wattle
(Acacia floribunda)



ORIGIN
QLD, NSW, VIC

DESCRIPTION
A large shrub or small tree to 8m high. Foliage is long, narrow and dark green in colour. Pale yellow rod-shaped flower clusters are produced from August to October



Queensland Silver Wattle
(Acacia podalyriifolia)

ORIGIN
QLD, NSW

DESCRIPTION
A shrub or small tree to 7m high. The oval shaped leaf-like phyllodes are silvery grey in colour and 20-30mm long. Clusters of golden-yellow, ball-shaped flowers are produced in winter and early spring.



Silver Wattle
(Acacia dealbata)

ORIGIN
NSW, VIC, TAS

DESCRIPTION
A large shrub or small tree to 10m high. Leaves are bipinnate and bluish-grey to silvery in colour. Clusters of pale to bright yellow ball-shaped flower are produced in late winter to mid-spring.

* Re-sprouts from cut stump and suckers from roots, poisoning stump immediately after cutting is recommended.





Sydney Wattle
(Acacia longifolia)

ORIGIN
NSW, eastern VIC

DESCRIPTION
An upright shrub or small tree, growing to 10m high with dark grey bark and dark green foliage. The leaf-like phyllodes are 5-20cm long with 2-4 prominent longitudinal veins. The yellow flowers are in rod-shaped clusters and produced from June to October. Can be mistaken for the local native Golden Wreath wattle (Acacia saligna), which looks similar but has a single mid-rib in the leaf-like phyllode and ball-shaped flowers.





NOT ALL WATTLES ARE WEEDS.
IF IN DOUBT, DON'T PULL IT OUT

Instead contact your local council environment department for assistance with identifying whether the plant is a native or a weed. Take a fresh sample of the plant or send good quality photos of key identifying features such as leaves, flowers and seed pods, to assist with proper identification.

Weedy Eastern States Eucalypts

KEY POINTS

- Can be invasive outside their normal range
- Fast growing trees which can become very tall
- May supress growth of understory species
- Attractive to Rainbow Lorikeets which are a declared pest

CONTROL METHODS

- Seedlings and small plants can be hand pulled. A 'tree popper' can be useful for larger infestations
- Larger plants can be cut at ground level and painted with a 50% glyphosate mixture or any re-growth continually removed to exhaust the roots

Lemon Scented Gum

(Corymbia citriodora)

ORIGIN

Northern NSW, QLD

DESCRIPTION

A large, fast growing tree to 50m tall. Bark is smooth and white to pink or coppery in colour. Leaves have a distinctive lemon smell when crushed.





Spotted Gum
(Corymbia maculata)





ORIGIN
Coastal NSW, eastern VIC.

DESCRIPTION
A large, fast growing tree to 45m tall. Bark is smooth and mottled cream, yellow, blue-grey, pink-grey, to green-grey or brown.

Rose Gum
(Eucalyptus grandis)





ORIGIN
Coastal NSW, QLD

DESCRIPTION
A large, fast growing tree to 55m tall. Bark is smooth, pale grey or white on most of the trunk with the exception of a rough, flaky, greyish basal collar from 1 - 4 m high. The bark is shed in long strips each year.

Century Plant
(Agave americana)





ORIGIN
Southern USA, Western Mexico

KEY POINTS
- Can form large infestations
- Sharp tooth like edge on leaves and spine at leaf tip can make manual removal difficult
- Sap can irritate skin, wear protective clothing and safety glasses
- Main plant dies after flowering but produces many daughter plants

DESCRIPTION
A long-lived, perennial, succulent plant which forms a very large rosette of greyish, fleshy, strap-like, spine-tipped leaves up to 2m long with many spines along the edges. When the plant is mature it produces a robust flowering stem to 10m high with many branches. Flowers are green or yellow-green.

CONTROL METHODS
- Dig out small infestations, cutting leaves off with a pruning saw can assist with gaining access to the base of stems
- Remove flower spikes before flowering occurs to prevent seed set
- Remove small daughter plants growing from rhizomes around main plant
- Consider using an experienced and reputable weed control contractor for chemical treatment

Adjuvant - An additive used in a herbicide mix to improve its performance

Annual - A plant that completes its life-cycle in one year or growing season

Axil - The upper angle between a leaf stalk or branch and the stem or trunk from which it is growing

Bipinnate - Doubly pinnate; e.g. a compound leaf with individual leaflets pinnately divided

Bract - A modified leaf associated with a flower or inflorescence and differing in shape, size, or colour from other leaves

Bulb - A thick storage organ, usually underground, consisting of a stem and leaf bases

Bulbil - A small, deciduous bulb or tuber formed in the axil of a leaf

Corm - A fleshy, swollen stem base, usually underground and functioning in the storage of food reserves

Cormel – A small young corm growing on the side of a mature corm

Margin - The edge of a structure, as in the edge of a leaf blade

Node - The part of a stem from which leaves or branches arise

Perennial - A plant whose life span extends over several years

Phyllode – A modified leaf stem that perform the functions of the whole leaf

Pinnate - A compound leaf with leaflets arranged on each side of a common petiole or axis

Rhizomatous - A plant whose above ground stem is derived from a below ground stem (rhizome)

Rhizome - A perennial underground stem usually growing horizontally

Spikelet - The typical arrangement of grass flowers

Tuber - A specialised vegetative underground storage organ

Tussock - A dense tuft of vegetation

Wetting Agent – An additive to a spray mix which helps the herbicide stay on waxy leaves and reduces the chance of spray droplets bouncing off leaves

Australian Government. Weeds in Australia:
http://www.environment.gov.au/biodiversity/invasive/weeds/

Western Australian Herbarium (1998–). FloraBase—the Western Australian Flora. Department of Biodiversity, Conservation and Attractions.
https://florabase.dpaw.wa.gov.au/

Australian National Botanic Gardens, 2010,
Australian National Botanic Gardens Parks Australia, Canberra,
Viewed 11 July, 2012,
www.anbg.gov.au

Hussey, B.M.J., Keighery, G.J., Cousens, R.D., Dodd, J. and Lloyd, S.G. (1997). Western Weeds, a Guide to the Weeds of Western Australia. Plant Protection Society of Western Australia, Inc. Western Australia.
https://wswa.org.au/western_weeds.htm#contents

Moore, J. and Wheeler, J. (2002). Southern Weeds and their Control. Department of Agriculture of Western Australia, Bulletin No 4558/02
https://researchlibrary.agric.wa.gov.au/bulletins/86/

Brown, K. and Brooks, K. (2002). Bushland Weeds.
A practical guide to their management.
http://nrpg.org.au/userfiles/Bushland_Weeds_Book.pdf

PERMIT TO ALLOW MINOR USE OF AN AGVET CHEMICAL PRODUCT FOR CONTROL OF ENVIRONMENTAL WEEDS IN VARIOUS SITUATIONS.
Australian Pesticides and Veterinary Medicines Authority (APVMA)
Check for current permit. http://permits.apvma.gov.au/PER13333.PDF

Water Notes – Herbicide use in Wetlands.
Water and Rivers Commission WN22 April 2001
https://www.water.wa.gov.au/__data/assets/pdf_file/0016/3355/12149.pdf

'The Bush is a Garden – chemical free weeding strategies' booklet written by Jennifer Catalano and Phil Cloran from Blackadder Woodbridge Catchment Group can be downloaded here https://www.emrc.org.au/regional-services/environmental-services/natural-resource-management/eastern-region-catchment-management-program.aspx

HerbiGuide. Information on weeds, pests, diseases and herbicides.
http://www.herbiguide.com.au

Wooroloo Brook LCDC (2004). Environmental Weeds, Eastern Plains and Hills Region

Weeds Australia – Information on weed identification and management.
https://weeds.org.au/

Note: Website links were current at time of printing but are subject to change. If a link is out of date please try an internet search for the document or website.

African Cornflag 35
African Love Grass 10
African Veldt Daisy 18
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Notes





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Jane Brook Catchment Group

City of Kalamunda

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