Your guide to the

WEEDS OF CENTRAL VICTORIA

Acknowledgements of Country

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INTRODUCTION

Why Control Weeds

Apart from the legislative requirement to control noxious weeds, it is beneficial to control weeds because they are invasive, provide harbour for vermin, reduce productivity, compete with native species and reduce water quality.

Classifications & Responsibilities

While many weeds are officially recognised under the Conservation and Land Protection Act 1994 (CALP Act) as being noxious, there are other weeds that also pose a threat to land managers. These are commonly termed environmental or agricultural weeds.

Each Catchment Management Authority (North Central, Goulburn Broken, Melbourne Water and Westernport) has its own list of priority weed species. These lists are used to determine allocation of funding and resources regarding weed control.

Please refer to the Department of Energy, Environment and Climate Action website for current weed classifications.

Noxious Weeds

There are four levels of noxious weeds identified in the Conservation and Land Protection Act 1994 (CALP Act). Each has its own requirements for landholders. The categories are:

State Prohibited - The Victorian State Government is responsible for the eradication of these weeds on all land.

Regionally Prohibited - The relevant land manager is responsible for the eradication of these weeds.

Regionally Controlled - The relevant land manager is responsible for prevention of growth and spread of these weeds.

Restricted - The relevant land manager is responsible for preventing trade or spread (by contamination) of these weeds.

The Victorian State Government is responsible for ensuring land managers comply with their legal requirements to control weeds.

Agricultural and Environmental Weeds

Agricultural weeds are plants that impact on the productivity or viability of crops, pasture or livestock.

Environmental weeds are invasive plants that have an impact on bushland by competing for resources.

INTRODUCTION

Environmental weeds are often 'garden escapees', which spread by clothing, dumping garden waste, vehicles, livestock, wind and water. Species that are native to Australia but not locally indigenous to an area are also potential environmental weeds.

Weeds of National Significance

Thirty-two Weeds of National Significance (WoNS) have been agreed by Australian governments based on an assessment process that prioritised these weeds based on their invasiveness, potential for spread and environmental, social and economic impacts.

Landowners and land managers at all levels are responsible for managing WoNS. State and Territory governments are responsible for legislation, regulation and administration of weeds.

Climate change

Changing weather patterns, temperatures and rainfall are contributing to the emergence of weeds across the landscape. The recent flooding events and increased risk of bushfires have intensified negative impacts to the natural environment. Early intervention will be a key factor in successful control.

Weed Prevention

The best and most effective means of weed control is prevention. Below are some tips to assist central Victoria in becoming weed free:

- Avoid buying and planting species that are invasive.
- Retain and enhance competition, such as native vegetation and pasture improvement (avoid overgrazing).
- Don't dump garden waste on public land and roadsides (it is illegal under Council's Local Laws).
- Stay to the designated tracks on public land.
- Minimise soil disturbance.
- Do not purchase or move soil that may be contaminated with weed seeds.
- Learn to identify weeds at their early stages and control weeds before they set seed.

- Do not purchase contaminated fodder and always feed in the same location to isolate the potential spread of weed seed within the fodder.
- Keep equipment, vehicles, clothes and pets free of weeds, especially when entering a bushland area.

Weed Hygiene – preventing weed seed spreading

Humans are one of the biggest vectors for spreading weeds.

Weed seed can readily attach itself to machinery, tyres, clothing and footwear.

It is best not to enter known weed infested areas if possible. If it is necessary, then a thorough inspection and clean down should be undertaken before progressing to a new site. It is good practice to move from low weed infestations to high ones to prevent further weed outbreaks.

Weed seed can be found in hay, fodder and grain. Particular attention should be paid to the origin of stock feed. In times of drought, stock containment areas help to prevent weed seed spread over an entire property. Sheep and goats can carry weed seed in their coats. When buying stock from new areas, contain them for a few days so that weed seed can be passed out.

There are a number of simple techniques for minimising the spread of weed seed:

- Inspect vehicles thoroughly (i.e. tyres, mud in wheel arches, fairings and guards).
- Carry a brush or broom (simple tools are often the best).
- Carry a sealable bag for the weeds (dispose of thoroughly).
- If necessary wash down on a tarp in an area already weed infested (watch for runoff).
- Be careful with stock and stock feed.
- Check your socks and trouser cuffs.

Safe weed disposal

Disposing of weeds appropriately is an important preventative tool in minimising the risk of future spread. Weed material should be disposed of using one or a combination of the following methods:

- Compost bin or worm farm.
- Double bag and straight to landfill.

- Fire.
- Mulching or smothering.
- Solarisation (heat treatment).

Control Techniques

Integrated Control

The most effective way to control weeds is with an integrated approach. This involves attacking the infestation via several techniques depending on the time of the year or the particular life stages of the weed (e.g. mature plants vs. seedling). For example, a large Gorse infestation may be treated as follows:

Autumn	Groom to remove biomass.
Summer	Chemical control of regrowth.
Autumn	Grazing to control seedling growth.
Winter/Spring	Fencing off part of the area and introducing competitive native vegetation.

Grooming

Grooming is an advanced method of mechanically removing weeds. This involves use of a flail mower (rotating drum with free swing blades) mounted on a hydraulic arm to shear off and mulch vegetation.

Slashing or mowing

Usually undertaken on a ride-on mower or a tractor towing a slasher. These techniques are best used for large patches of grassy weeds to reduce biomass prior to seed set. It can also be used for woody weeds at a low height. Slashers, tractors and mowers need to be cleaned down prior to moving from an infested area. Aim to slash or mow weed free areas first to prevent spreading seeds.

Biological Control

Biological control uses natural predators to minimise the spread and growth of existing infestations. Biological control is better suited to larger infestations and should be seen as one of the available tools in an integrated approach. It is essential that other control techniques are used as the control agent will rarely kill the host plant.

Grazing

This involves using well managed stock regimes to control weed growth, reduce a weed's reproductive capability and minimise the risk of new infestations (maintaining competition). Avoid over grazing an area. Grazing is most suitable for management of pasture or agricultural weeds. It works best if used in conjunction with other control techniques.

Chemical Control

This involves using manufactured chemicals (herbicides) to kill weeds.

There are several different types of herbicides:

- Non-selective herbicides - effects most vegetation it comes into contact with, so care must be taken only to treat targeted plants.
- Selective herbicides – effects a specific weed type (protecting desirable plants) due to the chemical's placement, active ingredient and/or time of application.
- Translocated herbicides - enters the plant and circulates through it achieving a complete kill.
- Residual herbicides - remains active in the soil for a specified time.

Different herbicides can be referred to by their product/brand name or their active ingredient.

Chemicals can be applied via a range of techniques including:

- Boom spray - used widely for broad acre application.
- Aerial spraying - may be an option for wide scale chemical application in otherwise inaccessible areas.
- Spot spraying - using knapsacks or handguns attached to tanks. Useful method for isolated or linear infestations.

ALWAYS READ AND HEED THE LABEL

It is important to read the whole label before using a chemical. This will give you vital information on its use and application. It is illegal to use a chemical in a way other than what is stated on the label.

Chemical users' licence - An Agricultural Chemical Users Permit (ACUP) - is required for the use of some chemicals. To obtain

this you must complete a Farm Chemical Users course or a recognised equivalent. Contact your local TAFE for further details. A Chemical Users Permit does not entitle you to undertake contract spraying.

Tips:
Chemical control should only be considered as part of an integrated program. Careful consideration must be given to chemical selection, application time, weather conditions and method of application. Herbicide spraying should only take place on clear, mild days with no more than a light breeze, and it is advisable to inform your neighbours of your intentions.

Always ensure that spraying contractors have the appropriate public liability insurance, licenses/permits and professional indemnity insurance before hiring them. Use a contractor that is experienced with the weed or situation you wish to target.

Cultivation

This involves the cultivation of soil using agricultural implements such as disc ploughs or rippers. Weed control is achieved by causing massive disturbance to the plants. Cultivation should occur before seed set. After cultivation, pasture seed or crop plants should be sown to provide competition to weeds.

Not suitable for areas of native grasses or vegetation (will destroy desirable species). Removal of remnant vegetation generally requires a planning permit.

Not suitable for weeds that grow from rhizomes or stolons.

May result in soil erosion if not properly managed.

Tips:
Should be used with care as many weeds thirve following soil disturbance. Removing one weed may promote another.

Cut and Paint

Involves the application (painting) of herbicides directly on to the sap wood of the weed. Herbicides must be applied after making the cut.

Tips:

Cut the stem cleanly close to the ground but do not allow dirt to contaminate the cut. Use a safe herbicide applicator such as

the Weeding Brush (available from good nurseries). Do not use paint brushes and open containers that pose the risk of spilling on people or native vegetation.

Competition

Competition can include the establishment of pasture or crops after cultivation, or revegetation with indigenous trees and shrubs following other weed control techniques. As most weeds are adapted to growing in areas of disturbance (e.g. full sunlight, exposed soil), competition helps to restore stability.

Tips:
Plan carefully. If the competition species fails to establish, weeds may return to their original levels. Use appropriate competition species. Do not use pasture grasses in conservation areas, as some pasture species are environmental weeds.

Manual Removal

This involves hand pulling or removal of weeds using tools such as mattocks, shovels, trowels or rakes. Useful for small areas or individual plants. Considered manual removal is the cornerstone of the Bradley method of bush regeneration.

Tips:
Ensure that all components of the weed that may allow for regrowth (eg. roots, stolons and rhizomes) are removed. Ensure that waste material is left in situ or disposed of properly.

Fire

Fire can be used for initial knockdown of weeds, or to remove dead biomass after other control works. Fire is not recommended as a standalone control technique and follow-up works are essential. Burning should only be used under strict supervision and after consultation with your local Country Fire Authority (CFA) and local Council.

Drill and Fill

Often used on larger woody weeds such as pines and willows where other techniques are expensive or difficult to access. This technique consists of drilling holes into the stem and adding a selected herbicide which will kill the tree. Seek professional advice about appropriate herbicide for a particular species.

HOW TO USE THIS GUIDE

Plant type
Weeds have been alphabetically listed in the field guide based on plant types with the plant type listed in the header tab on each page:

plant type (colour coded)

Calendar for weed control
The **colour coded** months in this calendar below are a guide to indicate the **optimum chemical treatment** time for each weed in an average year. Manual removal can occur all year round. Treatment times may vary slightly due to topography and local conditions and weather variations.

J	F	M	A	M	J	J	A	S	O	N	D

The calendar above indicates the optimal treatment times are March, April, May, June, July, August, September, October in bright crimson. The marginal months are February and November in pale crimson. The non treatment months are January and December in grey.

Plant lifespan

Perennial
Indicates perennial weeds, which are plants with a long lifespan lasting two or more years.

Annual
Indicates annual weeds, which are plants that have a life cycle lasting one year.

HOW TO USE THIS GUIDE

How weeds spread

Weeds may spread by many or all of the ways represented below. For the purpose of this field guide, only the most common methods of spread have been indicated for each weed.


Seed or plant pieces spread in farm produce such as grain or fodder


Movement of seed or plant pieces in contaminated soil


Seed eaten or carried by birds or other native or pest animals


Seed or plant pieces carried in water


Seed blown by wind


Seed eaten or carried by livestock


Seed or plant pieces carried on machinery, equipment, and/or vehicles


Seed spread by slashing or mowing


Seeds spread by humans via clothing, boots and planting activities


Seed or plant pieces spread by cultivation

HOW TO USE THIS GUIDE

Weed control options
Weeds may be controlled by many or all of the ways represented below. For the purposes of this booklet, only the most effective methods of control have been indicated for each weed.

 Grooming

 Slashing or mowing

 Biological Control

 Grazing of young growth

 Chemical

 Cultivation prior to flowering

 Cut and paint with appropriate herbicide

 Competition

 Manual Removal

 Fire

 Drill and Fill

BLACKBERRY

Rubus fruticosus agg.

Woody

Description: A dense forming perennial shrub with long arching wood , thorny canes growing up to several metres long. Leaves are dark green and have serrated edges, dropping in the winter months. Flowers late spring to summer bearing small white flowers and edible berries. Fruits December to March.

Tips: Chemical control is best between flowering and leaf fall (look for new growth on the tips of canes). It is recommended that signage is installed after spraying fruit to warn potential berry pickers.

Avoid spraying Blackberry during fruiting as native finches can be killed when they ingest herbicide. Use appropriate woody weed herbicide.

Classification: Regionally Controlled
Weed of National Significance

Perennial

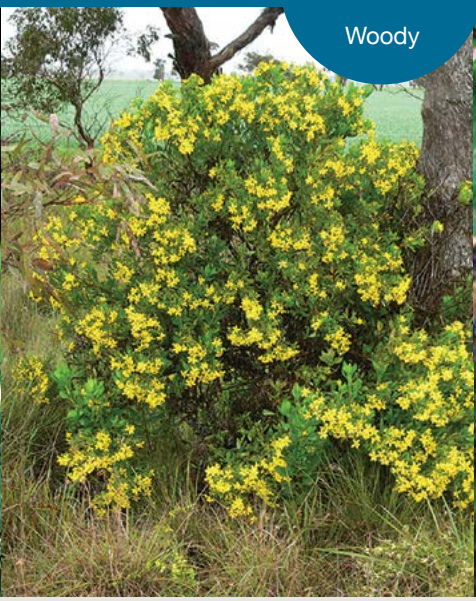
Control options

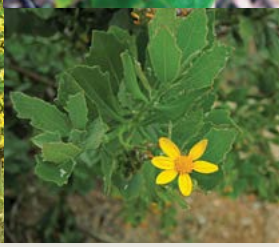
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BONESEED AND BITOU BUSH

Chrysanthemoides monilifera





Description: An erect perennial evergreen shrub/small tree, growing to 3m in height, with obvious toothed leaves. Yellow daisy like flowers 5-8 ray florets. Round smooth bone-coloured seeds. Bitou Bush – A sprawling perennial evergreen shrub, growing 1-2m in height, slightly toothed rounded leaves. Yellow daisy like flowers 11-13 ray florets. Egg shaped ribbed dark seeds.

Tips: Apply suitable herbicide whilst plant actively growing and before seeds set. Avoid spraying with herbicides during extended dry periods. Young plants can be hand pulled.

Classification:

Melbourne Water	Regionally Controlled
North Central	Regionally Prohibited
Goulburn Broken	Regionally Controlled
Weed of National Significance	

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BOXTHORN

Lycium ferocissimum

Woody

Description: An erect thorny dense shrub growing to 5m in height with drooping branches that produce white to lilac flowers during spring and summer. Berries are initially green, turning to red when mature. Boxthorn is often used by rabbits as harbour.

Tips: For chemical control, apply when tree has a healthy cover of foliage. Do not spray during hot summer periods or when the plant is under stress. For manual removal, ensure all roots are removed.

Classification: Regionally Controlled
Weed of National Significance

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BRIAR ROSE (WILD ROSE, SWEET BRIAR ROSE)

Rosa rubiginosa

Woody

Description: An erect perennial, woody shrub up to 3m in height. Arching stems, covered with down-curved prickles, arise from shallow rootstock. Pink or white flowers are present from October to December, giving the plant a rose like appearance. Briar Rose seed is contained in an egg shaped capsule (hip). When seeds are ripe the hips are orange to red to almost black. Seed is shed in autumn.

Classification: Regionally Controlled

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

CAPE BROOM & ENGLISH BROOM

Genista monspessulana and Cytisus scoparius

Woody

Description: Slender shrubs that grow to approximately 3m in height with woody stems. Yellow pea like flowers, sometimes with reddish markings. English Broom is almost leafless while in flower.

Tips: Broom is a prolific seeder and will quickly regenerate after larger infestations have been removed. For this reason, it is essential to undertake pasture improvement and revegetation with native species to outcompete emerging Broom seedlings. Where this is not appropriate, spot spraying and manual removal of new seedlings should be undertaken.

Classification:

Melbourne Water	Regionally Controlled
North Central	Restricted
Goulburn Broken	Regionally Controlled
Weed of National Significance	

Perennial

Control options

Method of spread

English Broom

J	F	M	A	M	J	J	A	S	O	N	D

Cape Broom

J	F	M	A	M	J	J	A	S	O	N	D

CHERRY LAUREL & PORTUGUESE LAUREL

Prunus laurocerasus and Prunus lusitanica

Woody

Description: Evergreen shrubs or small tree to 5m or more commonly planted in gardens. Leaves are alternately arranged and oblong to lanceolate. Cherry Laurel leaves have almost smooth margins and blunt tips while Portuguese Laurel leaves have pointed tips and toothed margins. Sprays of small white flower heads decorate the trees in spring followed by cherry-like fruits which are green or reddish green at first and turn dark purple or black as they ripen in late summer or early autumn.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

COTONEASTER

Cotoneaster spp.

Woody

Description: An evergreen shrub or small tree to 5m or more. Leaves are alternately arranged and oblong to oval. Flowers are small, numerous and have five white or pink petals. Fruit is a fleshy, red, berry-like pome about 7-8mm across. The fruit is poisonous if eaten in large quantities.

Tips: For immature plants cut the stem and paint with herbicide. Treat mature plants with herbicide by stem injection well in advance to lopping.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

FLAX-LEAVED BROOM

Genista linifolia

Woody

Description: An evergreen perennial shrub that grows to approximately 3m in height. Flax-leaved Broom has silvery grey foliage that is hairy on the upper and lower surface. Like most broom species has yellow pea like flowers. It produces brown seed pods that are hairy in appearance when ripe. The seed pods split open on hot days, dispersing the seeds a few metres from the plant.

Tips: Likely to be found on roadsides and disturbed sites. Plants form dense thickets outcompeting native plant species and providing harbour for pest animals. Seed banks can remain dormant for many years and the plants can increase fire risk.

Classification:

Melbourne Water	Regionally Controlled
North Central	Restricted
Goulburn Broken	Regionally Controlled
Weed of National Significance	

Perennial

Control options
English Broom

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

Cape Broom

GORSE (OR FURZE)

Ulex europaeus

Woody

Description: A dense, extremely spiny shrub up to 7m tall, but more commonly 1 to 2.5m tall. Stems are woody, turning brown at maturity with numerous spines and narrow spine-like green leaves. Gorse bears fragrant yellow pea like flowers in July to October and March to May.

Tips: Gorse is a prolific seeder with seeds remaining viable in the ground for up to 25 years. Integrated methods need long term control. It is best to use chemical control whilst the plant is actively growing. Mechanical control can be used all year round, but is not advised during late spring to summer due to fire risk. Young growth is palatable to stock.

Classification: Regionally Controlled
Weed of National Significance

Perennial

Control options

Method of spread

J F M A M J J A S O N D

HAWTHORN

Crataegus monogyna

Woody

Description: Tall, densely growing deciduous shrub or small tree. Hawthorn produces white, cream or pink flowers in spring which form into small, red, apple shaped berries. Hawthorn was historically grown as a hedge and, therefore, is often associated with fence lines.

Tips: Undertake manual control during the growing season before fruits ripen. Ensure all roots are removed. It is best to use chemical control after the formation of new growth.

Classification:

Melbourne Water	Regionally Controlled
North Central	Restricted
Goulburn Broken	Regionally Controlled

Perennial

Control options

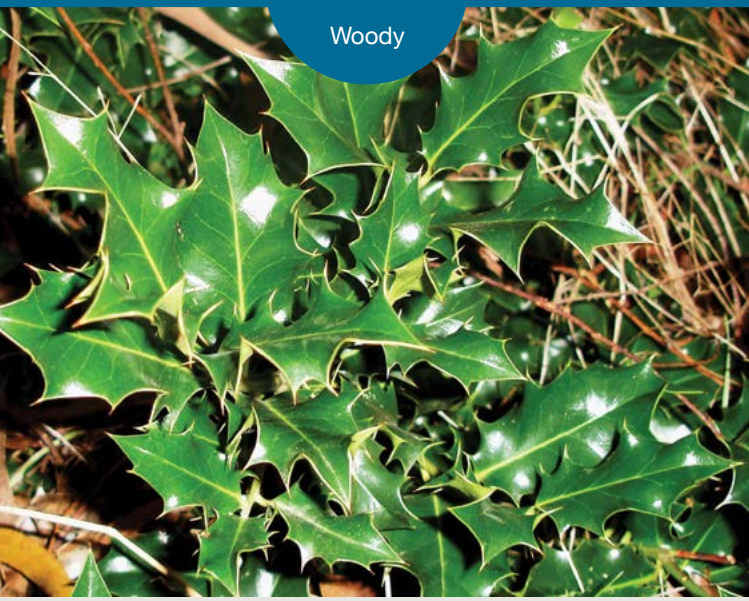
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

HOLLY

Ilex aquifolium

Woody



Description: A classic Christmas decoration, Holly flowers in groups of three. Berries ripen from green to bright red. Leaves are dark green and shiny with spine tipped points. Plants are semi-deciduous in spring. Holly is highly invasive, invading damp and wet forest landscapes with an ability to out compete indigenous species. Its berries are poisonous to humans.

Tips: Cut and paint or drill and fill. Pull out small seedlings roots and all.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J F M A M J J A S O N D

OLD MAN'S BEARD

Clematis vitalba L.

Woody

Description: An introduced woody climbing vine that can reach lengths of up to 30m. Flowers are greenish creamy white clusters with hairy fruits and seeds. Can produce thousands of viable seeds.Known to escape from gardens and dumped garden waste. It outcompetes native plants by forming dense canopies over vegetation, blocking sunlight, and smothering any growth below and can cause trees to topple due to weight. It is known to grow along forest edges, roadsides, grassy woodland areas, urban areas, and remnant bushlands. Has tolerance to cold extremes and will survive in most soil types.

Tips: Stumps and cut stems can easily resprout. Take care to remove all cut growth and dispose carefully. Check treated areas regularly. Not to be mistaken with native clematis species will usually have 3 leaflets emerging from stem instead of 5.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

OLIVES

Olea europaea

Woody

Description: Olives are widely planted for fruit and ornamental purposes. It is a highly invasive small tree or dense bushy shrub able to tolerate most soil types, full sun and drought conditions. Infestations shade and crowd out ground-flora and over-story plants, over time forming dense, mixed age thickets preventing virtually all regeneration.

Tips: Seedlings and small plants can be hand-pulled or dug out. Tops are very likely to break away when pulled, so if roots remain they should be dug out. Larger plants can be treated using the drill and fill, or cut and paint methods. Plants frequently reshoot so follow up treatments are required. Plants can be sprayed with selective herbicides. Large plants are difficult to spray successfully and considerable spray drift may occur.

Classification: Environmental Weed

Perennial

Control options

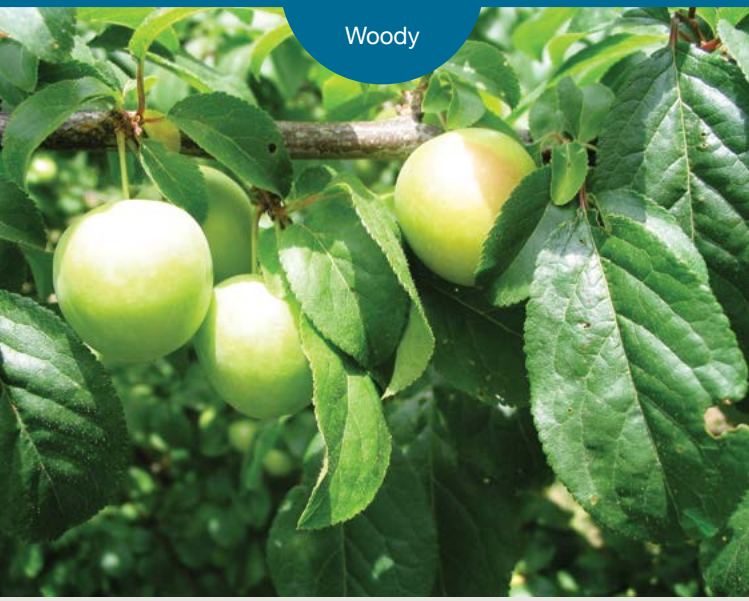
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

PLUM AND APPLE TREES

Prunus and Malus spp.

Woody



Description: Although a nice garden and orchard tree, apple and plum trees can invade bushland and roadside reserves.

Plums – (Prunus) Deciduous tree with paddle shaped leaves and white 5 petalled flowers in spring. Soft edible fruit. The Cherry-plum, *Prunus cerasifera* and Blackthorn, *Prunus spinosa* are most frequently encountered growing as weeds on roadsides and bushland.

Apples – (Malus) Deciduous tree with rounded or heart shaped leaves and white or pink flowers in spring. Edible fruit.

Spread is often caused by throwing away apple and pear cores. Feral fruit trees can also contribute to horticultural issues such as fruit fly etc.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SPANISH HEATH

Erica lusitanica

Woody

Description: Medium sized shrub to 1-3m, with dense multi-stemmed habit. White bell-shaped flowers form in late winter to early spring. Spanish Heath forms dense stands that compete with native vegetation. Not to be confused with native Common Heath *Epacris impressa* which has a similar appearance.

Tips: Ensure all roots are removed when manually removing. Fire can be used with a follow-up treatment.

Classification: Environmental Weed

Control options

Perennial

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SWEET PITTOSPORUM

Pittosporum undulatum

Woody

Description: An evergreen tree or shrub with dense foliage of darker greens leaves (lighter below). Fragrant white flowers form in mid-winter to early spring, which are followed by clusters of orange grape sized berries (12-15mm). Sweet Pittosporum is native to eastern Victoria, but is now a widely spread environmental weed.

Sweet Pittosporum is a prolific seed producer which are dispersed most commonly by birds, but also mammals (including foxes). It is also known to be dumped as garden waste.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

WILLOW LEAF HAKEA

Hakea salicifolia

Woody

Description: Native to NSW and Queensland, it is becoming established in areas outside its normal range. A large erect, fast growing shrub or small tree to 5 m. Leaves are pale green, willow-like, flattened, leathery and occasionally bluish green in appearance. Masses of fragrant, small cream spidery flowers clustered around stems followed by woody fruit, wart-like in appearance. Can dominate areas of forested areas, open woodlands, riparian and disturbed areas. Infestations replace indigenous vegetation and prevent the regeneration of local native species. Dominates low shrubland and regenerating bush in soils with very low fertility. Often promoted by nurseries as a drought and frost tolerant plant and as an attractive hedging plant.

Tips: For small plants, remove by hand. For larger plants, cut stem and paint with herbicide, drill and fill with herbicide.

Classification: Environmental Weed

Perennial

Control options

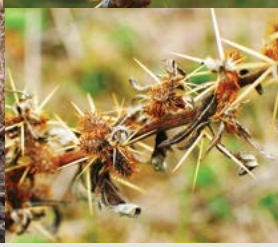
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BATHURST BURR

Xanthium spinosum

Herbs



Description: A distinctive low branched annual shrub with sparse dark green and pale yellow spikes growing from the base of leaf stalks. The burrs produced resemble a football shape (8-10mm) covered in small hooks. Plants seed in summer and die off in winter.

Flowers February to July. Fruit - mature plants produce burrs in February or after late spring germinating plants produce burrs within a few weeks. Plants can die off in winter months so control must be prior to the plants forming burrs.

Tips: Work will need to be scheduled over 3-6 years because of seed persistence. Use manual removal before burr formation. Plants with burrs should be collected and burned. Use chemical control in early spring prior to seed set.

Classification: Regionally Controlled

Annual

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

CALIFORNIA THISTLE

Cirsium arvense

Herbs

Description: California Thistle is perennial, with a vigorous root system spreading to many square metres. Upright stems covered in spiny leaves emerge from the spreading roots in winter. Pale purple flowerheads, lacking spines, are produced in spring followed by fluffy white seedheads. It has potential to spread from scattered occurrences throughout cooler, fertile areas of the region.

Tips: The vigorous root system allows it to thrive in pasture, cultivated areas and wetter bushland. Manual removal is viable only at early-stage infestation. Slash flowerheads before seed formation. Larger infestations may need a strategy combining herbicide, cultivation, grazing and competition.

Classification:

Melbourne Water	Regionally Controlled
North Central	Regionally Prohibited
Goulburn Broken	Regionally Controlled

Control options

Annual

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

CAPE TULIP (ONE & TWO LEAF)

Moraea flaccida & Moraea miniata

Herbs

Description: Perennial herbs that produce salmon pink or orange flowers between September and October. Leaves are thin and strap like. Cape Tulips are a threat primarily to agricultural lands and native grasslands where they restrict growth of ground flora.

Both tulips are spread via underground corms (soil movement). Two-leaf are also dispersed by leaf corms which are spread by slashing, water, machinery and soil movement. One-leaf also set seed, which are dispersed by wind, water and in soil.

Classification:

Melbourne Water	Regionally Controlled
North Central	Regionally Controlled
Goulburn Broken	Regionally Prohibited

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

CAPE WEED

Arctotheca calendula

Herbs

Description: A low growing, annual winter herb with basal, deeply lobed green leaves and yellow daisy like flowers with black centres (appearing in early spring). Can be poisonous to stock in large quantities. Capeweed is widespread and prefers soils high in nitrates and, as such, is often found on sheep camps and around yards.

Tips: If using a chemical, select a broadleaf herbicide for the control of Cape Weed.

Classification: Environmental Weed

Annual

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

GALENIA

Galenia pubescens

Herbs

Description: A low growing, perennial ground cover with succulent oval grey-green leaves and pink or white flowers. Galenia smothers all other vegetation. Its tolerance to dry or saline conditions enables it to readily invade pastures, lawns, roadsides and wastelands.

Tips: Long term control of Galenia requires mechanical or manual removal of the plant and all root material using methods such as ploughing, chipping or grubbing followed by vegetation replacement with desirable species.

Important: Galenia may be mistaken for several native saltbushes which are beneficial for the environment.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

GAZANIA
Gazania spp.

Herbs

Description: A hairy perennial herb that grows to about 30cm in height. Flower heads vary in colour but usually have yellow or orange petals with dark or black bases. Flowers all year round, but mostly in spring and summer.

Spreads quickly in bushland and road reserves.

Tips: Manual removal all year round prior to seed set. Cutting off flowerheads at the end of flowering can also reduce spread via wind.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

HEMLOCK (OR CARROT FERN)

Conium maculatum

Herbs

Description: An erect annual or biennial herb with narrow, hollow multi branched stems. The green leaves resemble those of the common carrot and give off an offensive odour when bruised. Flowers are white and clustered at the end of the stems. Hemlock has a large tap root that grows up to 3m deep. Can be poisonous to stock.

Tips: If using a herbicide, spray plants prior to flowering in spring to summer.

Classification:

Melbourne Water	Regionally Controlled
North Central	Restricted
Goulburn Broken	Regionally Controlled

Biennial

Control options

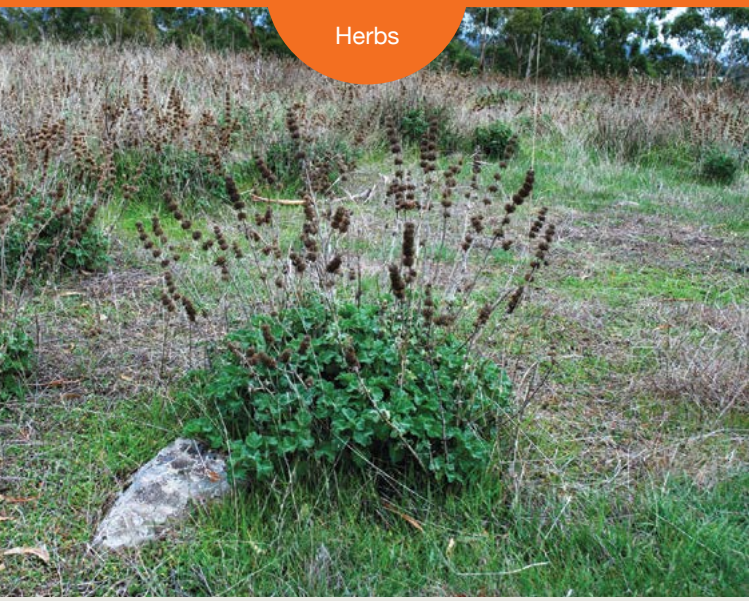
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

HOREHOUND

Marrubium vulgare

Herbs



Description: Horehound is a perennial herb that grows as a clump of branches from a taproot. The leaves resemble common mint (wrinkled with serrated edges) with a downy light blue/white coating. Brown burrs form along protruding stems.

Tips: Horehound spreads quickly after soil disturbance due to overgrazing. Preventative works include fencing steep land to exclude livestock, preventing overgrazing and rabbit control. Remove burrs from clothing and socks prior to leaving an infested area.

Classification: Regionally Controlled

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

PATERSON'S CURSE

Echium plantagineum

Herbs

Description: An erect low growing annual, occasionally biennial, herb that develops a rosette after autumn rains. Purple flowers form on stems up to 120cm in height from early spring. Paterson's Curse is poisonous to stock particularly horses and has the potential to smother pasture.

Tips: Manual control can be used for small infestations. Fire can be used to stimulate seed germination prior to spraying.

Classification: Regionally Controlled

Annual

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

PRAIRIE GROUND CHERRY

Physalis hederifolia

Herbs

Description: An erect, spreading, summer growing perennial herb commonly 20 to 70cm high. Reproduces by seed, creeping roots and root fragments.

Tips: Flowers produced in summer on short stalks. It is a deep rooted plant and very difficult to control.

Classification: Regionally Controlled

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

RAGWORT

Senecio jacobaea

Herbs

Description: An erect biennial or perennial herb growing to 1.5m in height. Ragwort has single or multiple stems arising from the crown, deeply divided and wrinkled dark green leaves with lighter green leaves underneath. Clusters of yellow flowers are produced from December to March. Can be poisonous to stock, especially horses and cattle.

Classification:

Melbourne Water	Regionally Controlled
North Central	Restricted
Goulburn Broken	Regionally Prohibited
Weed of National Significance	

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SILVERLEAF NIGHTSHADE

Solanum elaeagnifolium

Herbs

Description: An erect, summer growing herb, 30 to 80cm high. Reproduces by seed and from creeping roots. Plants flower from November or December to April, and fruit (smooth green globular berry) is commonly ripe in February. Flowers are usually purple to violet, occasionally white with five fused petals. A weed of fallows and pastures. All parts of the plant, particularly the ripe fruit, are toxic to animals.

Root fragments and horizontal roots are capable of forming shoot buds and daughter plants up to 1m from the parent plant.

Classification:

Melbourne Water	Regionally Prohibited
North Central	Regionally Controlled
Goulburn Broken	Regionally Controlled
Weed of National Significance	

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SOURSOB

Oxalis pes-caprae

Herbs

Description: Cool season perennial herb that produces underground bulbs or rhizomes. The leaves are similar to clovers and often have brown blotches. Soursob flowers are bright yellow trumpets to 4cm, whilst other varieties of oxalis have bright pink and purple flowers. The leaves typically close in low light or at night. Very hard to control once established. Poisonous to sheep under some circumstances.

Occurring in areas with above 350mm rainfall Soursob is invasive to many ecosystems especially riparian areas.

Tips: Chemical control using selective or non-selective herbicide or careful manual removal. Well-timed control before seed set over several years is required. Soursob can be misidentified with native Oxalis species. The weedy species features include longer flower stalk, larger flowers and leaves.

Classification: Restricted

Perennial

Control options

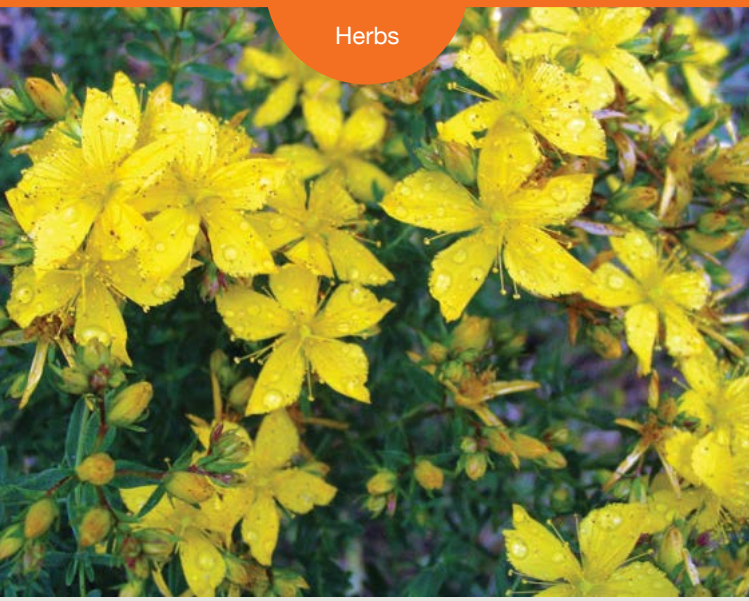
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

ST. JOHN'S WORT

Hypericum perforatum

Herbs



Description: A perennial multi-stemmed herb or small shrub to 80cm that has bright yellow flowers between October and March. Leaves have small pin holes visible when held up to the light. St John's Wort can be found in a range of habitats, but mostly in pasture, open woodlands, disturbed habitats and roadsides.

Tips: Hand weeding can be used for small plants and seedlings. Chemical control and/or fire can be used for larger infestations.

Classification:

Melbourne Water	Regionally Prohibited
North Central	Regionally Controlled
Goulburn Broken	Regionally Controlled

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

THISTLES

Herbs

Artichoke Thistle

Description: Thistles generally favour richer soils, especially the basalt soils common to Central Victoria. Six major thistles are listed below. Thistles are commonly found in areas of disturbance or bare soil and farm paddocks. Thistles can flower in spring or autumn. Flowerheads are usually purple, blue or yellow

Manually remove smaller plants. Slash or remove seed heads before formation. Larger plants or larger infestations may be controlled by selective or non-selective herbicides. To prevent reinfestation, minimise soil disturbance and provide competition.

Tips: Saffron Thistle, Spear thistle and Variegated thistle can be either annual/biennial an important consideration when treating.

Artichoke Thistle *Cynara cardunculus*

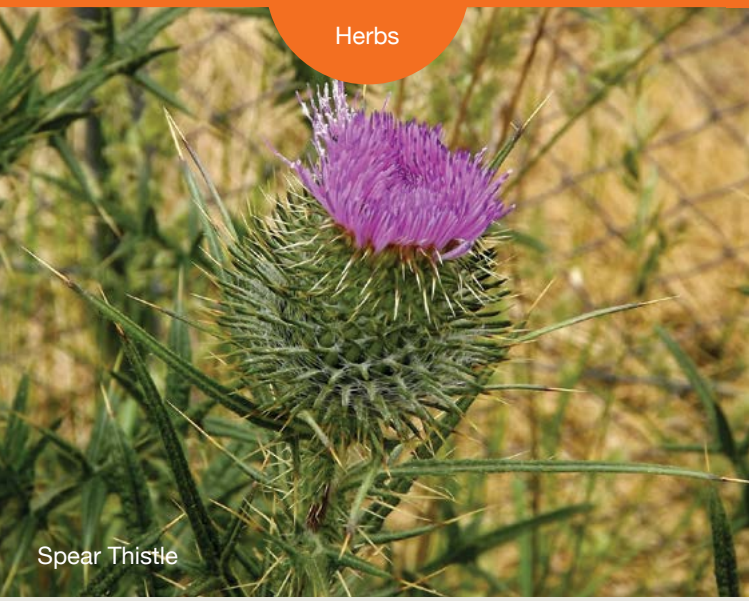
Classification:	Melbourne Water	Regionally Controlled
	North Central	Regionally Controlled
	Goulburn Broken	Regionally Prohibited

Saffron Thistle *Carthamus lanatus*

Classification:	Melbourne Water	Regionally Controlled
	North Central	Restricted
	Goulburn Broken	Regionally Controlled

THISTLES

Herbs



Spear Thistle

Golden Thistle *Scolymus hispanicus*
Classification: Regionally Controlled

Slender Thistle *Carduus pycnocephalus*

Classification:		
	Melbourne Water	Regionally Controlled
	North Central	Restricted
	Goulburn Broken	Restricted

Spear Thistle *Cirsium vulgare*

Classification:		
	Melbourne Water	Regionally Controlled
	North Central	Restricted
	Goulburn Broken	Restricted

Variegated Thistle: *Silybum marianum*

Classification:		
	Melbourne Water	Regionally Controlled
	North Central	Restricted
	Goulburn Broken	Regionally Controlled

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

WHEEL CACTUS

Opuntia robusta

Herbs

Description: A cactus with oval to round shaped segments that grow to over 2m in height. Wheel cactus can form dense and impenetrable stands in mostly open or disturbed areas. Plants spread by birds eating seeds or by any plant material touching the ground, even if broken from main plant.

Tips: The Cactoblastis Moth can be used as a biological control of Wheel Cactus. Glysophate solution at 1:2 parts water can be injected into each segment at a rate of 2-4ml per segment. Sturdy gloves must be worn as spines are up to 2-3cm in length.

Classification: Melbourne Water — Regionally Prohibited
North Central — Regionally Controlled
Goulburn Broken — Restricted
Weed of National Significance

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

RED HOT POKER

Kniphofia uvaria

Herb

Description: A large tufted herb that grows to about 1.5m with long green leaves at the base. The flowers are a vibrant orange-red turning yellow as they age. Flowers form a dense conical spike-like inflorescence growing on the end of a tall stem. Commonly used as an ornamental species in gardens, Red Hot Poker is quick to spread in a range of soil types. Spread by seed or plant material containing roots. Flower head forms many bulbils which spread easily.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

AGAPANTHUS

Agapanthus praecox subsp. orientalis

Bulbs

Description: A bulbous perennial plant with blade-like leaves with a purple or white flower head. Can cause irritations in dogs from the sap. Commonly planted in gardens and can potentially spread into native bushland competing with native vegetation. Roots are rhizomous which form extensive networks underground.

Tips: Avoid planting near waterways or bushland. Dig out bulbous roots within the soil. Do not place in green waste. Remove seed heads after flowering to prevent spread.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

ANGLED ONION

Allium triquetrum

Bulbs

Description: A succulent green bulbous perennial with white bell shaped flowers. Distinctive triangular stems with flat or slightly channelled leaves. Angled Onion reaches a height of 48cm and has a strong smell of onions when crushed. Grows prolifically along waterways or moist areas and can totally exclude other species. Flower head forms many bulbils which spread easily.

Tips: Hand weeding needs to be undertaken repeatedly to ensure bulbs are removed. Chemical control by selective or non-selective herbicide. Mechanical slashing to prevent seed set and bulb formation can also be effective.

Classification: Restricted

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SOUTH AFRICAN WEED ORCHID

Disa bracteata

Bulbs

Description: Often found in native grasslands, grassy woodlands and amongst other native orchids. Robust, erect, bright green, fleshy herb 20– 40 cm tall. Produces new underground tubers each year, from which annual above-ground growth forms in spring, emerging as a rosette of multiple narrow pointed leaves. The tubers look like a small potato (up to 2cm) and usually accompanied by a mass of fleshy roots.

Tips: It is easiest to identify once the plant develops its asparagus-like spike. Before this stage, it can resemble native species of Triggerplant (*Stylidium spp.*). Plants in the leafy stage (before flowering) are susceptible to herbicides, which also kill the tubers. Once the plant has flowered, the only effective treatment is to dig out the plant, including all tubers, which can be deep underground. Minimise soil disturbance around the plant. Remove the plant before it goes to seed to prevent further spread. Double bag all plant material and dispose of it in landfill, not in green waste or compost.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

WATSONIA

Watsonia meriana

Bulbs

Description: A perennial flax-like herb with trumpet shaped red-pink flowers in October to December. Forms dense stands that prevent regrowth of native vegetation (little agricultural impact).

Tips: Hand weeding needs to ensure all fragments are removed from the soil. Chemical control with selective or non-selective herbicide can be effective as can slashing to reduce the spread before stem bulbils form.

Classification:

Melbourne Water	Regionally Controlled
North Central	Restricted
Goulburn Broken	Restricted

Perennial

Control options

Method of spread

J F M A M J J A S O N D

WILD GARLIC (CROW GARLIC, FIELD GARLIC)

Allium vineale

Bulbs

Description: Erect perennial herb growing to 1m in height from a bulb. Leaves are almost cylindrical and hollow. Flowers form tight clusters and can be white, pink or green. The plant has a strong onion like odour and can taint milk, meat and wheat.

Classification:

Melbourne Water	Restricted
North Central	Regionally Controlled
Goulburn Broken	Regionally Prohibited

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

AFRICAN LOVEGRASS

Eragrostis curvula

Grasses

Description: A densely tufted perennial grass that grows to 120cm high. Leaves are dark green to blue-green in colour, 3mm wide and 25-35cm long, narrow and often tapered near the tips. Flowers in summer. Seed is present from January to March. Seeds germinate in autumn or spring. Old growth has low palatability, often avoided by animals. Readily spread during road construction in contaminated soils.

Tips: Pastures should be grazed heavily in the first summer, then over sown with clovers or a native grass seed mix in the following autumn. Undertake chemical control the following spring or prior to seed set.

Classification: Regionally Controlled

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BENT GRASS

Agrostis spp.

Grasses

Description: Bent grasses are fine-bladed perennials. The seed heads are open with spreading branches.

Although Bent Grass is widely grown as a turf species, it is considered a major agricultural weed in bushland and pasture. Bent Grass has a very fine texture and grows very densely, forming a thatch root system.

Tips: For chemical control, apply herbicide in late spring or early summer followed by cultivation and resowing in early autumn.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BROAD KERNEL ESPARTILLO

Amelichloa caudata

Grasses

Description: Tough perennial tussock to 1m high. Best identified when seeding in December to January. Young plants have a dark, spiky appearance. Mature plants resemble native Common Tussock Grass (*Poa labillardierei*) but have two kinds of seeds: cleistogenes (special seeds enclosed within the base of the plant) and stem seed with a seed tail (awn). Espartillo is established in the Clunes and Castlemaine.

Tips: There is a year-round risk of spread from slashing due to the cleistogenes in the plant base. Vehicle hygiene practices should be used. Soil-stored seed may germinate after years of apparent absence, especially following cultivation or breaking of drought. Providing competition is an important strategy.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

CANE NEEDLE GRASS

Nassella hyalina

Grasses

Description: Cane Needle Grass is a perennial tussock-forming grass. Its flower stem stands erect, like a cane. It is a new and emerging weed in Central Victoria. It can potentially be just as invasive as Chilean Needle Grass, Texas Needle Grass or Serrated Tussock. Like some of the other needle grasses this species forms a seed head as well as stem seeds at the nodes of the flower stem.

Cane Needle Grass leaves are flat or rolled slightly inwards and are up to 200mm long. The leaves possess a small (0.2–2mm) inrolled ligule with a few short hairs. The seeds of cane needle grass are very sharp and are 4–5mm long and have 35–40mm long bristle-like tails, or awns.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

CHILEAN NEEDLE GRASS

Nassella neesiana

Grasses

Description: Perennial grass with tussock base. Best identified when flowering during November to February. It is distinguished from native spear grass *(Austrostipa)* by the presence of a raised collar or corona between the seed head and seed tail (awn). Chilean Needle Grass is a new and emerging weed that is becoming a problem throughout the region.

Tips: Identify the infestation of Chilean Needle grass in spring. Chemical control may be undertaken in these areas in autumn to spring or prior to seed set. Slashing should be undertaken prior to seed set. Vehicle hygiene practices should be used to prevent further spread. Professional advice should be sought prior to undertaking chemical control to reduce any off-target spraying.

Classification: Restricted
Weed of National Significance

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

PAMPAS GRASS

Cortaderia selloana

Grasses

Description: A large perennial grass growing up to 2-6m tall with distinctive feathery, soft, white/yellowish plumes. Leaves are long, narrow and strap-like with a rough surface. Summer to Autumn flowering. Grown as an ornamental plant, Pampas Grass is highly invasive in a range of native vegetation types.

Tips: For manual removal, smaller plants can be chipped out at any time of year (ideally before seed set). For chemical control, spray plants with a non-selective herbicide whilst the plant is actively growing.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

PHALARIS

Phalaris aquatica

Grasses

Description: Popular as a pasture and erosion control plant, Phalaris has come to dominate many moist grassland or bushland areas. Phalaris when not grazed, forms dense grass clumps and often poses a severe fire risk. It has long broad leaves and grows actively all year. It produces many seed heads each on long slender stems.

Tips: Small plants can be manually removed. Larger infestations can be slashed or heavily grazed. Selective and non-selective herbicides can also be used. Another successful method consists of burning Phalaris during winter and then applying herbicide.

Classification: Environmental Weed

Control options

Perennial

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

QUAKING GRASS (LARGE QUAKING GRASS)

Briza maxima

Grasses

Description: An annual tufted grass, growing 10-65cm tall that can be found in drier bushland areas (300-700mm rainfall).

Quaking Grass has few broad green leaves (4-8mm wide and 20cm long). The seed heads are distinct, oval-shaped and shell like, drooping on fine stems. The seed heads persist for most of the year and can easily be identified. Reproduces by seed.

Tips: As an annual grass, Briza can easily be controlled with repeated annual treatments. Techniques include manual removal, slashing or burning plants with semi-ripe seed heads. Seed in the soil will reduce quickly, and by preventing seed set plants die without reproducing. Selective and non-selective herbicides can also be used.

Classification: Environmental Weed

Annual

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SERRATED TUSSOCK

Nassella trichotoma

Grasses

Description: A densely tufted perennial grass growing up to 50cm high. Juvenile plants are erect in appearance, however as the plant matures it forms flower stems and long leaves which droop to the ground. Seed heads are visually contained within the plant. In contrast native grasses tend to have an extended seed panicle (head) that extends beyond the plant. Leaf colour varies from green in summer to a yellow/green in winter. Old leaves are fawn and the base is white.

The needle like leaves are cylindrical and roll smoothly between the thumb and forefinger, whilst native grass species feel as though they have flat edges. A slight serration is felt when the leaf is drawn between fingers from tip to base. Serrated Tussock is not eaten by stock.

Serrated Tussock resembles many native tussock grass species and therefore it is recommended that samples are identified prior to treatment.

Flowers in spring to early summer. Seed set occurs late spring to early summer.

SERRATED TUSSOCK (CONT.)

Nassella trichotoma

Grasses

Tips: Manual removal is effective in small and isolated infestations. For larger infestations integrated control methods include: the use of selective and non-selective herbicides, the establishment of windbreaks to reduce further seed spread, pasture improvement or introduced competition of a desirable pasture or grass species.

Classification:

Melbourne Water	Regionally Controlled
North Central	Regionally Prohibited
Goulburn Broken	Regionally Prohibited

Weed of National Significance

Control options

Perennial

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SPINY RUSH

Juncus acutus

Grasses

Description: A perennial rush/tussock growing up to 1.5m high with very sharp dark green cylindrical leaves. Flower heads appear in spring and are a dense cluster of green florets, turning brown. Establishes dense stands that restrict access to water and create harbour for pest animals. Spiny Rush favours damp areas with high salt loads. For this reason it is considered to be an indicator of salinity. The tussock has sharply pointed spines at the end of the leaf when compared with similarly looking native tussocks.

Classification: Regionally Controlled

Control options

Perennial

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SWEET VERNAL GRASS

Anthoxanthum odoratum

Description: A tufted perennial grass, widespread in most areas including farmland and bushland. Sweet Vernal Grass presents few problems to agriculture, however it is a major environmental weed. Characterised by a dense seed head that opens and becomes lighter as summer progresses and seeds are shed. It has few leaves, however dense infestations of hundreds of plants can develop. It releases chemicals into soil to suppress the growth of other plants.

Tips: Selective or non-selective herbicide can be used over winter/spring prior to seed set. Easily pulled by hand as the plant's roots and rhizomes tend to be shallow. Mowing with a catcher to collect seed heads can be effective. Hand weed prior to seed set.

Classification: Environmental Weed

Control options

Perennial

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

TEXAS NEEDLE GRASS

Nassella leucotricha

Grasses

Description: A perennial tussock, forming dense clumps up to 1m high. Distinguished from native spear grasses by a raised collar encircling the tail of the seed. Texas Needle Grass spreads by seeds, which are produced abundantly in stalked panicles and become attached to animals, vehicles and clothing. Seeds are readily dispersed on contaminated vehicles and machinery and contaminated hay.

Tips: Chip out small infestations. Repeated tilling and heavy grazing in winter before seed set and low slashing during spring will minimise seed production and spread. Selective chemical spot or boom spraying is only effective during autumn and winter. Slashing prior to seed set. Ensure all machinery and equipment entering your property is cleaned down before hand. If you have Texas Needle Grass on your property work from clean areas first and the infested area last then clean down there to minimise further spread.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BLACK LOCUST

Robinia pseudoacacia

Trees

Description: A spiny deciduous tree that can grow to about 18m high. Leaves are bright green turning yellow in autumn with oblong to oval leaflets (1.5-5cm long) and spiny appendages on the stems. Flowers appear during spring and are white, yellowish or pink, fragrant and in dense, drooping clusters. Black Locust has poisonous bark, wood, roots, seeds and pods. Thorns cause irritation. Reproduces by seeds and suckers.

Tips: Trees can be killed by stem injection and cut and paint. Hand pulling small trees under 0.5m tall is a practical and environmentally safe way of removing young plants.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

COOTAMUNDRA WATTLE

Acacia baileyana

Trees

Description: Although a native plant in New South Wales, Cootamundra Wattle is considered an environmental weed outside of its natural range. An evergreen large shrub/small tree that stands between 2-5m high, it is characterised by many small silvery-grey leaves.

Flowers are groups of fluffy yellow balls produced in winter, and the black shiny seeds are carried in flat brown papery pea-like pods. All wattles produce large crops of hard-coated seed which can persist in a viable condition in the soil for many decades. This seed may germinate profusely after a disturbance such as cultivation or fire. Saplings generally grow close to the parent tree.

Tips: Manually remove immature plants (ensure all roots are removed) or cut the stem and paint with herbicide. For mature plants stem inject the trunk with herbicide. Killing the plant by ring barking is another alternative control method.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

EARLY BLACK WATTLE

Acacia decurrens

Trees

Description: Also referred to as Sydney Green Wattle, it is native to NSW and is considered an environmental weed in Victoria. Early Black Wattle is a woody flowering tree that grows between 4 – 12 metres tall. It has dark green, feather-like leaves and small, ball-shaped golden-yellow flowers that bloom from July to September. Younger trees feature smooth bark, but as they mature, the trunk darkens and becomes split and cracked. The branches often have winged or angular ridges. This plant is generally short-lived, typically surviving 10-15 years under favourable conditions. However, it tends to become highly invasive due to its prolific seeding.

Tips: Seeds will germinate after rain in autumn and winter, following a fire, or from soil disturbance. Target recently burnt or disturbed areas for increased germination. For mature plants, control methods include injecting the stem with herbicide or cutting the stem and paint with herbicide. Can also be controlled by ring barking the tree. Do not confuse with Black Wattle, *Acacia mearnsii.*

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

OVENS WATTLE

Acacia pravissima

Trees

Description: Acacia, commonly known as Wattle is a large genus with over 1000 species in Australia. Some species of Acacia, particularly Northern species from NSW, can become invasive in our local bushland. Oven's Wattle may be regarded as an environmental weed in parts of Victoria. It is a small tree or shrub growing 3 -8 metres, with triangular-shaped or pointed, dull green leaves and tiny yellow clusters of flowers. Immature flowers buds appear pink before emerging into scented yellow blooms.

Tips: Likely to be found in sheltered areas, near streams or wet areas. Manually remove immature plants or cut the stem and paint with herbicide. This species appears on some local and regional environmental weed lists in the central and southern parts of Victoria. It is recommended to control Acacia species from outside their natural range if they start to spread and only plant and promote local species.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

DESERT ASH

Fraxinus angustifolia

Trees

Description: Desert Ash is a deciduous tree, popular as street or garden trees, growing up 20m tall. It has a dense crown with small purple or green flowers in spring. The one sided winged seed turns brown and dry when mature. This species will outcompete native trees, shrubs and ground covers mainly through large germinations of new plants in spring. Desert Ash reproduces from seed and root suckers and is spread via wind, water and dumped garden waste.

Classification: Environmental Weed

Perennial

Control options

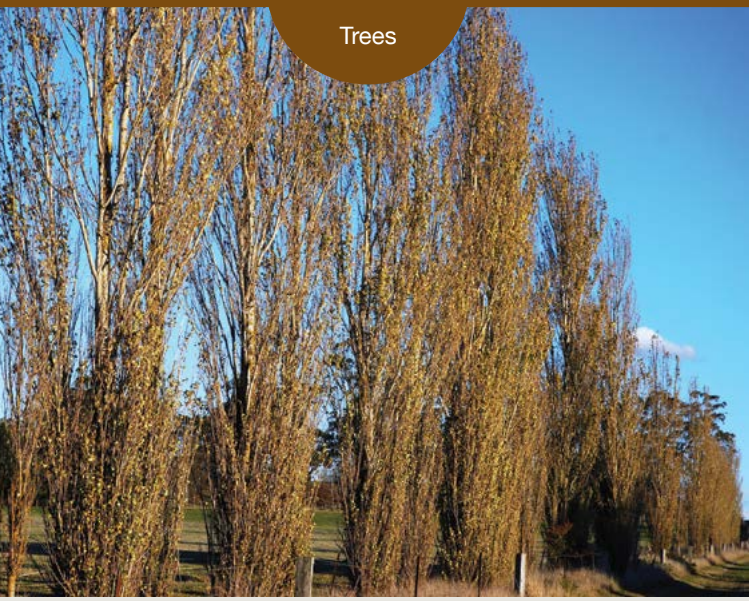
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

POPLARS

Populus species

Trees



Description: Fast growing deciduous trees with alternately arranged leaves. Flowers as male and female catkins, and are in separate trees. Fruit is a capsule containing seeds, each with a tuft of silky hairs at their base. Popular as street and garden trees, however their roots often cause problems in drains and paving. In some species the sucker forms dense stands along roadsides and water courses. Flowers during spring. The main form of spread is by root suckers around the parent plant, forming large thickets. White or silver poplar *(Populus alba)* and Lombardy poplar *(Populus nigra var. Italica)* sucker the most. Poplars easily spread over great distances when dumped material or branches detach in floods and take root.

Tips: For immature plants spray or cut and paint. For larger plants stem inject with herbicide. Follow up cut and paint will be required for suckers.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

RADIATA PINE

Pinus radiata

Trees

Description: Tall evergreen tree with dark green needle like leaves. Pines establish in both disturbed and undisturbed locations, forming dense stands that compete with native vegetation, in part by reducing soil fertility. Over time they grow extremely large and can be very expensive to remove.

Tips: Small trees and seedlings can be removed by hand. Larger trees can either be cut down (below the lowest branch), generally without the need for chemical treatment or ring barking.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SALLOW WATTLE

Acacia longifolia

Trees

Description: Indigenous to NSW and Eastern Victoria, Sallow Wattle seeds prolifically and spreads rapidly into bushland from gardens and has become an environmental weed. It grows into a small tree with long blunt leaves (phyllodes) with two main veins and a small gland near the base. Flowers in July-October and produces masses of dense yellow spikes.

Tips: Small plants can be pulled by hand. Cutting down without herbicide application can control larger mature plants, as Sallow Wattle will not re-grow from the stump. Burning will also germinate dormant seeds in the soil which can then be sprayed with a selective herbicide or hand pulled.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SYCAMORE MAPLE

Acer pseudoplatanus

Trees

Description: Long living fast growing deciduous tree of central and southern Europe. It has dark green maple-shaped leaves with 3 to 5 lobes. Small flowers produce wing shaped seeds in summer that drop like a propeller. It invades damp and wet forest areas, stream sides and gardens. Sycamore Maple is very hardy and tolerant to extreme conditions.

Tips: Sycamore Maple seeds prolifically with each tree producing up to 10,000 seeds. The most effective removal treatment time for Sycamore is early Autumn, prior to leaves changings colour. Will germinate from prunings, make sure to dispose of carefully.

Classification: Environmental Weed

Perennial

Control options

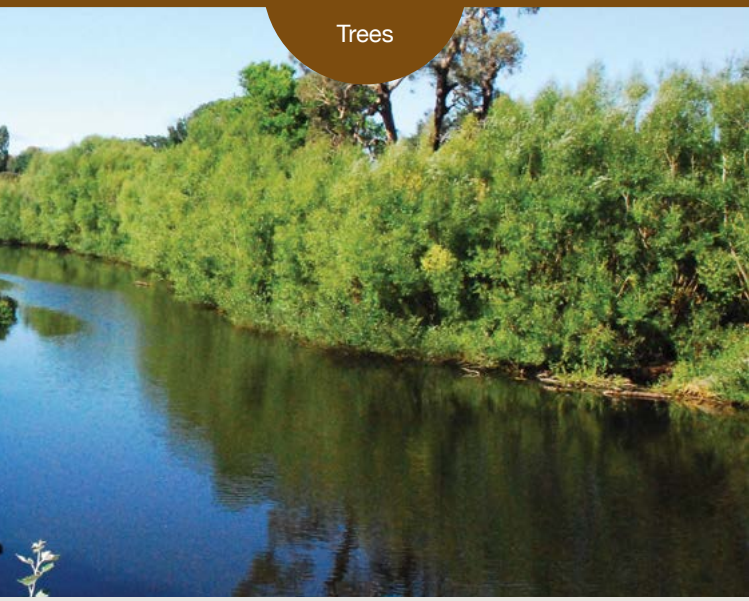
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

WILLOWS

Salix spp.

Trees



Description: A large, invasive deciduous tree that tends to populate water courses. Their extensive root systems impact upon water flow and nutrient cycling and their canopy impacts natural light which affects stream health. There are a range of Willow species including the wild types and cultivar varieties. Willows are renowned for their ability to colonise riparian areas and are able to hybridise between wild types and cultivars.

Tips: Large plants should be treated by stem injection well in advance to lopping. This reduces the chance of stem fragments setting roots. Start control in the uppermost part of the riparian area affected. Follow up control will be required.

Classification: Restricted
Weed of National Significance

Perennial

Control options

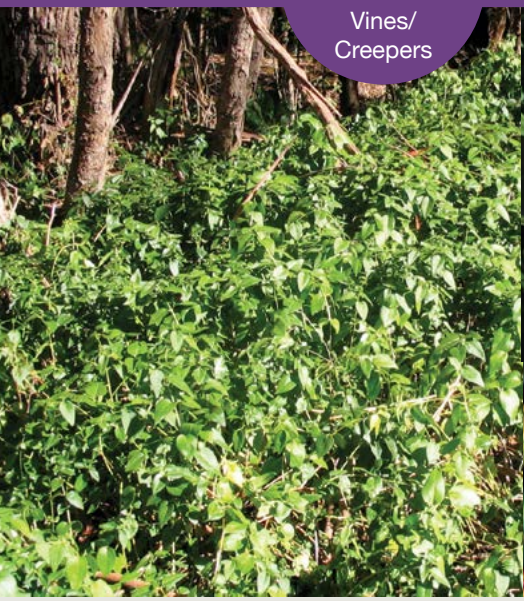
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BLUE PERIWINKLE

Vinca major

Vines/
Creepers



Description: A low growing creeper that forms dense mats. Leaves are dark green and broadly oval shaped. Flowers are distinctive blue to mauve, fading to white in the centre. Blue Periwinkle is found most commonly on moist and fertile soils, usually near gullies or waterways. It is poisonous to cattle, horses and sheep if eaten.

Tips: Seedlings and small infestations can be manually removed (ensuring all roots and stem fragments are removed). Chemical control should be undertaken in spring and summer with selective or non-selective herbicides. For ease of removal, undertake manual removal when soil is moist.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BLUEBELL CREEPER

Sollya heterophylla

Vines/
Creepers

Description: A Western Australian native that has spread beyond its natural range, Bluebell Creeper smothers the plants it grows over. This climber grows to 2-3m tall with glossy green leaves and a small pendant cluster of bell shaped flowers. The flowers are usually blue, but sometimes can appear as pink or white which flower in spring to autumn. Often found in gardens and roadsides.

Tips: Bluebell Creeper can be sprayed with herbicide prior to flowering. Manual removal can be undertaken with the use of quality gloves to protect from toxins in the plant leaves which can cause irritation.

Classification: Environmental Weed

Perennial

Control options

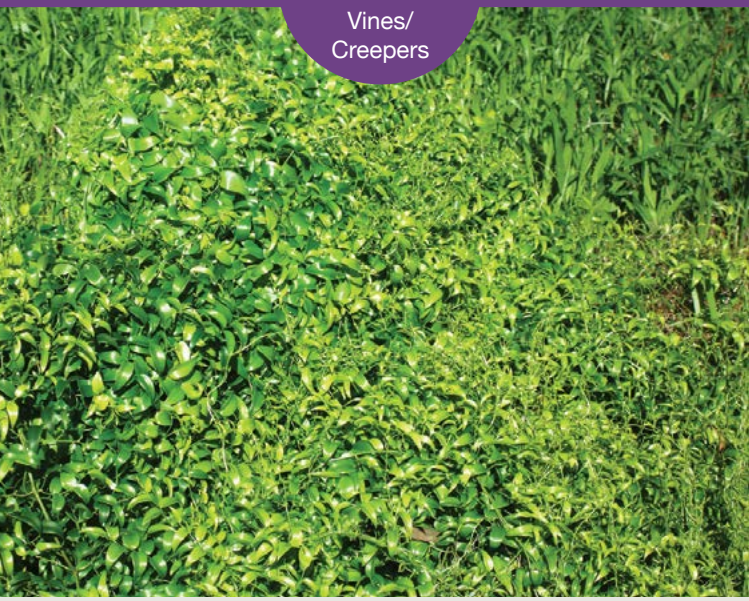
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

BRIDAL CREEPER

Asparagus asparagoides

Vines/
Creepers



Description: A tenacious vine like plant with small shiny green leaves to 30mm in length, senescing in summer. The plant forms a thick mat of underground tubers which enables it to survive through dry periods. Bridal Creeper has small white flowers and produces red berries around 8mm in diameter from around August to September. Bridal creeper is highly invasive and a threat to bushland and riparian areas.

Manual control can be conducted all year round. Chemical control is best in early spring when the plant is actively growing around flowering or between flower bud and green berry stage.

Classification: Restricted
Weed of National Significance

Perennial

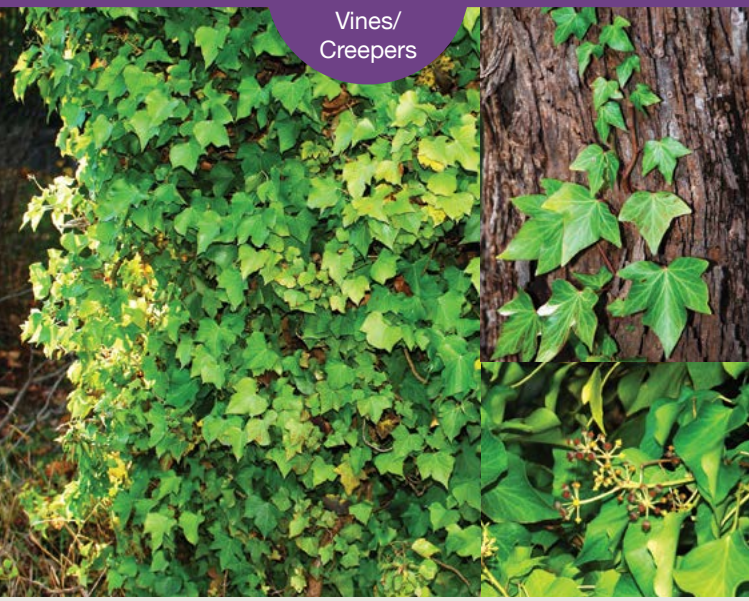
Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

ENGLISH IVY AND CAPE IVY

Hedera helix and Delairea odorata



Description: A dense invasive ground cover or climber with twining stems and fleshy green leaves. Both species of ivy form a vigorous dense mass of plant material that smothers vegetation and prevents natural regeneration. English Ivy typically flowers and fruits when the stems become arborescent or when growing in light shade or full sun. The leaves are triangular shaped and have 3-5 lobes on non-flowering plants and becoming diamond shaped or rounded (not lobed) on flowering stems. The leaves and fruit of English Ivy are poisonous if swallowed. Similar in appearance, Cape Ivy typically has 3-8 lobes and bears clusters of small daisy like yellow flowers from autumn to spring.

Tips: Remove all stems in contact with soil. Vines growing on trees can be severed at the base of the tree and left to dry out in the canopy.

Classification: Environmental Weed

Perennial

Control options

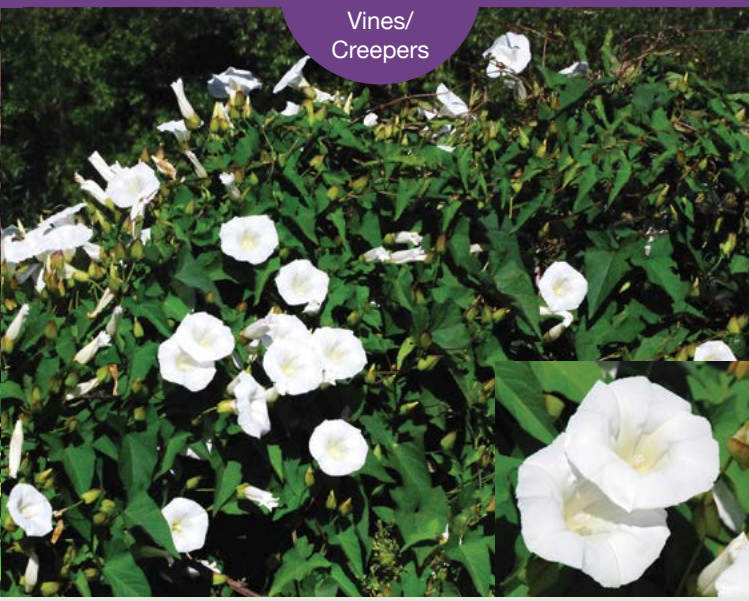
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

MORNING GLORY

Ipomoea spp.

Vines/
Creepers



Description: A trailing or climbing perennial that grows to 10m in height. Trumpet like flowers form during the warmer months. Leaves are heart shaped. Morning Glory mostly effects disturbed areas and is found primarily in moist and sunny positions.

Tips: Manual removal is appropriate for small infestations (ensuring that all roots are removed from soil). Cut and paint and chemical control with non-selective herbicide is also effective. Undertake chemical treatment during warmer months whilst the plant is actively growing.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

WANDERING TRADESCANTIA

Tradescantia fluminensis

Vines/
Creepers

Description: A perennial climber or creeper with alternate dark green shiny leaves and small green to white flowers. Wandering Creeper can form thick mats that smother all other vegetation and climb trees, choking them. Prefers damp dark areas, such as vegetated waterways. The plant contains many stem fragments called 'stolons' that can reproduce when broken and left on the ground.

Known to cause an allergic reaction in dogs.

Tips: If manually removing, ensure the entire weed is removed to avoid reinfestation.

Classification: Environmental Weed

Perennial

Control options

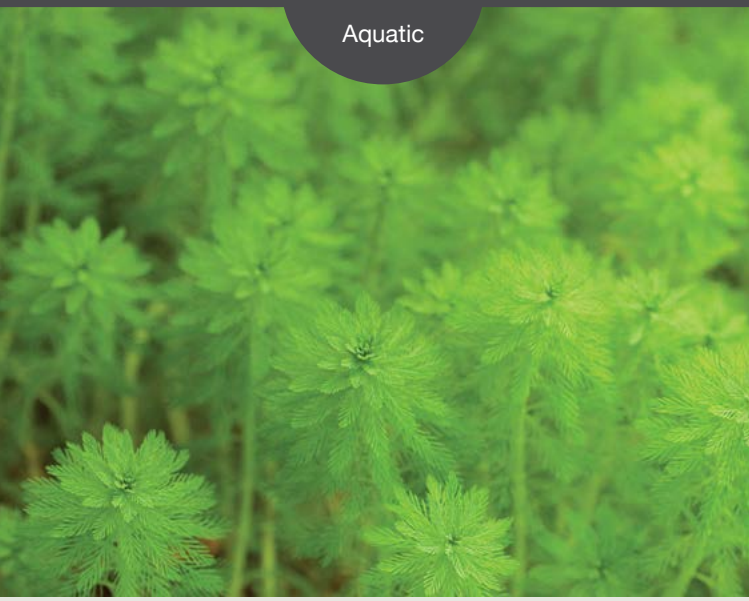
Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

PARROTS FEATHER

Myriophyllum aquaticum

Aquatic



Description: An aquatic plant with bright green feather like leaves. Forms a dense mat on the water's surface, with slender yellow/green stems trailing under the surface. Can be available for purchase as an aquarium plant.

Tips: Manual and mechanical removal can be effective although it is vital to avoid movement or spread of stem fragments. Chemical control must be used with care around waterways following label directions.

Classification: Environmental Weed

Perennial

Control options

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

SALVINIA

Salvinia molesta

Aquatic

Description: An aquatic fern that floats on still or slow-moving water. Salvinia grows rapidly to cover the entire water surface with a mat of vegetation. The smothering effect is disastrous to the water body's natural system. Submerged leaves also act like floating roots which do not take root in any substrate.

Tips: Salvinia found in aquariums and fish ponds, it should be dried, burnt or buried. Do not empty into sinks, drains or waterways. Mechanical removal of large infestations is extremely difficult. Early detection of this weed is therefore very important. Salvinia is a State Prohibited Weed in Victoria (and nation wide) and is a most serious threat to waterways. The Victorian Government is responsible for eradication of Salvinia on all land in Victoria. Infestations are to be reported to Agricultural Victoria by calling 136 186 or email weed.spotters@agriculture.vic.gov.au

Classification: Weed of National Significance
State Prohibited Weed

Perennial

Victorian State Government responsible for removal

Method of spread

J	F	M	A	M	J	J	A	S	O	N	D

Alternate when leaves are placed singly at different heights on an axis
Annual lasting or living only one growing season
Bulbils a small bulb formed in the leaf axil or flowers
Corms a short, swollen upright stem-base used to store food
Cultivar cultivated variety of a plant
Naturalised an organism freely reproducing in an area outside its natural range
Node location on a stem where leaves or branches occur
Noxious declared under legislation and a problem to natural areas, primary production, the environment or effecting human health
Perennial lasting or living throughout the year
Weed of National Significance a weed classified by the Australian Weed Committee posing a national threat due to its potential for spread, invasiveness, and impact on socioeconomic and environmental values
Riparian interface between land and a river or stream
Rhizome an underground stem which usually grows horizontally
Stolon an above ground creeping stem (sometimes called runner), producing roots and sometimes shoots
Succulent a plant with thick fleshy leaves
Sucker shoots that emerge from roots
Tubers underground food storage organ

Resources

Further Reading

Auld, B & Medd, R 1987, *Weeds: an Illustrated Botanical Guide to the Weeds of Australia*, Inkata Press, Melbourne.

Blood, K 2001, *Environmental Weeds: A Field Guide for SE Australia*, Bloomings Books, Melbourne.

Bradley, J 2002, *Bringing Back the Bush: the Bradley method of bush regeneration*, New Holland, Sydney.

Brombery, A 1980, *Australian Native Plants*, Angus & Robertson, Sydney.

Cummins, J, Moerkerk, M 1996, *TOPCROP Weeds: The Ute Guide*, Primary Industries and Resources, South Australia.

GLOSSARY, REFERENCES & RESOURCES

Ermert, S & Clapp, L 1998, *Gardeners Companion to Weeds*, Lansdowne Publishing, Sydney.

French, J 1989, *Organic Control of Common Weeds*, Aird Books, Flemington, Victoria.

Horner, A 1994, *WeedPac a Practical Guide to Noxious Weed Suppression*, Tudor Systems Australia, Traralgon.

Lamp, C & Collet, F 1996, *Field Guide to Weeds in Australia*, Inkata press, Melbourne.

McBarron, E 1983, *Poisonous Plants*, Department of Agriculture, New South Wales.

Muyt, A 2001, *Bush Invaders of South-East Australia*, Meridith, Victoria.

Moerkerk, M & Barnett, A 1998, *More Crop Weeds Melbourne*: R G and F J Richardson.

Morley, T and Stapleton, P 1999, *The Paterson's Curse Management Handbook*, Department of Natural Resources and Environment, East Melbourne, Victoria.

Parsons, W & Cuthbertson, E 1992, *Noxious Weeds of Australia*, Inkata Press, Melbourne.

Rogers, F 1986, *A Field Guide To Victorian Wattles*, Creative Rural Printers, St Arnaud.

Taylor, U & Sindel, B 2000, *The Pasture Weed Management Kit*, CRC for weed management systems Adelaide.

Wrigley, J 1990, *Third Edition Australian Native Plants*, Angus & Robertson, Sydney.

Wilding, J, Barnett, A & Amor, R 1986, *Crop Weeds Melbourne*, Inkata Press, Melbourne.

Whibley, D and Christenen, T 1991, *Garden Weeds Identification and Control*, Adelaide Botanic Gardens Handbook, South Australia.

Wolff, M 1999, *Winning the War on Weeds*, Kangaroo Press, New South Wales.

Online

www.agriculture.vic.gov.au/biosecurity/weeds/weeds-information

Agriculture Victoria
www.agriculture.vic.gov.au

Weeds Australia
www.weeds.org.au

Department of Energy, Environment and Climate Action
www.deeca.vic.gov.au

Weed Society of Victoria
www.wsvic.org.au

Weed Identification App
www.weedscan.org.au

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NOTES

Further information

Department of Energy, Environment and Climate Action (DEECA)
131 186 www.deeca.vic.gov.au

Landcare Victoria
www.landcarevictoria.org.au

Catchment Management Authorities

North Central CMA
www.nccma.vic.gov.au
03 5448 7124

Goulburn Broken CMA
www.gbcma.vic.gov.au
03 5822 7700

Melbourne Water
www.melbournewater.com.au
131722

Local Government

www.mitchellshire.vic.gov.au 03 5734 6200
www.mrsc.vic.gov.au 03 5422 0333
www.mountalexander.vic.gov.au 03 5471 1700
www.bendigo.vic.gov.au 03 5434 6000
www.hepburn.vic.gov.au 03 5348 2306

Macedon Ranges Shire Council
MITCHELL SHIRE COUNCIL
Mount Alexander Shire Council
CITY OF GREATER BENDIGO
Hepburn SHIRE COUNCIL
South West Goulburn Landcare Network