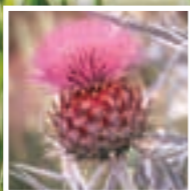


WEEDS

of the GOULBURN BROKEN

A FIELD GUIDE TO TERRESTRIAL
AND AQUATIC WEEDS



**GOULBURN
BROKEN**
CATCHMENT
MANAGEMENT
AUTHORITY

3RD EDITION

3rd Edition, 2008



The Goulburn Broken Catchment Management Authority wishes to acknowledge Jaye Caldwell for his effort in the compilation of this booklet.

The Goulburn Broken Catchment Management Authority and the Department of Primary Industries wish to acknowledge; Kate Blood (DPI/CRC), Rebecca Heard, Graeme Prichard, Lalith Gunasekera , Jaye Caldwell (DPI), Rodney Orr (La Trobe University, Bendigo), Ian Higgins (NCCMA), Jim Wilding (GMW), Jonathan Boow, Linda Bester, Forest & Kim Starr (USGS), Phil Moran, Kyla Finlay, Alan McKay (DPI), Terry McCormack (NE CMA), Rodney Whyte (DSE) and the Victorian Resources Online (www.dpi.vic.gov.au/vro) for the use of their photographs.

This publication may be of assistance to you but the Department of Primary Industries (DPI) and the Goulburn Broken Catchment Management Authority and their employees do not guarantee that it is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaim all liability for any error, loss or other consequences which may arise from you relying on any information in this publication.

Contents

Introduction	2
The Goulburn Broken Catchment	3
Legislative Requirements.....	4
How to use this Booklet.....	6
How Weeds Spread	7
Control Options	8
Weed Descriptions.....	9-91
Index	92-96
References	97

Introduction

Weeds cost the community millions of dollars each year in lost productivity and have a significant impact on the natural environment.

In Victoria, there are over one hundred declared noxious weeds proclaimed under the Catchment and Land Protection Act 1994. These weeds are classified under four categories: State Prohibited, Regionally Prohibited, Regionally Controlled and Restricted. The responsibility for management of declared noxious weeds varies for each category.

In addition to declared noxious weeds, there are numerous other weed species that impact on the agricultural and environmental values of the Goulburn Broken catchment. The Goulburn Broken Catchment Management Authority in partnership with the Department of Primary Industries coordinate a range of weed management programs across the catchment in an effort to minimise weed impacts.

All land managers have a responsibility to manage weeds on their land, irrespective of whether the land is public or private land. As a land manager, it is important to be able to identify weeds that may pose a threat to your land or neighbouring land. Early identification will enable you to implement management plans that prevent weed establishment or spread.

The purpose of **Weeds of the Goulburn Broken** is to provide all land managers, public and private with a locally relevant field guide that will assist in the identification and management of environmental and agricultural weeds in the Goulburn Broken Catchment. The third edition now includes aquatic weeds.

For additional copies of this booklet or further information contact:

Goulburn Broken Catchment Management Authority

Benalla	03 5761 1611	Yea	03 5736 0100
Shepparton	03 5820 1100		

Department of Primary Industries

Alexandra	03 5772 0200	Benalla	03 5761 1611
Broadford	03 5784 0600	Echuca	03 5482 1922
Mansfield	03 5733 1200	Seymour	03 5735 4300

The Goulburn Broken Catchment



Legislative Requirements

In Victoria, Declared Noxious Weeds are classified as State Prohibited, Regionally Prohibited, Regionally Controlled and Restricted.

State Prohibited Weeds

State Prohibited Weeds either; do not yet occur in Victoria but pose a significant threat if they were to invade, or are present, pose a significant threat and it is reasonable to expect that they can be eradicated from the State.

Control of State Prohibited Weeds is the responsibility of DPI wherever they occur across the State.

Regionally Prohibited Weeds

Regionally Prohibited Weeds are not widely distributed across the region but are capable of spreading further. It is reasonable to expect that these weeds can be eradicated from the region.

Control is the responsibility of both public and private land managers on their land and Vic Roads on Declared Roads under the Victorian Transport Act 1983, and DPI on roadsides.

Regionally Controlled Weeds

Regionally Controlled Weeds exist in the region and are usually widespread. Continued control measures are required to prevent further spread to clean land.

Control is the responsibility of both public and private land managers on their land and Vic Roads on Declared Roads under the Victorian Transport Act 1983.

Restricted Weeds

Restricted weeds seriously threaten primary production, Crown Land, the environment or community health in another State or Territory and have the potential to spread into and within Victoria. If sold or traded in Victoria there would be an unacceptable risk of it spreading within Victoria and to States and Territories.

There is no requirement for land managers to control restricted weeds on their property. However, they cannot be traded or transported within Victoria.

Undeclared Weeds

These weeds are not classified under the Catchment and Land Protection Act 1994 (Vic.), but are recognised as a serious threat to agriculture and the environment.

Weeds of National Significance

In order to implement the National Weeds Strategy, 20 weeds of National Significance have been identified, which require coordinated action across all States and Territories to reduce their impact on Australia's productive capacity and natural ecosystems. The weeds were determined according to their:

- invasiveness;
- impact;
- potential to spread; and
- socioeconomic and environmental values.

How to use this Booklet

The shaded months in this calendar are a guide to indicate the optimum treatment time for each weed in an average year. Treatment times may vary slightly due to topography and local seasonal conditions.



The chart above indicates the optimal treatment times are May, June, July and August, depending on seasonal conditions.

P Indicates that the weed is a perennial (growing cycle lasts for more than two seasons).

A Indicates that the weed is an annual (growing cycle lasts one year).

The weeds in this booklet are divided into two sections with each page containing a photograph and a botanical description of the weed. The classification of the weed under the Catchment and Land Protection Act 1994 is listed at the top of each page. A description of these classifications is included on pages 4 and 5.

Pages shaded **ORANGE** in this booklet identify State Prohibited and Regionally Prohibited weeds, as well as two Regionally Controlled noxious weeds (Blackberry and Gorse) considered to be high priorities in the Goulburn Broken Catchment.

Pages shaded **GREEN** in this booklet identify other weeds considered to pose a threat to agriculture and the natural environment in the catchment. These include Regionally Controlled and Restricted weeds, as well as a number of undeclared weeds.

Note: A review of Victoria's declared noxious weeds is currently being undertaken and as a consequence the weed classifications described in this booklet may change.

How weeds spread

Weeds may be spread by many or all of the ways represented below. For the purposes of this booklet, only the most significant methods of spread have been indicated for each weed.



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



Movement of seed or plant pieces in contaminated soil



Seed eaten or carried by birds and animals



Seed eaten by waterfowl



Seed or plant pieces carried by water



Seed blown by wind



Plant pieces spread by boat



Seed eaten by stock



Seed or plant pieces carried on equipment, vehicles and machinery



Seed or plant pieces spread by cultivation



Seed spread by slashing or mowing

Control Options

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



Spot spray foliage with appropriate herbicide*



Cut and Paint with appropriate herbicide*



Mechanical removal



Hand weeding



DPI responsible for control



Cultivation prior to flowering

* There are restrictions on the use of some chemicals within the Goulburn Broken Catchment. When using herbicides consult an agronomist or rural merchandise store for advice on the appropriate herbicide for your situation and use in accordance with the manufacturer's label.

African Lovegrass

Eragrostis curvula

(Weeping Lovegrass, Fyngrass, Boer Lovegrass)



Description: A vigorous tussocky grass, growing to 120 cm tall and reproducing by seed.

Flowers: Same colour as the plant. Found in clusters on small branches at the end of each stem. Each cluster may contain 3-14 flowers up to 10 mm long and 1mm wide. Flowers in Summer.

Leaves: Vary from green to blue green, usually hairless and curled at the edges. Blades 25–35 cm long and 3 mm wide. Obvious ridges run the length of the leaves making them rough to the touch. A conspicuous ring of hairs between the leaf blade and its covering sheath.

Stems: Slender and erect. Sometimes bent at the lower nodes.

Note: A highly persistent summer weed that will dominate disturbed or sparsely covered areas.

Similar Native Species: Could be confused with several native *Eragrostis* species including Weeping Lovegrass *E. parviflora*.



CONTROL OPTIONS



VECTOR OF SPREAD

Alligator Weed

Alternanthera philoxeroides



Description: Generally aquatic but can be terrestrial. May form a free-floating mat or be rooted with surface growth.

Flowers: Silver/white flower heads 1.2-1.4 cm diameter on 2-7cm stems growing from leaf axils. Flowers generally produced from January to March.

Leaves: Dark green, smooth and waxy. 2-7 cm long and tapering at the tip. Growing in opposite pairs along the main stem with veins clearly visible.

Stems: 10-70cm long, yellow to dark green and often branched. Usually hollow and forming large dense mats.

Note: Highly invasive and destructive weed. Chokes waterways, depletes oxygen and collects sediment. **Weed of National Significance.**

Similar Native Species: Could be confused with knotweeds (*Persicaria* spp.) when immature and without flowers. Also confused with other, less invasive, introduced *Alternanthera* species, such as Mukunu Wenna (*A. sessilis*), used in some Asian cooking. It is unlikely to be confused with the native species, *A. denticulata*.



CONTROL OPTIONS



VECTOR OF SPREAD

Amsinckia

Amsinckia spp

(Yellow Burr Weed, Buckthorn, Tar Weed, Yellow Gromwell)



Description: An erect herb between 20-70 cm tall.

Flowers: Bright yellow to orange in small 5 petal trumpets. Usually grouped in a curved spike 5-15 cm long. Flowers appear between July and October.

Leaves: Up to 20 cm long and covered in hairy bristles. Rosette and base leaves occur on short stalks, upper leaves clasp the stem.

Stems: Erect and sometimes branched. Covered with hairy bristles.

Note: Highly competitive and a prolific seeder which can significantly reduce cereal crop yields.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

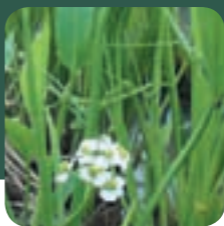


VECTOR OF SPREAD

Arrowhead

Sagittaria graminea

(*Sagittaria*, Delta Arrowhead, Slender Arrowhead)



Description: Emergent aquatic herb that is rooted in the soil. Spreads from seed, rhizomes and tubers.

Flowers: White to pink and always below leaf height. 3 cm in diameter formed in three flowered whorls at the end of stalks, each with three sepals and three petals. Appear from January to May.

Fruit: In clusters 5-15 mm wide amongst flower heads.

Leaves: Emergent leaves broad and then tapering to a point. 10-25 cm long, 2-8 cm wide and on stems with triangular cross-section. Submerged leaves are strap like and up to 50 cm long and 2.5 cm wide.

Stems: Erect or occasionally bent near the middle. Up to 20 cm long and ending in flower clusters.

Note: Competitive weed of waterways and rice fields. A particular threat to natural lagoons and backwaters.

Similar Native Species: Could be confused with water plantain (*Alisma plantago-aquatica*). Juvenile form can be confused with other species in the same family (*Alismataceae*), before mature, upright leaves develop, including *A. plantago-aquatica* and *Damasonium minus*.



CONTROL OPTIONS



VECTOR OF SPREAD

Arum Lily

Zantedeschia aethiopica

(Calla Lily, Death Lily, Funeral Flower, Lily of the Nile, Pig Lily)



Description: Robust herb with thick rhizomous roots, forming a tuft of fleshy-stalked green leaves to 1 m tall.

Flowers: Yellow inside a large white sheath. All year.

Leaves: Dark green, glossy, 15-45 cm long and 10-25 cm wide. Arrowhead shaped.

Leaf stems: Robust, 50-100 cm long and growing from rhizomes.

Roots: White, long, fleshy and occasionally branched. Growing from rhizome at the base of the stem.

Note: Most of the spread has been a result of careless garden waste disposal.

Similar Native Species: Could be confused with Monochoria (*Monochoria cyanea*) or Pickerel Weed (*Pontederia cordata*), if not in flower.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Bathurst Burr

Xanthium spinosum



Description: An erect herb with many branches, usually 30-60 cm tall. Can exceed 1 m tall in favourable conditions.

Flowers: Inconspicuous creamy green flowers formed at the end of stems and at leaf nodes during Summer.

Leaves: Shiny dark green above and pale green and downy underneath. Leaves are alternate and clasp the stem. Prominent central vein.

Stems: Greenish yellow and covered in fine hairs. Sharp golden spines to 2.5 cm shoot from the base of leaves.

Fruit: Brown/straw coloured burr, 1-1.5 cm long. Covered with small hooks. Usually single along stem.

Note: Burrs are one of the worst causes of vegetable contamination in wool. Competes with desirable plants and has vicious spikes, which cause damage to the feet of stock and severe discomfort to people when handling wool.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Bindweed

Convolvulus arvensis

(Field Bindweed, Morning Glory)



Description: A twinning herb that grows along the ground.

Flowers: White to dark pink, funnel shaped and up to 3 cm in diameter. Occurring on stems shooting from leaf axils up to four at a time. Each flower only lasts one day and they appear between Spring to early Autumn.

Leaves: Alternate and arrow shaped on short stalks, dark green and generally between 2-5 cm long.

Stems: Prostrate or climbing and growing up to 2 m long. Sometimes has short hairs and tends to spiral towards the tips.

Note: Strong competitor in cropping situations where its extensive root system robs desirable plants of moisture. Spreads from seed and root pieces. Similar in appearance to native Bindweed's, although generally much larger.

Similar Native Species: Could be confused with native Bindweed *Convolvulus erubescens*.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Blackberry

Rubus fruticosus spp. agg.

(Bramble)



Description: An erect woody bush with scrambling and prickly stems (canes).

Flowers: White to pink flowers with 5 petals form in clusters at the end of branches. Flowers from December to February.

Leaves: Oval, dark glossy green on the upper side and lighter underneath with fine hairs. Edges lightly serrated. Leaves shed in winter.

Stems: Erect or sprawling canes up to 7 m long. Green to reddish purple and covered in curved thorns.

Fruit: Produced from December - March. Initially hard green cluster of berry segments turning to red then black on ripening.

Note: Invades natural watercourses as well as agricultural land. Inhibits natural regeneration and reduces agricultural productivity. **Weed of National Significance.**

Similar Native Species: Could be confused with native *Rubus* species, such as the Small-leaf Bramble, *Rubus parvifolius*.



CONTROL OPTIONS



VECTOR OF SPREAD

Black Knapweed

Centaurea nigra

(Common Knapweed, Knapweed, Lesser Knapweed, Spanish Buttons)



Description: An erect herb growing to 1m tall and spreading by creeping lateral roots.

Flowers: Reddish-purple flowers with forked outer petals. 3-4 cm in diameter occurring singly at the end of branches from December to February.

Leaves: Grey/green to green, hairy and oblong shaped. Lower leaves can be toothed or smooth edged and up to 25 cm long. Upper leaves are much smaller and clasp stem.

Stems: Erect up to 1 m. Ridged, hairy and rough to touch. Initially green but turning purple when mature.

Note: Prohibits the germination and growth of desirable species and is not grazed by stock.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

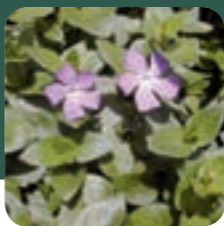


VECTOR OF SPREAD

Blue Periwinkle

Vinca major

(Greater Periwinkle, Periwinkle, Sorcerer's Violet, Vinca)



Description: Perennial creeper to 50 cm tall with lateral stems to 2 m. Forms dense mats smothering other desirable plants.

Flowers: Single blue occasionally white, in leaf-axils. Tube is usually 2 cm long with 5 petals (lobes) 1.5-2 cm long. Petals are square at ends. Appear from May to December.

Fruit: 1-4 seeds contained in paired woody follicles, 2-5 cm long and 1 cm wide.

Leaves: Opposite, broad, glossy, 3-8 cm long and 1-4 cm wide. Margins with hairs.

Stems: Mostly green turning woody at the base.

Note: Able to spread rapidly in heavily shaded conditions. Often spread through the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Box Elder

Acer negundo

(Ash-Leaf Maple, Black Maple, Box Elder Maple)



Description: Deciduous tree to 20 m tall.

Flowers: Male flowers clustered and hanging. Female flowers on a single long drooping branched stalk. Male and female flowers are on different plants. Flowers from September to November.

Fruit: Winged and 3-4 cm long in pairs.

Leaves: Contain 3-7 leaflets, each 4-12 cm long and 2-4 cm wide with a slightly larger leaflet at the end.

Stems: Brownish grey bark, smooth when young and becoming flaky with age.

Note: Often spread by the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Boxthorn

Lycium ferocissimum

(African Boxthorn)



Description: An erect spiny shrub to 5 m tall with spreading branches.

Flowers: White with some purple markings, appearing mainly in Summer but also at other times. 1 cm in diameter and containing of 5 petals. Occurring singly or in pairs. Appears from June to October.

Leaves: Oval, glossy green and appearing in clusters. 3.5 cm long and fleshy when plant is active and shed when the conditions are unfavourable.

Stems: Erect, woody, much branched, bearing spines of up to 15 cm along and at the end of branches.

Fruit: Drooping on short stems and 1 cm in diameter. Green to red when mature. Contains many small seeds.

Note: Forms dense, impenetrable thickets, restricting stock and human access to water, tracks and fences etc. Spikes can cause injury and puncture car tyres. Harbours pest animals.

Similar Native Species: Could be confused with the Australian Boxthorn, *Lycium australe*, though flower differs slightly, and thorns are positioned between nodes, rather than on nodes, as *L. ferocissimum*.



CONTROL OPTIONS

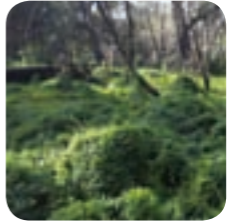


VECTOR OF SPREAD

Bridal Creeper

Asparagus asparagoides

(African Asparagus Fern, Bridal Veil Creeper, Similax)



Description: A climbing herb with an extensive tuberous root system.

Flowers: Greenish-white, 8-9 mm in diameter and appearing in leaf axils between August and September.

Fruit: A round berry 6-10 mm in diameter. Green, turning red and sticky when mature.

Leaves: Oval, glossy green and alternate with pointed tips. Usually 1-4 cm long and 0.5-1.5 cm wide.

Stems: Slender, twining and up to 3 m long.

Note: Highly competitive and invasive in natural bushland and orchards. Climbs on and chokes understorey species. Often spread by the careless disposal of garden waste. **Weed of National Significance.**

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS

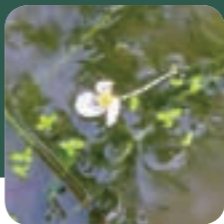


VECTOR OF SPREAD

Cabomba

Cabomba caroliniana

(Fanwort)



Description: Mostly a submersed aquatic herb. Usually rooted but sometimes free-floating in mats.

Flowers: White or cream, sometimes with a pink tinge at the end and 2 yellow spots at the base of each petal. 2 cm in diameter and consisting of 3 petals on short stalks. Appearing between November and March.

Leaves: Submerged leaves opposite or in whorls. Finely divided into many segments that form a fan shape approximately 3 cm long. Surface leaves narrow, 2 cm long and sometimes forked at the tip.

Stems: Slender, branched to 2 m long and covered in a thin mucilaginous (slimy) coating.

Note: Popular aquarium plant. Spreads easily from stem fragments and can restrict water flows. **Weed of National Significance.**

Similar Native Species: Could be confused with Hornwort (*Ceratophyllum demersum*), though Hornwort has a stiffer texture.



CONTROL OPTIONS



VECTOR OF SPREAD

Caltrop

Tribulus terrestris

(Bindii, Cats Head, Goats Head, Yellow Vine)



Description: A prostrate Summer growing annual.

Flowers: Yellow, 8-15 mm in diameter with 5 petals.
Growing from leaf axils in early Summer through to Autumn.

Leaves: Darker on top and slightly hairy underneath. Each leaf consists of 4-8 pairs of small leaflets 5-12 mm long.

Stems: Numerous green to reddish-brown stems radiating from a central crown. Up to 2 m long and sometimes slightly erect when competing for space or light.

Fruit: A woody burr with sharp rigid spines up to 6 mm long, splitting into 5 segments when mature.

Note: Caltrop burrs damage the feet of animals and are a painful nuisance to people, especially on playing fields, walkways and around buildings.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS

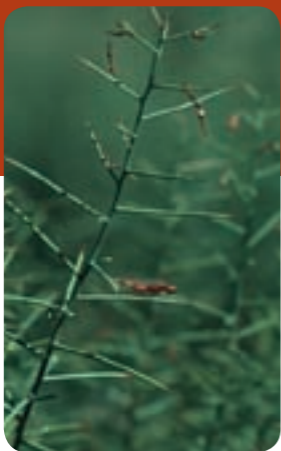


VECTOR OF SPREAD

Camelthorn

Alhagi maurorum

(Camel Thorn Bush, Caspian Manna)



Description: An erect spiny shrub to 1.5 m tall.

Flowers: Red/brown pea like flowers, 7-10 cm long, produced in clusters of up to 8 on short branches and along spikes. Flowering occurs from late Spring to Summer.

Leaves: Up to 2.5 cm long, pale green and usually solitary at the base of spines.

Stems: Rigid and much branched bearing 1-2.5 cm spines with fine golden tips.

Fruit: A reddish brown pod 2.5 cm long containing 1-5 well-defined seeds.

Note: A hardy and vigorous plant with an extensive root system.

Similar Native Species: Could be confused with native Bitter-pea species including *Daviesia genistifolia*.



CONTROL OPTIONS



VECTOR OF SPREAD

Cape Broom

Genista monspessulana

(Canary Broom, French Broom, Genista, Montpellier Broom)



Description: An erect shrub to 3 m tall and reproducing by seed.

Flowers: Bright yellow, pea like and about 1.2 cm long. Appearing late winter through spring in clusters of up to 9 in leaf axils and at the of branches.

Leaves: Shortly stalked and made up of 3 leaflets that are hairy underneath. Middle leaflet longer than others.

Stems: Erect, woody, ridged and finely hairy. One main stem with many branches.

Fruit: Silky black or brown pods containing 5-8 seeds that are ejected on hot days in summer.

Note: Spreads readily through seed ejection. Forms dense stands excluding other vegetation.

Similar Native Species: Unlikely to be confused with native species, though may be confused with other introduced brooms.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Cape Tulip

Moraea flaccida and *Moraea miniata*



Description: 30-60 cm tall reproducing from seed and corms.

Flowers: Orange or pink (occasionally yellow) with a yellow throat. 3-5 cm diameter with 6 petals. Appearing in clusters at the end of branches in September-October.

Leaves: Flat, ribbed, 1-2 cm wide and up to 1m long.

Stems: Stiff, erect, somewhat alternate and branched near the top.

Fruit: Green, turning brown when mature. A thin capsule, approx 5 cm long.

Note: Toxic to stock. There are two varieties of Cape Tulip; One leaf and Two leaf. The description and lifecycle for both are very similar except Two leaf Cape Tulip does not produce viable seed and instead develops a cluster of many small cormils at the leaf axis and the base of the plant. The flowers are also slightly smaller and the plant produces 2-3 leaves rather than one.

Similar Native Species: Unlikely to be confused with native species.

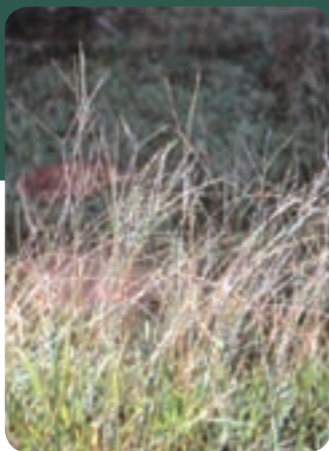


CONTROL OPTIONS



VECTOR OF SPREAD

Carpet Grass

Axonopus affinis

Description: Creeping, shallow-rooted, Summer-growing perennial grass that can form dense mats.

Flowers: Between 2-5 spreading, spike like racemes. Spikelets are arranged in rows along raceme, with each containing 1 white-pale yellow floret.

Leaves: Smooth, hairless and flat with a rounded base. Between 5-20 cm long and 2-6 mm wide.

Fruit: Numerous, small, light seeds 1.8 mm long and 0.8 mm wide.

Note: Occurs over a wide range of soil types and climates. Most common in damp or swampy conditions.

Similar Native Species: Could be confused with native Windmill Grass *Chloris truncata* or Couch Grass *Cynodon dactylon*.



CONTROL OPTIONS

VECTOR OF SPREAD

Castor Oil Plant

Ricinus communis

(Castor Bean Plant, Maple Weed, Palma Christi)



Description: Shrub to about 6 m tall containing toxins harmful to humans and stock.

Flowers: Upper flowers female with separate male flowers lower on the same plant. Reddish and produced in Summer. Appears from October to February.

Fruit: Seed 1-1.5 cm long in a soft, spiny, 3-celled green capsule to 2 cm long that dries to become reddish-brown. Seeds ejected explosively.

Leaves: Palmate leaves up to 50 cm across with 6-9 uneven lobes with a serrated edge. Leaves produce an unpleasant smell when crushed.

Stems: Hollow.

Roots: Thick and fibrous.

Note: 2-8 seeds can kill a human.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Chilean Needle Grass

Nassella neesiana



Description: Tussock grass growing to about 1 m tall.

Flowers: A loose flowering head to 40 cm long. Appears between March and August.

Leaves: Narrow, hairless or sparsely hairy, flat or slightly rolled leaves, up to 30 cm long and 5 mm wide.

Seed: Raised crown consisting of a sheath with a ridge of small teeth that encircles the base of the awn (long 'tail' of seeds). The awn is 60-90 mm long and bent at two points. The seed is 8-10 mm long, pale brown, warty and usually lacking hairs. The bracts around the seed are purple. Stem seed is also produced at swelling along the stem. The base of the leaves conceals the stem seed.

Note: Invades native grasslands and agricultural land. Is difficult to control selectively. **Weed of National Significance.**

Similar Native Species: Could be confused with a number of native Spear grasses (*Austrostipa* spp).



CONTROL OPTIONS

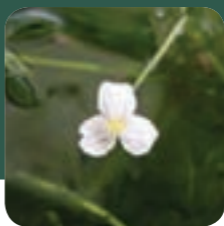
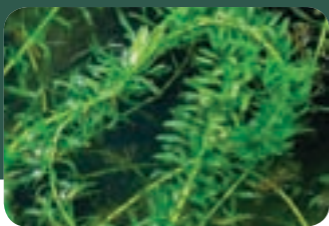


VECTOR OF SPREAD

Dense Waterweed

Egeria densa

(*Egeria*, Leafy Elodea, Giant Elodea, Pondweed)



Description: A submerged aquatic herb. Usually rooted but sometimes free floating.

Flowers: White with 3 petals 9-11 mm long and on thread-like stems up to 7.5 cm long growing from upper leaf axils. Appear between November and March.

Fruit: On female plants only. Not yet recorded in Australia.

Leaves: Dark green-brown, 1.5-3 cm long, 3-5 mm wide and tapering to a point. Stem clasping with a faint midrib. Lower leaves opposite and upper leaves in whorls of 3-7.

Stems: Green-brown, slender, branched and up to 5 m long.

Note: Forms extremely dense stands that can retard water flow. Spreads from plant fragments.

Similar Native Species: Could be confused with *Hydrilla* (*Hydrilla verticillata*). Could also be confused with the introduced *Elodea canadensis*.



CONTROL OPTIONS



VECTOR OF SPREAD

Desert Ash

Fraxinus angustifolia

(Narrow Leaf Ash)



Description: Deciduous tree to 20 m tall and freely suckering from roots.

Flowers: Inconspicuous, green or purple in branched clusters, without petals and appearing before leaves. Appears between October and February.

Fruit: Green, 3-4 cm long on drooping stalks and in large clusters turning brown when ripe.

Leaves: Opposite, 14-20 cm long, divided into 5-7 (occasionally more) leaflets 5-8 cm long and 5-20 mm wide. Tapering at each end.

Stems: Greyish brown with prominent ridges.

Note: Often spread by the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS

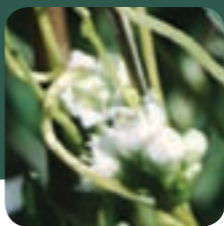


VECTOR OF SPREAD

Dodder

Cuscuta spp.

(Beggar Vine, Golden Dodder)



Description: Twining parasitic herb that reproduces by seed. Forms dense mats along river banks.

Flowers: White to creamy pink, bell shaped and 4 mm in diameter. Formed in clusters between Spring and Autumn.

Fruit: Globular capsules containing up to 4 tiny brown-grey seeds.

Leaves: Tiny inconspicuous scales.

Stems: Bright yellow to green, thread like and twining with numerous branches. Twists tightly around host plants.

Note: Dodder damages both agricultural and native plants. It has been recorded on over 80 different host plants in Victoria.

Similar Native Species: Native and introduced species of *Cuscuta* occur in Victoria, and these could be confused.



CONTROL OPTIONS



VECTOR OF SPREAD

English Broom

Cytisus scoparius

(Broom, Common Broom, Scotch Broom, Spanish Broom)



Description: An erect deciduous woody shrub to 3 m tall.

Flowers: Pea like, bright yellow and sometimes with red markings. 2-2.5 cm long occurring singly or in pairs in leaf axils. Flowers occur from October to December.

Leaves: Shortly stalked and occurring singly or in clusters. Each leaf consists of three leaflets except on new growth. Leaflets softly hairy. Middle leaflet longer than others.

Stems: Green to brown with prominent ridges, erect woody with numerous branches.

Fruit: Brown to black pod to 5cm long containing 6-20 seeds.

Note: Invades bushland, especially after disturbance.

Similar Native Species: Unlikely to be confused with native species, though may be confused with other introduced brooms.

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



CONTROL OPTIONS

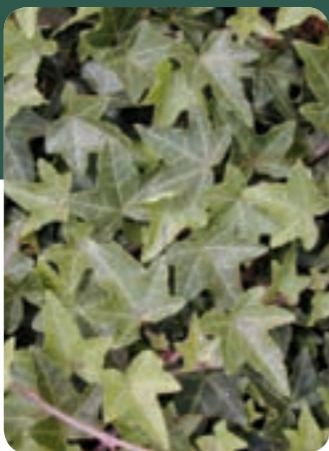


VECTOR OF SPREAD

English Ivy

Hedera helix

(Canary Ivy, Common Ivy, Ivy)



Description: Perennial growing to 30 m in length that can form dense mats and prevent revegetation.

Flowers: Greenish-yellow, in large clusters and each flower is 1.5-4 cm long. Flowers between March and July.

Fruit: Globular black berry with 1-3 hard seeds.

Leaves: Alternate, usually glossy, dark green and lighter on underside. Juvenile (young) leaves are hand-shaped with 3-5 fingers (lobes) and have lighter veins, turning heart-shaped when mature.

Stems: Green, flexible and scrambling when young, turning woody when mature. Climbing stems have roots along the underside.

Roots: Climbing roots, 1-3 mm long on underside of stem. Stems re-shoot at nodes when cut.

Note: Spread by seed and stems. Often spread by the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

VECTOR OF SPREAD

Feathertop Grass

Pennisetum villosum

(Long-style Feather Grass, Feather Grass, Foxtail)



Description: A tussock-forming perennial that grows near the urban fringe on disturbed, moist soils.

Flowers: A feathery spike with bristles, pale green or purple colour and 2-12 cm long. Appearing in late Summer.

Leaves: Strongly ribbed, flat or folded blades with a green or blue-green colouration. Can range in length from 6-30 cm long, with a width of 2-6 mm and up to 6 leaves per stem.

Stems: Erect and cylindrical, up to 90 cm long with several sprouting from one crown. Slender and generally without hairs except at the base of the flower.

Note: Seeds germinate but rarely survive, with most reproduction occurring from the crown or rhizomes that shoot in spring and summer.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Fennel

Foeniculum vulgare

(Aniseed, Sweet Anise)



Description: An erect herb, 1.5-2.5 m tall.

Flowers: Branching from the top of the stem in groups of 15 to 20. Flowers are 2 to 3 mm in diameter and yellow in colour. Appearing in Summer.

Leaves: Stringy and up to 45 cm long. The leaves have a very strong aniseed scent when crushed. Often formed at the base of the plant and break down as the plant becomes mature.

Stems: Smooth with faint ridges and heavily branched with a number of stems emerging from the crown. The stem is also filled with spongy white pith.

Note: Spread easily by soil disturbance through movement of bulbs. Usually found in moist places (e.g. roadsides, channel banks and depressions).

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

VECTOR OF SPREAD

Tall/Flax-leaf Fleabane

Conyza albida/*C. bonariensis*

(Hairy Fleabane, Hairy Horseweed, Rough Conyza, Wavy-leaf Fleabane)



Description: Erect herb with fine hairs. Tall fleabane growing 1-2 m high and Flax-leaf fleabane growing 20-70 cm high.

Flowers: Creamy white or occasionally purplish, bell-shaped and in small clusters. On short stalks at the ends of branches between Spring and Autumn.

Fruit: Small seed with a parachute of fine hairs.

Leaves: Greyish green and narrow, to 15 cm long and coarsely toothed. Upper leaves 2-8 cm long with fine teeth.

Stems: Tall fleabane differs from Flax-leaf by only having one central stem and is branched at the top, rather than the base.

Note: Both species occur in similar situations and have similar growth characteristics. Dense stands can smother native vegetation.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS

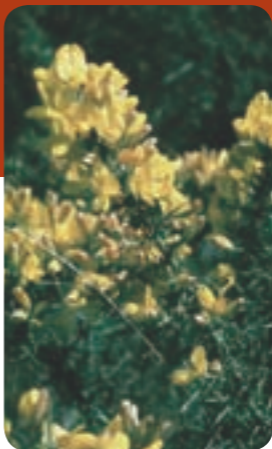


VECTOR OF SPREAD

Gorse

Ulex europaeus

(Furze, Golden Gorse)



Description: An erect, much branched shrub to 4 m tall.

Flowers: Bright yellow pea-like flowers 2-2.5 cm long. Found in leaf axils and in clusters at the end of branches. Appearing between July and October and March to May.

Leaves: Dark green, narrow and spiny, 1-2.5 cm long, stalkless and occurring in whorled clusters along the branches.

Stems: Green when young and turning to brown and woody when mature. Ridged and hairy. Covered with spines and bearing short branches with spiny ends.

Note: Introduced as a garden hedge. Prolific seeder and highly invasive. A dense stand can produce 6 million seeds per hectare per year. **Weed of National Significance.**

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Great Mullein

Verbascum thapsus

(Velvet Dock, Blanket Weed, Flannel Leaf, Aaron's Rod)



Description: An erect, densely hairy biennial herb up to 2.5 m tall.

Flowers: Yellow, 2-2.5 cm diameter, clustered on flower spike up to 1 m tall. 5 petals, 3 with fine woolly filaments. Flowers occur between January and March.

Leaves: Grey-green, covered with matted layers of short hairs. Rosette leaves are alternate and up to 50 cm long. Stem leaves tapered at the base and strongly veined underneath.

Stems: One main erect stem. Densely woolly with wings running down from leaf bases.

Note: Readily colonises less fertile sites and dominates disturbed and overgrazed areas.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Hardheads

Acroptilon repens

(Hardhead Thistle, Creeping Knapweed, Russian Knapweed)



Description: Appearance of a spike-less thistle 40 -100 cm tall.

Flowers: Small, hard, thistle like heads, solitary at the end of branches. Purple, sometimes white, 2.5 cm diameter, appears between November and February.

Leaves: Lance shaped, larger and toothed at base and smaller with edges up the stem. Grey/green with a cover of fine woolly hairs.

Stems: Erect grey/green stems arise from the centre of rosettes and have a covering of fine hair. Branched towards the top.

Note: Hardy, deep-rooted and long living. Can severely reduce crop yields.

Similar Native Species: Unlikely to be confused with native species.

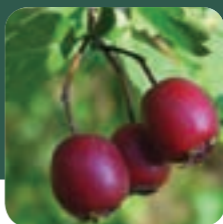


CONTROL OPTIONS



VECTOR OF SPREAD

Hawthorn

Crataegus monogyna

Description: An erect deciduous shrub to 6 m tall.

Flowers: White, cream or pink, 8-13 mm in diameter and in flat-topped clusters at the end of small branches. Strongly scented and occurring in Spring.

Leaves: Green and varying from oval to triangular. Divided into lobes and generally coarsely serrated.

Stems: Erect and branched with many small branches ending in stout spines. Bark rough at base and smoother towards the top.

Fruit: Clusters of deep red berries 8 mm in diameter.

Note: Provides harbour for pest animals and disease such as Fire Blight.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Hoary Cress

Cardaria draba

(White Weed, Hoary Pepperwort, White Top, Whitlow Pepperwort)



Description: An erect herb 15-75 cm tall.

Flowers: White, 4-6 mm diameter and contains 4 petals. Clustered at the top of the plant. Appearing between September and November.

Leaves: Covered with fine hairs, lower leaves to 10 cm long oval or wedge shaped and short stalked. Upper leaves smaller and stem claspings.

Stems: Erect, branched near top, covered with fine downy hairs. Vertically ridged.

Note: Seriously effects crop yields. Difficult to control and spread by seed and root fragments.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Horehound

Marrubium vulgare

(White Horehound)



Description: An erect bushy herb to 75 cm tall.

Flowers: White, 6-10 mm long, formed in dense rounded clusters surrounding the stem at the nodes. Flowers from Summer through to Autumn.

Leaves: Blue/green with a silvery appearance due to fine hairs on top. Woolly underneath. Crinkled, leathery, and rounded, up to 7 cm in diameter. Edge slightly serrated and veins sunken on the upper surface.

Stems: Woody at the base, covered with dense hairs and branched at the top.

Note: Widespread weed of bushland, roadsides and cropping fringes.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Horsetail

Equisetum spp.

(Field Horsetail, Scouring Rush, Snake Bean, Snake Plant)



Description: Erect, non-flowering herb with ribbed/grooved stems to 80 cm long.

Spores: Pale green to yellowish, produced in cones 1-4 cm long produced at the end of fertile stems.

Leaves: Green, in rings of 6-18 on main stems. Sheath 5-8 mm long with teeth 2-3 mm long.

Stems: 2 types (fertile and sterile), both jointed (She-oak like), ribbed/grooved and hollow to 80 cm long. Fertile stems are often shorter, whitish to brown and appear before sterile stem in early spring. Sterile stems are green and appear in late spring.

Roots: Deep growing (up-to several metres long) with dark brown to black wiry rhizomous roots.

Note: Has the ability to spread by spores, rhizomes and tubers. Potential to spread through the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Ivy-leaf Sida

Malvella leprosa

(Alkali Sida, Alkali Mallow)



Description: Semi-erect herb to 30 cm tall with silver/green appearance.

Flowers: 5 petalled and approx 2.5-3.5 cm diameter. Cream-yellow with short stalks in clusters at the end of branches. Flowers in Summer.

Leaves: Short stalked and fan shaped with prominent veins on underside. Soft silvery appearance due to cover of fine hairs.

Stems: Erect or prostrate, slender, light green and covered in fine hairs.

Note: Highly competitive and difficult to kill.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Japanese Honeysuckle

Lonicera japonica

(Gold and Silver Flower, Hall's Honeysuckle)



Description: Vine that climbs by twisting its stems around vertical structures, including the trunks and limbs of trees.

Flowers: Creamy white to yellow or occasionally pink, in pairs, 3-7 cm long. Sweetly scented with a double tongue and produced throughout Summer.

Fruit: Globular, dark-blue to black berry with many seeds.

Leaves: Opposite, oval-shaped, 3-7 cm long and 1-3 cm wide. Plant may lose some leaves during winter.

Stems: Young stems are covered with fine hairs, older stems become hollow and have brown bark that peels off in shreds. Stems produce roots at nodes when they contact soil.

Note: Spread by the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

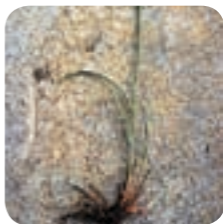
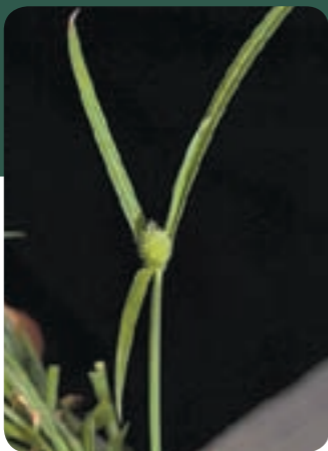


VECTOR OF SPREAD

Kylinga

Cyperus brevifolius

(Mullumbimby Couch)



Description: Shiny green perennial sedge, 15-40 cm high. Appears in Spring, seeds in Summer and dies-back over Winter.

Flowers: Green knob like spikes 3-5 mm with up to 100 tiny flowers.

Leaves: Stiff and lanceolate, branching in threes from stem nodes.

Stems: Short and stiff ending in knob like florets.

Note: Emerging weed of irrigated pastures. Stock will not readily graze. Smells sweet when crushed.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS

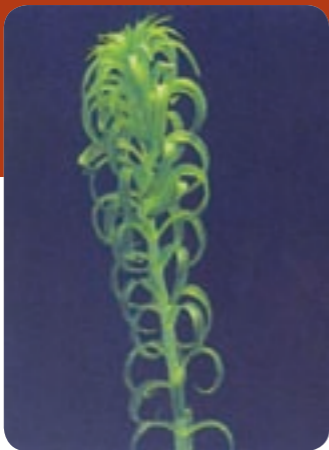


VECTOR OF SPREAD

Lagarosiphon

Lagarosiphon major

(Oxygen Weed)



Description: A branched fresh water herb that forms tangled mats under the water surface.

Flowers: Inconspicuous, purple, 3 mm across and growing on threads from the leaf axils. Appearing between Spring and early Summer.

Leaves: Stem clasping in tightly grouped spirals at the top and more loosely grouped at the base. Stiff, tapered, 5-20 mm long and curving downwards at the tip.

Stems: Ascending, brittle and branched. Up to 5 m long.

Note: Aggressive weed of reservoirs up to 7 m deep.

Similar Native Species: Could be confused with Hydrilla (*Hydrilla verticillata*). Could also be confused with the introduced *Elodea canadensis*.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Madeira Winter Cherry

Solanum pseudocapsicum

(False Capsicum, Jerusalem Cherry)



Description: A hairless evergreen shrub from 1-1.5 m tall.

Flowers: White, single or in clusters of 2-4 on short stalks. 5 lobes bending backward and tapering at ends. Appear most of the year.

Leaves: Narrow and tapered at both ends with prominent veins.

Stems: Green, erect and smooth.

Fruit: Orange to red globular berry 1-1.5 cm in diameter.

Note: Fruit and plant material are reported to have caused poisoning in stock and humans.

Similar Native Species: There are a number of native *Solanum* species, whose fruits may resemble Madeira Winterberry. However, the leaves and flowers are dissimilar. Where the leaves and flowers are similar, such as *S. esuriale*, the colour of the fruit is distinct.



CONTROL OPTIONS



VECTOR OF SPREAD

Mesquite

Prosopis spp



Description: Six species or subspecies recognised in Australia. Small tree or shrub, between 1-15 m tall.

Flowers: Yellow cylinder shaped flower spikes 5-10 cm long, clusters of 2-5 at the end of branches. Flowers in Summer.

Leaves: Bright green, consisting of 1-3 segments of 6-18 opposite pairs of leaflets. Leaflets are 5-12 mm long.

Stems: Thick and woody with grey-brown or black bark. Older bark is rough and newer growth smooth. Spikes are present on the main stem and on branches above each leaf stalk.

Fruit: Straw coloured seedpods 10-20 cm long, containing up to 20 hard black seeds.

Note: Invasive and aggressive competitors that exclude other vegetation.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Morning Glory

Ipomoea indica

(Blue Dawn Flower, Common Morning Glory, Purple Morning Glory)



Description: Fast-growing climber to 15 m long, forming a dense blanket that smothers other vegetation.

Flowers: Tubular dark-blue to purple, trumpet-shaped to 10 cm and formed between Spring and Autumn.

Leaves: Large, light green, hairy underneath with a heart-shaped base and usually having three lobes. Up to 18 cm long and 16 cm wide on a leaf stalk 2-18 cm long.

Stems: Hairy, climbing or running and producing roots where it touches the ground. Contains white sap.

Roots: Rhizomes, capable of sprouting months after removal from the ground. Stems produce roots at nodes when they contact soil.

Note: Seeds rarely appear in Australia. Spreads from existing plants. Often spread by the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Noogoora Burr

Xanthium strumarium

(Californian Burr)



Description: Erect up to 2.5 m tall, but usually under 1 m. Can be single stemmed or much branched.

Flowers: Inconspicuous, formed in clusters in leaf axils near branch tips. Flowers late Summer.

Leaves: Green and darker on upper surface. Lower leaves opposite and upper leaves alternate. Similar in shape to a maple or grape and up to 15 cm in diameter. Serrated edge and a rough texture. Prominent red/purple veins and stalks.

Stems: Blotched with purple and covered in short, coarse hairs.

Fruit: A hard, woolly, oval shaped burr with numerous spines and 2 prominent beaks on the end. In clusters of 2-13.

Note: A contaminant of wool.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Olive

Olea europaea

(Common Olive)



Description: Evergreen tree or bushy shrub from 5-15 m tall.

Flowers: Fragrant, creamy white and 4-5 mm long with 4 lobes. In small clusters throughout Spring.

Fruit: Green, turning purple to black when ripe, 2-2.5 cm long and 1 cm wide containing a hard seed.

Leaves: Opposite, glossy dark green above and silvery below. 3-8 cm long and 1 cm wide.

Stems: Erect, greenish to black and branching with rough bark.

Note: Cultivated for food, a source of oil and wood is used for cabinetwork and furniture.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Pampas Grass

Cortaderia selloana

(Common Pampas Grass, Silver Pampas Grass)



Description: A large tussock-forming grass with long narrow drooping leaves.

Flowers: White to pinkish cluster of flowers 30-90 cm long on stems to 4 m tall. Flowers between March and May.

Leaves: Bluish green above and dark green below, 2 m long and 2-4 cm wide tapering to a fine point with serrated edges.

Stems: Erect, hollow, greyish green to yellowish, 2-4 m high and 3 cm wide.

Root: Fibrous rhizomes spreading in clumps to 4m across and 3m deep.

Note: Flower plumes are capable of producing 100,000 seeds that can be blown several kilometres. Often spread by the careless disposal of garden waste.

Similar Native Species: Pampas grass is commonly confused with the Common Reed (*Phragmites australis*).

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



CONTROL OPTIONS

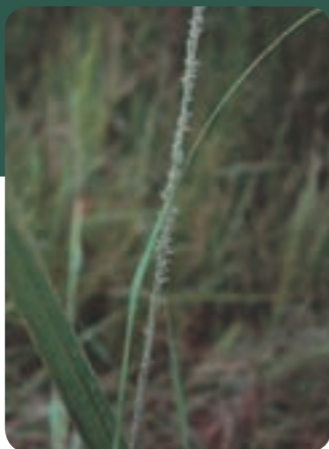


VECTOR OF SPREAD

Parramatta Grass

Sporobolus africanus

(Rats Tail Grass, African Dropseed Grass)



Description: A tough tussock grass that reproduces by seed.

Flowers: Dark slate green spikes from 6-20 cm long and 4-7 mm in diameter. Tiny spikelets display 1-2 mm flowers, and occur tightly packed against the primary axis. Occurring in mid to late Summer.

Leaves: Slender, dark green and stiff, 6-18 cm long. Growing from the base, Blades are rolled in at the edge.

Stems: Erect, dark green and slender, growing to 50 cm long.

Note: Tough, unpalatable and highly invasive of pastures. Extremely difficult to control selectively.



CONTROL OPTIONS



VECTOR OF SPREAD

Parrot's Feather

Myriophyllum aquaticum

(Brazilian Water Milfoil, Thread-of-Life)



Description: A bright green aquatic herb that forms vigorous mats of tangled stems.

Flowers: Solitary and rising on short stalks. Petals absent but stigma is prominent bearing fine hairs. Appears between June and September.

Leaves: Bright green and feathery in appearance. In tightly packed whorls at the top becoming further apart towards the base.

Stems: Slender, trailing, yellow/green, up to 5 m long and rooting from nodes at the base.

Note: Readily spreads from stem fragments. Invasive and difficult to control.

Similar Native Species: Could be confused with a number of native *Myriophyllum* species, such as Common Milfoil, *M. papillosum*.



CONTROL OPTIONS



VECTOR OF SPREAD

Parthenium Weed

Parthenium hysterophorus



Description: A branched, pale green, erect herb to 150 cm tall.

Flowers: Flower heads creamy white, 4-10 mm diameter, found in clusters at the top of branches between January and June, depending on conditions.

Leaves: Deeply divided and covered in soft white hairs. Pale green and alternate. Base leaves to 20 cm and stem leaves smaller, all with many segments.

Stems: Erect, branched in the upper half and hairy with vertical grooves.

Note: A prolific seeder and aggressive coloniser producing 15,000 seeds per plant per year. Can cause health problems such as dermatitis and asthma in some people.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

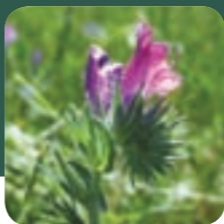


VECTOR OF SPREAD

Paterson's Curse

Echium plantagineum

(Salvation Jane, Riverina Bluebell)



Description: Erect, up to 1.2 m tall and covered with coarse hair.

Flowers: Purple (sometimes white or pink), trumpet shaped and 2-3 cm long. Occurring between August and December in curved clusters at the end of branches.

Leaves: Rosette and base leaves broad, paddle-shaped and up to 25 cm long with prominent veins. Stem leaves smaller and clasping stem.

Stems: Usually several rising from the base. Covered with hairy bristles.

Note: Can dominate grazing land and annual pastures. Toxic to some stock in large quantities.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Phalaris

Phalaris spp.

(Canary Grass, Paradoxa Grass, Toowoomba Canary Grass)



Description: Erect, tufted grass 30-150 cm tall and spreading from the base.

Flowers: Cylindrical, spike-like flower head, 1-12 cm long containing numerous spikelets 2-10 mm long and to 6 mm wide. Flowers between November and January.

Leaves: Flat, hairless, stem-clasping and bluish green to 50 cm long and 1.5 cm wide. Mainly at the base forming a clump with some along the stems.

Stems: Erect with visible nodes.

Roots: Branched rhizomes spreading from the base to form a clump.

Note: Although there are several Phalaris species common to the area, *P. aquatica* is the most common. Palatable to stock when young.

Similar Native Species: Prior to flowering Phalaris resembles a number of other grass species.



CONTROL OPTIONS

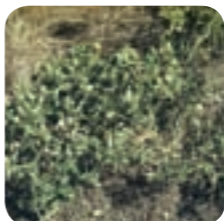


VECTOR OF SPREAD

Prairie Ground Cherry

Physalis viscosa

(Cape Gooseberry, Tomato Weed, Chinese Lantern)



Description: An erect perennial growing up to 60 cm tall.

Flowers: Yellow, bell shaped, 2-3 cm in diameter. Made up of 5 petals. Produced in Summer on short stalks from upper leaf axils.

Leaves: Light green, lance shaped with wavy margins. Fine hairs on edges and veins. 4-6 cm long and up to 4 cm wide.

Stems: Branched, spreading, vertically ribbed with very short hairs.

Fruit: An orange berry when ripe, enclosed in a bladder or Chinese lantern like case approx. 2-2.5 cm diameter.

Note: Deep rooted and difficult to control.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Ragwort

Senecio jacobaea

(St James Wort, Tansy Ragwort)



Description: Short-lived, can flower twice a year producing 250,000 seeds from a mature plant.

Flowers: Bright yellow in colour. In large clusters at the end of the branches. Each flower head is 2.5 cm in diameter with 12-15 petals surrounding it.

Leaves: Can range from dark green with few hairs to pale green, with a downy appearance. Rosette leaves can grow up to 35 cm long. Stem leaves shorter and more wrinkled.

Stems: Can grow either single or several stems from the crown. Branched at the top of the stem. Purple or reddish at the base near the crown.

Note: Causes death in stock due to liver damage. Seeds can remain viable for 8-16 years.

Similar Native Species: Unlikely to be confused with native species.



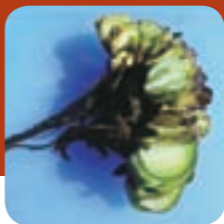
CONTROL OPTIONS



VECTOR OF SPREAD

Salvinia

Salvinia molesta (Giant Salvinia, Water Fern)



Description: A floating mat-forming aquatic fern, with slender branching rhizomes occurring just below the water surface.

Leaves: Submerged brown leaves, deeply divided on stalks, ending in hairy root-like filaments. Emergent green, oval, smooth edged and short stalked leaves. In pairs 1-5 cm wide. Top of leaves are covered with fine waxy hairs that make it water repellent.

Stems: Slender, jointed and branched to 30 cm long.

Note: Forms dense mats that restricts water flow, hinders recreational use and reduces oxygen. Reproduces entirely from vegetation fragments. **Weed of National Significance.**

Similar Native Species: Not likely to be confused with native species, though from a distance an infestation covering a pond may look like Azolla.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Senegal Tea

Gymnocoronis spilanthoides

(Temple Plant, Spadeleaf Plant)



Description: A hardy plant, often forming a mass of tangled vegetation that covers the surface of either flowing or marshy water bodies.

Flowers: White florets that are grouped into heads of up to 2 cm in diameter at the end of a branching stem. Appearing between Spring and Summer.

Leaves: Elongated to oval shaped, dark green, 5-20 cm long 2.5-5 cm wide with a slight wavy shape.

Stems: Erect at first, later becoming prostrate and scrambling. Hollow and buoyant when in water and growing from 1-1.5 m long to 1-2 cm wide when mature.

Note: A large plant can easily impede water flow in a creek. Can grow from both seeds and vegetatively through broken stem fragments.

Similar Native Species: Could be confused with knotweeds (*Persicaria* spp.) when immature and without flowers.



CONTROL OPTIONS



VECTOR OF SPREAD

Serrated Tussock

Nassella trichotoma

(Nassella Tussock, Yass River Tussock)



Description: Tussock grass up to 50 cm tall and 25 cm wide at base.

Flowers: Tiny, inconspicuous and found at the end of open branched panicles (flower heads) up to 35 cm long. Originally purple and turning straw coloured. Flowers in Summer.

Leaves: Many, tightly rolled, up to 50 cm long and emerging from the base. Finely serrated, green but becoming bleached as they mature.

Stems: Up to 1 m, erect but becoming droopy. Flower heads bear at the end of stems.

Note: Unpalatable, invasive and a prolific seeder (approx. 100,000 seeds per plant). **Weed of National Significance.**

Similar Native Species: Could be confused with native Spear grasses (*Austrastipa* spp.).



CONTROL OPTIONS



VECTOR OF SPREAD

Silver Poplar

Populus alba

(Silver-Leaf Poplar, White Poplar)



Description: Deciduous tree growing to 12 m high.

Flowers: Catkins (clusters of small flowers) 5-10 cm long. Unfertilised female flowers turn into white 'fluff' and travel in the wind. Appears between October and February.

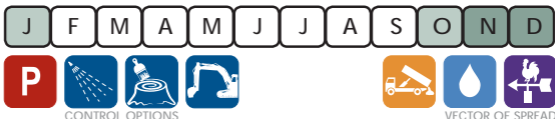
Leaves: 5-10 cm long with 3-5 lobes, bluish green on top and white underneath turning bright yellow in Autumn.

Stems: Single main stem with silvery white bark. Often sends up numerous suckers forming dense thickets.

Roots: Suckering is stimulated when soil is disturbed, damaging roots.

Note: Male flowering trees not yet recorded in Australia. Often spread by the careless disposal of garden waste.

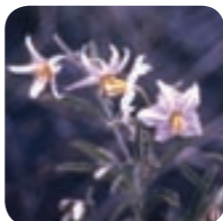
Similar Native Species: Unlikely to be confused with native species.



Silverleaf Nightshade

Solanum elaeagnifolium

(White Horsenettle, Bitter Apple)



Description: Erect, Summer growing herb, from 30-80 cm tall.

Flowers: Purple, occasionally white, to 3.5 cm diameter. 5 fused petals with 5 prominent yellow anthers. Occurring in late Spring-Summer.

Leaves: Silvery green due to dense covering of hairs. Lance shaped, to 15 cm long, with wavy margins and prickles along underside veins.

Stems: Erect, much branched and covered in fine hairs and numerous fine red prickles.

Fruit: Smooth, round berries, which start out green with darker markings and turn orange on maturing.

Note: Deep rooted and very hardy weed of Summer crops and pastures.

Similar Native Species: Could be confused with native Solanum species including Quena *S. esuriale*.



CONTROL OPTIONS

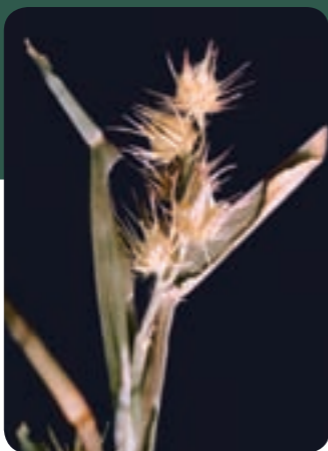


VECTOR OF SPREAD

Spiny Burr Grass

Cenchrus longispinus

(Innocent Weed, Gentle Annie, Sandbur, Burgrass, Field Burr)



Description: An erect spreading grass to 60 cm tall.

Flowers: A spike like head 3-8 cm long, contains up to 40 burrs, each made of 4 florets covered with spines. Spines fine and purple tinged. Appears between December and April.

Leaves: To 20 cm long and 5-8 mm wide, smooth but sometimes twisted and finely serrated.

Stems: Erect or spreading. Several slightly flattened stems produced from the base. May form new roots from nodes where they touch soil.

Note: Spikes cause discomfort to people and stock and contaminate wool.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Spiny Rush

Juncus acutus

(Sharp Rush)



Description: An erect pointed tussock, 1-2 m tall.

Flowers: Dark green to rusty brown, small and in clusters near the top of stems. Appear all year round but largely in Summer.

Leaves: Dark green, cylindrical, unbranched, 3-5 mm in diameter and many rising from the crown. Tapered to a sharp spike.

Stems: Very similar to the leaves, except they bear flower clusters near the top.

Note: Invades poorer soils especially along drainage lines. Commonly harbour rabbits or foxes.

Similar Native Species: Could be confused with a number of native *Juncus* species, as well as other rush species such as *Baumea* spp.



St John's Wort

Hypericum perforatum

(Goatweed, Klamath Weed)



Description: An erect herb 80-120 cm tall.

Flowers: Bright yellow, 2-2.5 cm wide with 5 petals. In clusters at the end of upper branches. Tiny black dots along margins. Occurring between late Spring and Summer.

Fruit: 3-celled capsule, 5-10 mm long with many seeds.

Leaves: Green, lighter underneath in opposite pairs 1.5-3 cm long. Numerous small oil glands give a perforated appearance when the leaf is held up to the light.

Stems: Several woody, reddish, with two ridges and dark glands. Branched towards the top.

Note: May cause "photosensitisation" in stock.

Similar Native Species: Could be confused with native *Hypericum* species, such as Matted St. John's wort (*H. japonicum*) or Small St. John's wort (*H. gramineum*).



CONTROL OPTIONS



VECTOR OF SPREAD

St Peter's Wort

Hypericum tetrapterum

(Square Stemmed St John's Wort, Winged St John's Wort)



Description: Erect, branching herb to 1 m tall.

Flowers: Yellow, 1-1.5 cm wide, in clusters at the end of upper branches with 5 petals. Tiny black dots along the edges. Occurring between late Spring and Summer.

Fruit: 3-celled capsule, 5-10 mm long with many seeds.

Leaves: Opposite, stem-clasping, light green, to 3 cm long with visible veins and black dots along the edges.

Stems: Prostrate at base becoming erect, green to reddish brown with tiny black dots (glands). Branched, almost square with wings along the edges.

Roots: Numerous rhizomes producing new plants.

Note: Differs from St John's wort by having a square stem and prostrate stems at the base.

Similar Native Species: Could be confused with native Hypericum species, such as Matted St. John's wort (*H. japonicum*) or Small St. John's wort (*H. gramineum*).



CONTROL OPTIONS

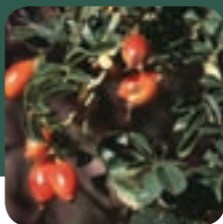


VECTOR OF SPREAD

Sweet Briar

Rosa rubiginosa

(Briar Rose, Wild Rose)



Description: Erect, thorny and woody shrub to 3 m tall.

Flowers: Pink or white, 2.5-4 cm in diameter and formed in loose clusters at the end of branches. 5 heart-shaped petals. Appear in Spring.

Leaves: Consist of 2-4 pairs of oval leaflets each 1-4 cm long. Margins serrated and slightly hairy. Hairy underneath.

Stems: Smooth when young but becoming rougher. Arched towards the top and bearing many curved thorns. Many stems from one base.

Fruit: Oval berry or "hip", green then red when mature. 2 cm long with small spikes especially at the stem end.

Note: Invades edges of watercourses and farm fringe areas.

Similar Native Species: Unlikely to be confused with native species, though may be confused with cultivated Rose species.



CONTROL OPTIONS

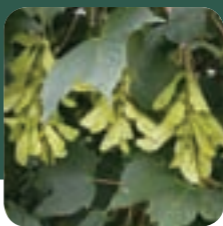


VECTOR OF SPREAD

Sycamore Maple

Acer pseudoplatanus

(Great Maple, Grief Tree, Maple, Purple Sycamore, Sycamore)



Description: Deciduous tree to 30 m tall.

Flowers: Tiny yellow flowers hanging in clusters 7-12 cm long.

Fruit: Winged, in pairs, 2-5 cm long and dispersed by wind and water. Appears in early Autumn.

Leaves: Coarse, opposite, dark green above and pale below, 7-15 cm wide with 5 lobes and a serrated edge. Some varieties produce reddish brown leaves when young, turning dark green when mature.

Stems: Greenish brown when young, turning greyish brown and scaly on mature stems.

Note: Often spread by the careless disposal of garden waste.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Thistle - Artichoke

Cynara cardunculus

(Wild Artichoke, Cardoon)



Description: A spiky erect herb to 2 m tall.

Flowers: Purple to blue in 7-13 cm heads at the end of stems. Surrounded by stiff spines. Flowers during Summer.

Leaves: Grey-green and tending towards white underneath due to a thick covering of fine hairs. Base leaves up to 90 cm long but shorter towards the top. Deeply toothed with each tooth ending with a sharp spine.

Stems: Erect, strongly ribbed and covered in hairs. Up to 2 m tall and usually 1-8 stems per plant.

Note: Will generally colonise waste areas and weaker pastures. Spread mainly by seed.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

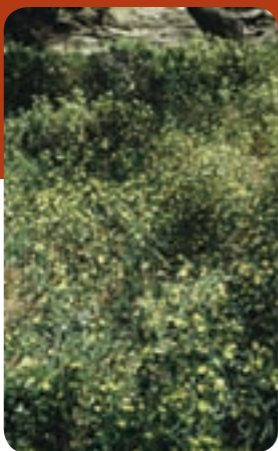


VECTOR OF SPREAD

Thistle - Golden

Scolymus hispanicus

(Spanish Oyster Plant, Spanish Salsify, Sunnariah)



Description: An erect, branched perennial to 90 cm tall.

Flowers: Golden yellow heads 2.5-4 cm in diameter on leaf axils. Heads surrounded by short spines. Appearing between Spring and Summer.

Leaves: Green with light coloured veins and markings. Leaves contain a milky sap. Deeply divided with stout spines on tips. Base of leaves make wings down the stem. Lower leaves to 30 cm long.

Stems: Erect, usually several arising from a single crown. Much branched and covered with fine hairs.

Note: Ferocious spines make dense stands almost impenetrable.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Thistle - Nodding

Carduus nutans



Description: An erect annual or biennial growing to 1.6 m tall.

Flowers: Pink, red, purple or occasionally white. Formed in drooping solitary heads at the end of branches surrounded by stiff spines. 4-8 cm in diameter and covered in a fine down. Occur between Spring and Summer.

Leaves: Green, rosette leaves up to 50 cm long with spikes around the margins. Pale toothed margins and pale prominent mid veins. Stem leaves smaller, deeply toothed, stem clasping with wings running down the stem from the leaf base.

Stems: Erect, winged and downy or cobwebby. Branched towards the top.

Note: Forms dense unpalatable stands. Competes with pastures.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS

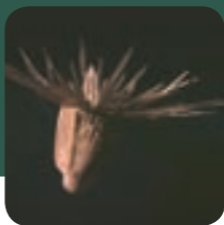


VECTOR OF SPREAD

Thistle - Saffron

Carthamus lanatus

(False Star Thistle, Woolly Safflower, Distaff Thistle)



Description: Erect, spiny, up to 1 m tall.

Flowers: Yellow or cream with faint red or black lines. Solitary heads at the end of branches and surrounded by sharp spiky bracts. Occurring between November and December.

Leaves: Lower leaves deeply toothed, 20 cm long and stem clasping. Stem leaves alternate and stiff with vicious spikes. Prominently veined and sometimes downy on upper surface.

Stems: Straw coloured, rigid and ribbed. Single stem branched at the top.

Note: Contributes to contamination of wool.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Thistle - Slender/Shore

Carduus tenuiflorus and *C. pycnocephalus*

(Italian Thistle, Plymouth Thistle, Sheep Thistle, Winged Slender Thistle)



Description: Erect annual plant, with spiny leaves and stems and has a stout taproot.

Flowers: Slender pink or purple flower heads surrounded by rows of spines. Usually in groups of 2 or 3. Appears between March and September.

Leaves: Rosette leaves are slightly woolly, particularly on lower surface.

Stems: Spiny green stems, branched and may have single or multiple stems from the base.

Note: *C. pycnocephalus* often has visible white patches along veins at the base of spines (never in *C. tenuiflorus*).

Similar Native Species: Unlikely to be confused with native species.



Thistle - Spear

Cirsium vulgare

(Bull Thistle, Black Spear Thistle, Scotch Thistle, Swamp Thistle)



Description: An erect annual or biennial thistle up to 1.2 m tall.

Flowers: Pinkish purple, 3-5 cm spiky heads either solitary or small clusters at the end of branches. Flowering between late Spring and Autumn.

Leaves: Rough and hairy. Dark on upper side, lighter and hairier underneath. Deeply toothed with spiky margins. Base leaves to 35 cm and stalked, stem leaves to 25 cm and clasping the stem.

Stems: Branched towards the top, hairy and spiky.

Note: Readily colonises disturbed or overgrazed areas.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Thistle - St Barnaby's

Centaurea solstitialis

(Yellow Star Weed, Yellow Centaurea, Golden Star Thistle)



Description: An erect annual or short lived perennial thistle, to 75 cm tall.

Flowers: Bright yellow on oval shaped heads 1-1.5 cm long. Solitary at the end of branches and surrounded by sharp golden spines. Flowers between late Spring and Summer.

Leaves: Silver/green due to a covering of downy hairs. Lower leaves deeply toothed, 20 cm long. Upper leaves narrow, 5 cm long and clasping the stem, forming wings running downwards.

Stems: Branched, downy, winged and without spikes.

Note: Competes with, and restricts the growth of pastures and crops.

Similar Native Species: Unlikely to be confused with native species.



Thistle - Star

Centaurea calcitrapa

(Purple Star Thistle)



Description: An erect bushy annual or biennial growing to 1 m tall.

Flowers: Flower heads purple, occasionally white or pink. Surrounded by sharp spines. Occurring singly at the end of branches between Spring and early Summer.

Leaves: Dark green, hairy and without spines. Lower leaves deeply lobed and up to 25 cm long. Upper leaves much smaller, clasping stem and lance shaped.

Stems: Many straggly branches, pale and hairy when young, becoming smooth.

Note: Competes with crops and pastures and may harbour pest animals.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Thistle - Stemless

Onopordum acaulon

(Flat Thistle, Horse Nettle)



Description: A prostrate annual or sometimes biennial, which reproduces by seed.

Flowers: White to purple in 6 cm heads, clustered in the centre of plants. Each head surrounded by many spiny bracts. Occurring in Spring.

Leaves: Arranged in a large rosette. Silvery and woolly to 40 cm long, on short stalks. Deeply toothed and spiky along edges.

Stems: Absent.

Note: Flat form crowds out large areas of pasture.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Thistle - Variegated

Silybum marianum

(Cabbage Thistle, Gundagai Thistle, Lady's Thistle, Milk Thistle)



Description: Beginning bushy, but becoming an erect thistle to 2.5 m tall.

Flowers: Purple, in large heads to 13 cm in diameter and surrounded by sharp spines. Solitary at the end of branches. Flowering between October and December.

Leaves: Shiny green with white blotches and markings, duller and hairy underneath. Lower leaves to 60 cm long, wavy with spiky margins. Upper leaves smaller and stiffer.

Stems: Stout, hollow or pith filled, ribbed and usually branched.

Note: Very competitive in highly fertile pastures.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Thorn Apple

Datura spp.

(Angel's Trumpet)



Description: Erect bushy annual or perennial to 1.5 m tall.

Flowers: White, pink to purple, trumpet shaped to 20 cm long. Growing singly from forks of branches. Flowers between Spring and Summer.

Leaves: Alternate, to 35 cm long and oval or broadly triangular. Wavy margins and prominent veins. Unpleasant odour when crushed.

Stems: Erect, green (but sometimes purple tinged), forked and slightly hairy.

Fruit: Capsule 2-5 cm in diameter with stout spines splitting into 4 segments.

Note: Three species declared in Victoria but all have similar characteristics. Most common is *D. stramonium* or Common Thorn apple. All parts poisonous to humans and some stock.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Tutsan

Hypericum androsaemum

(Sweet Amber)



Description: Erect shrub 1-1.5 m tall.

Flowers: Yellow, 2-3 cm in diameter, in clusters at the ends of branches, with 5 petals and numerous stamens. Flowers between Spring and Summer.

Fruit: Globular, 3-celled berry to 8 mm in diameter, changes from green to red to black as it matures.

Leaves: Opposite, stem claspings, green with a reddish appearance in Autumn and to 10 cm long.

Stems: Several reddish stems emerging from a woody base with 2 opposite ridges or wings along the stems.

Roots: Several shallow roots to 30 cm deep.

Similar Native Species: Could be confused with native *Hypericum* species, such as Matted St. John's wort (*H. japonicum*) or Small St. John's wort (*H. gramineum*).



CONTROL OPTIONS



VECTOR OF SPREAD

Water Hyacinth

Eichhornia crassipes

(Pickerel Weed, Water Orchid)



Description: Erect floating weed forming dense mats.

Flowers: Bluish/purple, funnel shaped end and 4-7 cm in diameter with six petals. One petal has a yellow patch surrounded by dark purple. Usually about 8 cm wide growing on a short stalk between mid Summer and Autumn.

Fruit: A narrow 3 celled capsule approximately 1-1.5 cm long.

Leaves: Glossy green. Some 6 cm long, narrow and erect. Others almost round, 3 cm wide and curved upward. Stalks to 5 cm long with bladder-like swelling to enable floating.

Stems: Can be erect to 6 cm long and bearing flowers, or lateral and producing new plants.

Note: Extremely invasive and rapid growing weed that chokes waterways and undermines native ecosystems.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

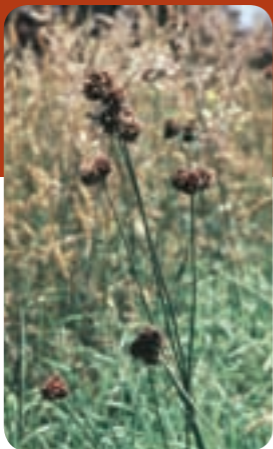


VECTOR OF SPREAD

Wild Garlic

Allium vineale

(Crow Garlic, Field Garlic, Wild Onion)



Description: An erect, strong smelling bulb, up to 1 m tall.

Flowers: White, pink or greenish, on short stalks formed in terminal heads.

Leaves: Slender, cylindrical, hollow and becoming channelled on one side. Emerging from lower part of stem.

Stems: Erect, cylindrical, unbranched, sheathed for part of its length.

Bulbil (small bulbs): Brown, smooth and shiny.

Notes: Strong odour taints milk if grazed and cereal crops when harvested.

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS



VECTOR OF SPREAD

Willow - Black

Salix nigra

Description: Deciduous, large and upright tree to 20 m tall.

Flowers: Drooping catkins (clusters of small flowers), 4-6 cm long and produced in Spring. Separate male and female flowers.

Leaves: Green, alternate, long and narrow with a toothed edge, 5-15 cm long and 0.5-1.5 cm wide.

Stems: Single trunked tree with rough bark. Shiny and reddish brown when young.

Note: Spreads easily from stem fragments and can restrict water flows. Both male and female trees found in Australia.

Weed of National Significance.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Willow - Crack

Salix fragilis

(Basket Willow)



Description: Deciduous, spreading shrub or small tree with multiple stems and a rounded crown to 15 m tall.

Flowers: Drooping catkins (clusters of small flowers) 4-6 cm long produced in Spring.

Leaves: Alternate, shiny, dark green above and bluish-green below, narrow with a toothed edge, 9-15 cm long and 1-3 cm wide.

Stems: Multi-stemmed with an irregular shaped crown.

Note: Spreads easily from stem fragments and can restrict water flows. Only male trees found in Australia but can cross with other *Salix* spp. to produce seed. **Weed of National Significance.**

Similar Native Species: Unlikely to be confused with native species.



CONTROL OPTIONS

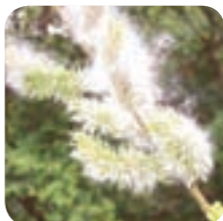


VECTOR OF SPREAD

Willow - Grey Sallow

Salix cinerea

(Grey Willow, Wild Pussy Willow)



Description: Deciduous and large spreading shrub or small tree to 10 m tall.

Flowers: Male catkins (clusters of small flowers) erect, golden and hairy to 3 cm long. Female catkins green, drooping to 6 cm long and produced in Spring on separate trees.

Leaves: Broad, dark green, hairy both sides, 7-10 cm long and 3-4 cm wide with a toothed edge.

Stems: Single trunked with several main branches appearing just above ground level. Rounded crown.

Note: Reproduces mainly by seed. Both male and female trees found in Australia. **Weed of National Significance.**

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Willow - Weeping

Salix babylonica



Description: Deciduous, single trunked tree with weeping form and 10-15 m tall.

Flowers: Drooping catkins (clusters of small flowers) 3-4 cm long appearing in early Spring.

Leaves: Yellowish green, alternate, long and narrow with a toothed edge, 8-15 cm long and 1-2.5 cm wide.

Stems: Drooping, slender, smooth, light green to pale yellowish-brown with greyish brown bark.

Note: Spreads easily from stem fragments and can restrict water flows. Only female trees found in Australia.

Similar Native Species: Unlikely to be confused with native species.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Yellow Water Lily

Nymphaea mexicana

(Mexican Water Lily)



Description: Perennial aquatic with floating leaves and flowers arising from rhizomes.

Flowers: Showy yellow flowers, 10-20 cm wide, produced between Spring to Autumn.

Leaves: Round or heart-shaped to 25 cm diameter on stalks. Young leaves often have brown markings.

Stems: Creeping horizontal stems (stolons) that can produce roots from each node.

Roots: Rhizomes to 30 cm long and 4 cm thick.

Note: Rhizomes greater than 30 cm long and 4 cm thick have been recorded.

Similar Native Species: Could be confused with a number of native and other introduced water lilies prior to flowering.

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



CONTROL OPTIONS



VECTOR OF SPREAD

Index

Name.....	Page No.	Name.....	Page No.
Aaron's Rod	39	Boxthorn	20
Acer negundo	19	Brazilian Water Milfoil	56
Acer pseudoplatanus	72	Briar Rose	71
Acroptilon repens	40	Bridal Creeper	21
African Boxthorn.....	20	Bridal Veil Creeper	21
African Dropseed Grass.....	55	Buckthorn	11
African Lovegrass	9	Bull Thistle	78
Alhagi maurorum	24	Burrgrass	67
Alkali Mallow	45	Cabbage Thistle.....	82
Alkali Sida	45	Cabomba	22
Alligator Weed	10	Cabomba caroliniana.....	22
Allium vineale	42	Cats Head	23
Angel's Trumpet	83	Calla Lily	13
Alternanthera philoxeroides ...	10	Californian Burr	52
Amsinckia	11	Caltrop.....	23
Amsinckia spp.....	11	Camelthorn	24
Aniseed	36	Camel Thorn Bush.....	24
Arrowhead.....	12	Canary Broom	25
Arum Lily	13	Canary Grass.....	59
Ash-leaved Maple	19	Canary Ivy	34
Asparagus asparagoides.....	21	Cape Broom	25
Axonopus affinis	27	Cape Gooseberry	60
Basket Willow.....	88	Cape Tulip.....	26
Bathurst Burr	14	Cardaria draba	42
Beggar Vine	32	Cardoon.....	73
Bindii.....	23	Carduus nutans.....	75
Bindweed.....	15	Carduus tenuiflorus	77
Bitter Apple.....	66	Carduus pycnocephalus	77
Blackberry.....	16	Carthamus lanatus	76
Black Knapweed.....	17	Carolina Fanwort	22
Black Maple.....	19	Carpet Grass	27
Black Spear Thistle	78	Caspian Manna	24
Blanket Weed.....	39	Castor Bean Plant.....	28
Blue Dawn Flower	51	Castor Oil Plant	28
Blue Periwinkle	18	Cenchrus longispinus.....	67
Boer Lovegrass.....	9	Centaurea calcitrapa	80
Box Elder	19	Centaurea nigra.....	17
Box Elder Maple.....	19	Centaurea solstitialis.....	79

Name..... Page No.	Name..... Page No.
Chilean Needle-grass.....29	Field Bindweed.....15
Chinese Lantern.....60	Field Burr.....67
Cirsium vulgare.....79	Field Garlic.....86
Common Ivy.....34	Field Horsetail.....44
Common Morning Glory.....51	Flat Thistle.....81
Common Olive.....53	Flannel Leaf.....39
Common Pampas Grass.....54	Fleabane.....37
Convolvulus arvensis.....15	Foeniculum vulgare.....36
Conyza albida.....37	Foxtail.....35
Conyza bonariensis.....37	Fraxinus angustifolia.....31
Cortaderia selloana.....54	Funeral Flower.....13
Crataegus monogyna.....41	Furze.....38
Creeping Knapweed.....40	Fyngrass.....9
Crow Garlic.....86	Genista.....25
Cuscuta spp.....32	Genista monospeculana.....25
Cynara cardunculus.....73	Gentle Annie.....67
Cyperus brevifolius.....47	Giant Elodea.....30
Cytisus scoparius.....33	Giant Salvinia.....62
Datura spp.....83	Gymnocoronis spilanthoides.....
Death Lily.....13	63
Delta Arrowhead.....12	Goats Head.....23
Dense Waterweed.....30	Goatweed.....69
Desert Ash.....31	Gold and Silver Flower.....46
Distaff Thistle.....76	Golden Dodder.....32
Dodder.....32	Golden Gorse.....38
Echium plantagenium.....58	Golden Star Thistle.....79
Egeria.....30	Gorse.....38
Egeria densa.....30	Great Maple.....72
Eichhornia crassipes.....85	Great Mullein.....39
English Broom.....33	Greater Periwinkle.....18
English Ivy.....34	Grey Willow.....89
Equisetum spp.....44	Greif Tree.....72
Eragrostis curvula.....9	Gindagai Thistle.....82
False Capsicum.....49	Hairy Fleabane.....37
False Star Thistle.....76	Hairy Horseweed.....37
Feather Grass.....35	Hall's Honeysuckle.....46
Feathertop Grass.....35	Hardhead Thistle.....40
Fennel.....36	Hardheads.....40

Index

Name.....	Page No.	Name.....	Page No.
Hawthorn	41	Moraea miniata	26
Hedera helix	34	Morning Glory	51
Hoary Cress.....	42	Mullumbimby Couch	47
Hoary Pepperwort.....	42	Myriophyllum aquaticum.....	56
Horehound	43	Narrow Leaf Ash.....	31
Horse Nettle	81	Nassella neesiana	29
Horsetail.....	44	Nassella Tussock	64
Hypericum androsaemum	84	Nassella trichotoma.....	64
Hypericum perforatum	69	Noogoora Burr	52
Hypericum tetrapterum.....	70	Nymphaea mexicana.....	91
Innocent Weed	67	Olea europaea	53
Ipomoea Indica.....	51	Olive.....	53
Italian Thistle.....	77	Onopordum acaulon.....	81
Ivy.....	34	Oxygen Weed	48
Ivy-leaf Sida	45	Palma Christi.....	28
Japanese Honeysuckle.....	46	Pampas Grass.....	54
Jerusalem Cherry.....	49	Paradoxa Grass.....	59
Juncus acutus.....	68	Parramatta Grass	55
Kalmath Weed	69	Parrots Feather	56
Kylinga	47	Parthenium hysterophorus.....	57
Lady's Thistle	82	Parthenium Weed	57
Lagarosiphon	48	Paterson's Curse.....	58
Lagarosiphon major.....	48	Pennisetum villosum.....	35
Leafy Elodea	30	Periwinkle	18
Lily of the Nile	13	Phalaris	59
Lonicera japonica	46	Phalaris spp.	59
Long-style Feather Grass	35	Physalis viscosa	60
Lycium ferocissimum	20	Pickernel Weed	85
Maderia Wintercherry	49	Pig Lily.....	13
Malvella leprosa.....	45	Plymouth Thistle	77
Maple	72	Pondweed.....	30
Maple Weed	28	Populus alba	65
Marrumbium vulgare	43	Prairie Ground Cherry.....	60
Mesquite.....	50	Prosopis spp.....	50
Mexican Waterlily	91	Purple Morning Glory	51
Milk Thistle	82	Purple Star Thistle	80
Montpellier Broom.....	25	Purple Sycamore.....	72
Moraea flaccida.....	26	Pussy Willow	89

Name..... Page No.	Name..... Page No.
Ragwort.....61	Spanish Salsify74
Rats Tail Grass55	Spiny Burr Grass.....67
Ricinus communis.....28	Spiny Rush68
Riverina Bluebell.....58	Sporbolus africanus.....55
Rosa rubiginosa71	Square-stemmed St John's Wort.....70
Rough Conyza37	St James Wort61
Rubus fruticosus16	St John's Wort69
Russian Knapweed.....40	St Peter's Wort.....70
Sagitaria.....12	Swamp Thistle.....78
Sagitaria gramminea12	Sweet Amber.....84
Salix babylonica90	Sweet Anise.....36
Salix cinerea89	Sweet Briar71
Salix fragilis.....88	Sycamore72
Salix nigra.....87	Sycamore Maple72
Salvation Jane.....58	Tansy Ragwort61
Salvinia62	Tar Weed11
Salvinia molesta62	Tass River Grass64
Sandbur67	Temple Plant63
Scolymus hispanicus74	Thistle - Artichoke.....73
Scotch Thistle78	Thistle - Golden74
Scouring Rush44	Thistle - Nodding.....75
Senecio jacobaea.....61	Thistle - Saffron76
Senegal Tea63	Thistle - Slender/Shore.....77
Serrated Tussock.....64	Thistle - Spear78
Sheep Thistle.....77	Thistle - St Barnaby's79
Silver Pampas Grass54	Thistle - Star.....80
Silver Poplar.....65	Thistle - Stemless81
Silver-leaved Poplar65	Thistle - Variegated.....82
Silverleaf Nightshade.....66	Thorn Apple.....83
Silybum marianum.....82	Thread-of-life.....56
Similax21	Tibulus terrestris.....23
Slender Arrowhead12	Tomato Weed.....60
Snake Bean44	Toowoomba Canary Grass...59
Snake Plant.....44	Tutsan84
Solanum elaeagnifolium66	Ulex europaeus38
Solanum pseudocapsicum.....49	Velvet Dock.....39
Sorcerer's Violet18	Verbascum thapsus.....39
Spadeleaf Plant.....63	

Index

Name.....	Page No.
Vinca.....	18
Vinca major	18
Water Fern.....	62
Water Hyacinth.....	85
Water Orchid.....	85
Wavy-Leaf Fleabane	37
Weeping Lovegrass.....	9
White Horehound.....	43
White Horse Nettle	66
White Poplar	65
White Top	42
White Weed	42
Whitlow Pepperwort.....	42
Wild Artichoke.....	73
Wild Garlic	86
Wild Onion.....	86
Wild Pussy Willow.....	89
Wild Rose	71
Willow - Black.....	87
Willow - Crack	88
Willow - Grey Sallow	89
Willow - Weeping	90
Winged St John's Wort.....	70
Winged Slender Thistle.....	77
Wolly Safflower.....	76
Xanthium spinosum	14
Xanthium strumarium	52
Yellow Burr Weed	11
Yellow Centaurea	79
Yellow Gromwell	11
Yellow Star Weed.....	79
Yellow Vine	23
Yellow Water Lily.....	91
Zantedeschia aethiopica	13

- Blood, K. (2001)
Environmental Weeds: A Field Guide for SE Australia.
CH Jerram & Associates, Scientific Publishers, Melbourne.
- Randall, R.P. (2002)
A Global Compendium of Weeds.
R.G. and F.J. Richardson, Meredith, Victoria
- Sainty, G.R. and Jacobs, S.W.L. (2003)
Waterplants in Australia. A Field Guide. 4th Edition.
Sainty and Associates, Sydney
- Walsh, N.G. and Entwisle, T.J. (eds.) (1994)
Flora of Victoria. Volume 2. Ferns and Allied Plants,
Conifers and monocotyledons.
Inkata Press, Melbourne
- Walsh, N.G. and Entwisle, T.J. (eds.) (1996)
Flora of Victoria. Volume 3. Dicotyledons Winteraceae to
Myrtaceae.
Inkata Press, Melbourne
- Walsh, N.G. and Entwisle, T.J. (eds.) (1999)
Flora of Victoria. Volume 4. Dicotyledons Cornaceae to
Asteraceae.
Inkata Press, Melbourne
- Auld, B and Medd, R, 1987.
Weeds, an Illustrated Botanical Guide to Weeds in
Australia.
- Lamp, C and Collet, F 1976.
A Field Guide to Weeds in Australia.
- Muyt, A, 2001.
Bush Invaders of South-East Australia.
- Parsons, W, and Cuthbertson, E, 1992.
Noxious Weeds of Australia.

