# WEEDS IDENTIFICATION GUIDE

North Central Victoria



### Acknowledgement of Country

The North Central Catchment Management Authority acknowledges Aboriginal Traditional Owners within the catchment area, their rich culture and spiritual connection to Country. We also recognise and acknowledge the contribution and interests of Aboriginal people and organisations in the management of land and natural resources.

### Acknowledgements

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# 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 north central Victoria. The North Central Catchment Management Authority (CMA) in partnership with the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) 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 the Weeds Identification Guide for north central Victoria 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 North Central CMA region.

### NORTH CENTRAL CMA REGION

For additional copies of this field guide or for further information please contact:

North Central CMA 628-634 Midland Highway PO Box 18 HUNTLY, VIC 3551 T: (03) 5448 7124 F: (03) 5448 7148 E: info@nccma.vic.gov.au W: www.nccma.vic.gov.au



### **HOW TO USE THIS GUIDE**

#### Plant type

Weeds have been listed in the field guide based on plant type, with pages colour coded to correspond with each plant type. Plant types include:

Herb
Bulb
Grass
Shrub
Tree
Water weed

#### Calendar for weed control

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 that the optimal treatment times are May, June, July, August and September. Marginal treatment times are April and October.

### Plant lifespan

#### Perennial

Indicates perennial weeds, which are plants that grow for more than two seasons.

#### Annual

Indicates annual weeds, that is, plants with a growing cycle lasting one year.

#### How weeds spread

Weeds may spread by a combination or all of the ways represented below. For the purpose of this field guide, 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 or plant pieces carried in water



Seed blown by wind



Seed eaten or carried by livestock



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



Seed spread by slashing or mowing



Seed or plant pieces spread by cultivation

#### Weed control options

Weeds may be controlled by a combination or all of the ways represented below. For the purpose of this field guide, 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



Cultivation prior to flowering



Herbicide stem injection



Economic Development, Jobs, Transport and Resources

DEDJTR responsible for weed control

\*There are restrictions on the use of some chemicals within the North Central CMA region. 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.

# LEGISLATIVE REQUIREMENTS

Under the Catchment and Land Protection (CaLP) Act 1994 certain plants are declared as noxious weeds in Victoria and are classified as State Prohibited, Regionally Prohibited, Regionally Controlled or Restricted.

### State Prohibited Weeds

State Prohibited Weeds either do not occur in Victoria, or it is reasonably expected that they can be eradicated from the state. Department of Economic Development, Jobs, Transport and Resources (DEDJTR) is responsible for the management of these species where ever they occur throughout Victoria, whether it is on public or private land. Reporting these species to DEDJTR will ensure treatment and removal are carried out in a safe and timely manner. If you suspect a State Prohibited Weed is on your property please contact DEDJTR immediately on 136 186.

### **Regionally Prohibited Weeds**

Regionally Prohibited Weeds are not widely distributed across the North Central CMA region but are capable of spreading further. It is reasonable to expect that these weeds can be eradicated from north central Victoria. Control is the responsibility of public and private land managers on their land and VIC Roads on Declared Roads under the *Victorian Transport Act 1983*.

### **Regionally Controlled Weeds**

Regionally Controlled Weeds exist in the North Central CMA region and are usually widespread. Continued control measures are required to prevent further spread to clean land. Control is the responsibility of 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 the weed spreading within Victoria and to other 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*, but are recognised as a serious threat to agriculture and the environment.

### Weeds of National Significance

As part of the National Weeds Strategy, 32 Weeds of National Significance (WONS) 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 are determined according to their invasiveness, impact, potential to spread and socioeconomic and environmental values. Control is the responsibility of land managers as per the Victorian categories of noxious weeds described above, that is: State Prohibited, Regionally Prohibited, Regionally Controlled and Restricted Weeds.

### **ENVIRONMENTAL WEEDS**

This field guide largely addresses weeds which are declared under the *Catchment and Land Protection Act 1994* and those that currently have a widespread impact on agricultural and environmental values in the region. There are many weed species that have not been included but should be recognised as having a potential to cause serious environmental problems in the future. Some of these weeds have been listed in the north central Invasive Plants and Animals Strategy 2010-15 as the highest risk undeclared invasive plants in north central Victoria. Many local governments also have strategies for environmental weeds of significance which highlight priorities for local action.

### What are environmental weeds?

Environmental weeds are plant species that predominantly invade natural areas and compete with or congest native plant communities.

### Why are they a problem?

Environmental weeds cause damage to native plant communities by competing with naturally occurring vegetation for moisture, nutrients and light. Native animal populations can also be affected by the change in vegetation due to replacement of their natural food source and habitat with exotic species. Weed species also tend to provide greater harbour for pest animal species and some can be poisonous to stock and other animals.

### Where have they come from?

Some environmental weeds may have been introduced accidentally, for example, as a contaminant of imported grain or fodder, however most have been introduced as a garden or decorative plant and then have 'escaped' into the environment. The most common methods of spread are from dumped garden waste containing bulbs, seed or root pieces, deliberate planting in inappropriate areas and from birds or animals spreading seed.

### **Common Environmental Weeds**

Some common environmental weeds that are not included in this field guide include:

Arum Lily, Zantedeschia aethiopia Cootamundra Wattle, Acacia baileyana Gazania, Gazania linearis Olive, Olea europeae Pampas Grass, Cordateria selloana

### HOW TO COLLECT AND PRESERVE WEED SPECIMENS

If you can't identify a weed using this field guide, you may need to submit specimens for identification to your local agronomist, rural merchandise store, government department or botanical gardens herbarium.

### **Collecting and preserving specimens**

Guidelines for collecting and preserving weed specimens include:

- 1. If possible, take a photograph of the weed before collection.
- 2. Choose a healthy specimen and keep it in a cool, dark place until it is pressed.
- 3. Collect as many plant parts as possible, including parts of the root system and leaves in position with flowers and/or fruit.
- 4. Ensure the specimen is clean of dirt and insects.
- 5. Preserve the plant as soon as possible by:
  - Labelling the specimen with field and location notes.
  - Placing the specimen between sheets of newspaper.
  - Pressing the specimen between flat boards of masonite, plywood or similar.
  - Weight the specimen under bricks, books, straps or ties.
- Change the paper every couple of days for a week, especially for moist, fleshy or bulky specimens. Most samples will be dry enough after a fortnight of pressing.

### Labelling specimens

The information recorded on the label is just as important as the specimen itself. Essential label information includes:

- Collector(s) name.
- A unique collecting number.
- Date of collection.
- Locality: place/area name, property name, description in reference to roads, road junctions and distance from nearest town.
- Geocode: a latitude and longitude, map grid of Australia coordinates or street directory reference (include the edition).

Other useful information such as habitat, plant habit and number of plants should also be included.

### **Mailing specimens**

Specimens should be accompanied by a covering letter clearly indicating what you require. Please provide clear contact information for communication of results, and an address for correspondence and invoicing. Fees apply for this service. Please state clearly who the invoice is to be made out to. Specimens can be sent either fresh or dried. If sending fresh material place the specimen inside a sealed plastic bag, and place the bag inside a padded envelope, box or mailing tube. It may help future weed identification if you keep a duplicate set of specimens and records, as the specimens are not generally returned after identification. Furthermore, some weeds change dramatically as they mature so collecting specimens or photos at different growth stages can help with identification.

Specimens can be sent to the National Herbarium of Victoria for identification:

National Herbarium of Victoria Identifications and Information Service Royal Botanic Gardens Melbourne Private Bag 2000, SOUTH YARRA, VIC 3141

T: 03 9252 2300 E: rbg@rbg.vic.gov.au W: www.rbg.vic.gov.au



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

Description: An erect herb 20-70 cm tall.

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

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



\*Marginal treatment time \*Optimum treatment time

### ARTICHOKE THISTLE

Herb

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: Generally colonises waste areas and weaker pastures. Spread mainly by seed.



### **BATHURST BURR**

Xanthium spinosum



#### (Bathurst Burr)

**Description**: An erect, much branched herb, usually 30-60 cm tall but up to 1 m.

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. Central vein is prominent.

**Stems**: Greenish yellow and covered in fine hairs. Sharp golden spikes 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 singular along stem.

Note: Burrs are one of the worst causes of vegetable contamination in wool. Bathurst Burr competes with desirable plants and has vicious spikes which injure stock and cause severe discomfort when handling wool.



### BINDWEED Convolvulus arvensis



#### (Field Bindweed, Morning Glory)

**Description**: A twining herb which grows along the ground.

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

**Leaves**: Alternate and arrow shaped on short stalks, dark green and 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.



### **BRANCHED BROOMRAPE**

Orobanche ramosa



#### (Branched Broomrape)

**Description**: A fleshy root parasite of broadleaf plants, 5-30 cm tall.

**Flowers**: Numerous and tubular, 15 mm long. Range from white to yellow, or mauve. Flowers during late spring or early summer for a two week period.

Leaves: Reduced, with dark brown or purplish scales.

**Stems**: One or many irregular stems, which are often branched just above ground level. Brown or straw-yellow in colour.

Note: Attaches to the host plant's roots, extracting water and nutrients. It grows underground for about six weeks before it emerges in late spring or early summer.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources Annual

CONTROL OPTIONS

State Prohibited Weed please contact DEDJTR immediately on 136 186

# **BRIDAL CREEPER**

Herb

Myrsiphyllum asparagoides



#### (African Asparagus Fern, Bridal Veil Creeper, Smilax)

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

**Flowers**: Greenish-white, 8–9 cm diameter and appearing in leaf axils in August and September.

**Leaves**: Glossy green, alternate and oval with pointed tips. Usually 1–4.5 cm long and 0.5–1.6 cm wide.

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

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

Note: Highly competitive and invasive in natural bushland and orchards. Climbs on and chokes understorey species. Spreads from seed and root tubers.



### **CALIFORNIAN THISTLE**

Herb

Cirsium arvense



#### (Perennial Thistle, Canada Thistle)

**Description**: An erect perennial up to 1.5 m tall reproducing from seed and creeping roots.

**Flowers**: 2–2.5 cm long and 1.5–2.5 cm diameter. Pink to purple in 1–5 heads at the end of branches. Flowering occurs in December to January.

**Leaves**: Rosette and lower leaves to 20 cm long, deeply toothed and hairy or woolly. Stem leaves alternate and joined to stem. Leaf edges carry sharp spines.

**Stems**: Erect, ridged and branched near top. Fleshy and slightly hairy.

**Note**: Extensive creeping root system and release of chemicals into soil inhibits the establishment and growth of desirable plants.



### **CALTROP** Tribulus terrestris



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

Description: A prostrate summer growing annual.

**Flowers**: Yellow, 8-15 mm wide with five petals. Growing from leaf axils in early summer through to autumn.

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

**Stems**: Many 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.

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







#### (Beggar Vine, Golden Dodder)

**Description**: Twining parasitic herb which reproduces by seed.

**Flowers**: White to creamy pink, bell shaped, 4 mm diameter. Formed in clusters in spring through to autumn.

Leaves: Reduced to tiny inconspicuous scales.

**Stems**: Bright yellow to green, thread like, twining and much branched. Twists tightly around host plants.

**Fruit**: Globular capsules containing up to 4 tiny browngrey seeds.

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



# **FENNEL**

Herb



### (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 2–3 mm in diameter and yellow in colour. Appearing in summer.

**Leaves**: Stringy and up to 45 cm long, with a very strong aniseed scent when crushed. Often formed at the base of the plant, breaking down as the plant becomes mature.

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

Note: Usually spread by seed and can be spread by the movement of root particles. Often found in moist places; e.g. road edges, channel banks, depressions.



# **GOLDEN THISTLE**

Scolymus hispanicus



#### (Spanish Oyster Plant)

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

**Flowers**: Golden yellow heads 2.5-4 cm diameter in leaf axils. Heads surrounded by short spines. Appear 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.



# **GREAT MULLEIN**

Herb

Verbascum thapsus



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

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

**Flowers**: Yellow, 2-2.5 cm diameter, clustered on flower spike up to 1 m tall. Five petals, three with fine woolly filaments. Flowers occur from January to 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 leaf bases.

Note: Readily colonises less fertile sites and dominates disturbed and overgrazed areas. \*Generally biennial but can be annual or short lived perennial.



# HARDHEADS

Acroptilon repens



#### (Hardhead Thistle, Creeping Knapweed, Russian Knapweed)

**Description**: Appearance like 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 November to March.

**Leaves**: Lance shaped, larger and toothed at base and smaller and smooth edged 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 lived. Can severely reduce crop yields. Spreads mainly by root pieces.



### HAWKWEEDS

Hieracium species



#### (Hawkweed)

**Description**: Perennial daisies, growing in a wide range of habitats, restricting the growth of neighbouring plants by releasing chemicals into the soil.

Flowers: Found in clusters of 5-30 flower heads, have square-ended petals and are either orange or yellow.

Leaves: Form rosettes of very hairy, green leaves.

**Stems**: Form rosettes, are 15-40 cm long and are covered in short, stiff hairs.

**Note**: Spreads by seed or above ground runners (stolons). Can form dense stands of up to 3,800 plants per square metre.



### **HOARY CRESS**

Lepidium draba (formerly 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. Appear September to November.

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

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

**Note**: Can significantly reduce crop yields. Difficult to control and spreads by seed and root fragments.



# HOREHOUND

Marrumbium 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 hairs on top and woolly underneath. Crinkled and leathery, rounded up to 7 cm diameter. Edges slightly serrated and veins sunken on the upper surface.

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

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



# Herb HORSETAILS

Equisetum species



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

**Description**: A group of primitive spore bearing perennial fern allies, some preferring wetland habitats. Species range in height from a few centimetres to 10 m tall, with some dying back to their underground parts during winter.

Flowers: Do not produce flowers or seeds.

**Leaves**: Inconspicuous leaves grow in whorls of 6 to 18 on the main shoots, joined at their edges to form blacktipped sheaths of teeth around the stems.

**Stems**: Green, jointed and hollow stems with spore producing cones found at their apex during spring.

**Note**: Spreads by an extensive underground root system or from fragments. These roots have been known to grow through bitumen and concrete. All species are believed to contain toxic chemicals.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources

Perennial

VECTOR OF SPREAD

CONTROL OPTIONS

State Prohibited Weed please contact DEDJTR immediately on 136 186

# **ILLYRIAN THISTLE**

Herb

Onopordum illyricum



#### (Illyrian Thistle)

**Description**: An erect annual or biennial to 2 m tall, reproducing by seed.

**Flowers**: Purple flower heads to 8 cm diameter appear singly at the end of stems in spring and summer. Surrounding bracts are purple and end in sharp yellow spines.

**Leaves**: Densely woolly with jagged edges and spines on its margins. Lower leaves to 30 cm long and leaf base continues down the stem to form a wing.

**Stems**: Erect, woolly, whitish, spiny and branched at the top.

Note: Competitive weed in pastures.



# **KNOTWEED**



#### (Japanese Knotweed, Giant Knotweed, **Japanese Knotweed Hybrid)**

Description: Fast growing semi-woody perennials that form dense, leafy thickets. Three species declared in Victoria as State Prohibited Weeds: Japanese Knotweed, Giant Knotweed and a hybrid of both.

Flowers: Small clusters of white, cream or green-yellow flowers form in summer.

Leaves: Vary in shape and size. Japanese Knotweed leaves have a flat leaf base, whereas Giant Knotweed leaves have a heart shaped leaf base. Leaves can grow up to 20 cm long.

Stems: Hollow, bamboo-like and become tough and woody with age. New stems may be purple-red in colour.

Note: Dies back in autumn, becoming dormant over winter and regenerates from rhizomes in spring. Young shoots can grow as rapidly as 8 cm per day.

State Prohibited Weed Annual TORIA State Government CONTROL OPTIONS VECTOR OF SPREAD State Prohibited Weed please contact DEDJTR immediately on 136 186

### **NOOGOORA BURR**

Xanthium strumarium



#### (Californian Burr)

**Description**: Erect to 2.5 m but usually 1 m. Can be single stemmed or much branched.

**Flowers**: Inconspicuous, formed in clusters in leaf axils near branch tips. Flowers in summer.

**Leaves**: Green and darker on upper surface. Lower leaves opposite and upper leaves alternate. Similar in shape to a maple or grape, to 15 cm diameter. Serrated edged 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 burr 1.2-2 cm long with numerous spines and 2 prominent breaks on the end. In clusters of 2–13.

Note: A bad contaminant of wool. Spreads by seed.



# ONION WEED

Herb

Asphodelus fistulosus



#### (Wild Onion)

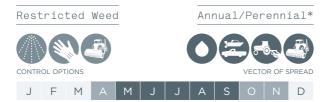
**Description**: An erect, annual, biennial or perennial herb to 75 cm tall.

**Flowers**: White or pink, 1.5-2 cm diameter with six petals, each with a brown/red stripe down the centre. Flowers appear spring and summer.

**Leaves**: Tubular, 50 cm long and all emerging from the base. leaves are many and much shorter than the flower stems.

**Stems**: Rigid, hollow and smooth, branched towards the top.

**Note**: Invades disturbed areas such as overgrazed or graded areas. \*Generally biennial but can be annual or short lived perennial.



### PARTHENIUM WEED

Parthenium hysterophoru



#### (Santa Maria, Whitetop Weed, Famine Weed)

**Description**: A much 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 from January to June depending on conditions.

**Leaves**: Deeply divided and covered in soft white hair. 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 longitudinal 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.

# State Prohibited Weed Weed of National Significance Perennial Victor Jobs, Transport and Resources Victor of Spread CONTROL OPTIONS Victor of Spread State Prohibited Weed please contact DEDJTR immediately on 136 186

# PATERSON'S CURSE

Echium plantagineum



#### (Salvation Jane, Riverina Bluebell)

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

**Flowers**: Purple (sometimes white or pink), trumpet shaped and 2–3 cm long. Occurring from August to 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 stem clasping.

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

**Note**: Can dominate grazing and annual pasture land. Toxic to some stock in large quantities. Spreads by seed.



# PERENNIAL RAGWEED

Herb

Ambrosia psilostachya



# (Perennial Ragweed, Cuman Ragweed and Roman Wormwood)

**Description**: An erect robust perennial 30-150 cm tall, forming dense colonies.

**Flowers**: Cream to pale-greenish, grouped in short stalked heads on flower spikes at the top of stems. Flowers from mid-summer to early autumn.

**Leaves**: Grey-green, hairy on short stalks. 5–12 cm long, deeply toothed. Lower leaves opposite, upper leaves alternate.

**Stems**: Hairy, longitudinal markings, tending to be woody at the base. Branched in the upper half.

**Note**: Causes severe allergic reactions in some people. Strongly competitive with desirable crops and pasture.

#### State Prohibited Weed

VICTORIA State Government

Economic Development, Jobs, Transport and Resources Perennial



CONTROL OPTIONS

State Prohibited Weed please contact DEDJTR immediately on 136 186

## **POVERTY WEED**

Iva axillaris



#### (Poverty Weed, Death Weed)

**Description**: An erect perennial to 40 cm tall, reproducing from creeping roots and seeds.

**Flowers**: Small greenish yellow heads 5-7 mm on short drooping stalks in upper leaf axils.

**Leaves**: Grey-green, hairy, stem clasping and up to 3 cm long. Lower leaves opposite, upper leaves alternate and smaller. Emits a strong herbal odour when crushed.

**Stems**: Erect, can be hairy or smooth, branched mostly near the base.

Note: Extensive root system. Very competitive in cereal cropping situations.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources



Perennial

CONTROL OPTIONS

State Prohibited Weed please contact DEDJTR immediately on 136 186

# PRAIRIE GROUND CHERRY

Herb

Physalis hederifolia



### (Cape Gooseberry, Tomato Weed, Chinese Lantern)

Description: An erect perennial to 60 cm tall.

**Flowers**: Yellow, bell-shaped, 2-3 cm diameter. Made up of five 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, longitudinally ribbed with very short hairs.

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

Note: Deep rooted and hard to control. Spreads by seed and root pieces.



### RAGWORT Senecio jacobaea



### (St James Wort, Tansy Ragwort)

**Description**: Short-lived, can flower twice a year producing 250,000 seeds from a large 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 surround 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 either grow 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 through liver damage, seed can remain viable for 8-16 years.



# SAFFRON THISTLE

Carthamus lanatus



### (False Star Thistle, Woolly Safflower, Distaff Thistle)

Description: Erect, spiny annual herb 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 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 vegetable contamination in wool.



# SCOTCH THISTLE

Herb

Onopordum acanthium subsp. Acanthium



### (Scotch Thistle, Cotton Thistle)

**Description**: Erect annual or biennial herb to 2 m tall, which reproduces by seed and root pieces.

**Flowers**: Purple or mauve flower heads, which are made up of many small flowers. Flower heads are 2–6 cm in diameter, solitary or in groups towards the end of branches. Flowers from late winter to early summer.

**Leaves**: Leaf margins are cut or toothed, spiny and undulating. White woolly hairs are dense on the underside of the leaves; less prevalent on the upper sides. Stalked rosette leaves can grow up to 40 cm long. Stem leaves are smaller, without stalks and extend into wings along the stems.

**Stems**: Generally has one main stem with numerous branches and broad spiny wings covered in dense woolly hairs which give it a whitish appearance.

Seeds: 4-5 mm long, grey with dark mottling.

Note: Prolific seeder and a single plant can produce more than 20,000 seeds.



### SILVERLEAF NIGHTSHADE

Solanum elaeagnifolium



### (White Horsenettle, Bitter Apple)

Description: Erect, summer growing, 30-80 cm tall.

**Flowers**: Purple, occasionally white, to 3.5 cm diameter. Five fused petals with five 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.

**Note**: Deep rooted and very hardy weed of summer crops and pastures. Spreads by seed and root pieces.



### SOLDIER THISTLE

Picnomon acarna



### (Soldier Thistle)

**Description**: Erect annual herb to 1 m tall. Yellow-green in appearance due to numerous yellow spines on the leaves.

**Flowers**: Pink or purple flower heads, growing 2-4 cm long. Flowers during early summer.

**Leaves**: Covered with fine white, woolly hairs and yellow spines. Rosette leaves grow to 30 cm long while stem leaves are 1–1.5 cm long, narrow and alternate.

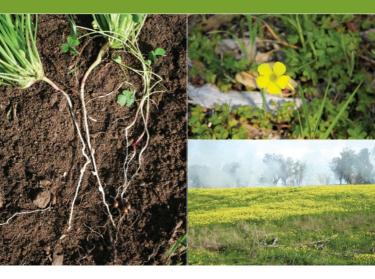
**Stems**: Densely leafy and branched with spiny wings and fine white hairs, which give them a woolly appearance.

Seeds: 4–6 mm long smooth and shiny seeds with a detachable parachute of bristles on one end.

**Note**: Easily controlled however well established infestations can compete with crops, choke harvesting equipment or injure animals.



### **SOURSOB** Oxalis pes-caprae



#### (Sourgrass)

Description: Perennial herb, common in urban areas.

**Flowers**: 3–25 flowers in a cluster located at the end of a stem. Bright yellow in colour and trumpet shaped. Flowers in winter and early spring.

**Leaves**: Heart shaped and located at the base of the plant, green or purple flecked on the top. 3.5 cm wide, 2.5 cm long.

**Stems**: Most often ending in clusters of flowers, other stems only develop if plant is crowded or shaded.

**Note**: Vegetatively reproduces through bulbs that are pulled down through the soil profile to depths of up to 10 cm by contractile roots. Main method of spread is through dumping of garden waste.



## SPEAR THISTLE

Cirsium vulgare



### (Black Thistle, Scotch Thistle)

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

**Flowers**: Pinkish purple, 3–5 cm spiky heads either solitary or in small clusters at the end of branches. Flowers from late spring to autumn.

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

Stems: Much branched towards the top, hairy and spiky.

Note: Readily colonises disturbed or overgrazed areas.



# SPINY EMEX

Emex australis



# (Three Corner Jack, Doublegee, Goats Head, Prickly Jack)

**Description**: A semi-prostrate and sometimes erect annual reproducing by seed.

**Flowers**: Male and female flowers, both inconspicuous, in separate groups on same plant. Male flowers in small stalked clusters, female clustered in leaf axils. Both appear late winter to early summer.

**Leaves**: Can be triangular or oval, green and 3–12 cm long and 2–10 cm wide. On short stalks surrounded by a membrane at the base.

**Stems**: Prostrate, sometimes erect to 50 cm. Ribbed, fleshy and purplish at base and leaf nodes.

Fruit: Brown and hard when mature. 7–11 mm long with three sharp spines at the end.

Note: Reduces crop yield and causes annoyance with its spiny burrs.

 Restricted Weed
 Annual

 Image: Control options
 Image: Control options

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## **ST BARNABY'S THISTLE**

Herb

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 heads 1-1.5 cm long. Solitary at the end of branches and surrounded by sharp golden spines. Flowers in 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 where they form wings running downwards.

Stems: Much branched, downy, winged and without spikes.

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



# ST JOHN'S WORT

Herb

Hypericum perforatum



#### (Goatweed, Klamath Weed)

Description: An erect herb 80-100 cm tall.

**Flowers**: Bright yellow, 2-2.5 cm wide with five petals. In clusters at the end of top branches. Tiny black dots along margins. Flowers in late spring and summer.

**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**: Reddish with two ridges bearing dark glands. Several woody stems arise per crown and branch towards the top.

Note: Invades undisturbed and non-arable areas. Causes photosensitisation in livestock. Spreads mainly by seed.



# STAR THISTLE

Herb

Centaurea calcitrapa



### (Purple Star Thistle)

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

**Flowers**: Flower heads purple, occasionally white or pink. Surrounded by sharp spines. Occurring singly at the end of branches in 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, stem clasping and lance shaped.

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

Note: Competes with crops and pastures and harbours pest animals.



### STEMLESS THISTLE

Herb

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. Flowers 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 growth form crowds out large areas of pasture.



### STINKWORT Dittrichia graveolens

Herb



### (Stink Weed)

**Description**: An erect, much branched, strongly aromatic herb 30-100 cm.

**Flowers**: Yellow in heads 7-10 mm long and 3-5 mm diameter. Formed singly on branch ends or from leaf axils in autumn.

**Leaves**: Covered with hairs, stem clasping, linear. Lower leaves to 10 cm, edges toothed. Upper leaves to 5 cm with smooth edges.

**Stems**: Erect, much branched and covered with hairs, some of which exude a strong smelling, sticky oil.

Note: Generally not eaten by stock but can taint meat and milk.



## TANGLED HYPERICUM

Herb

Hypericum triquetrifolium



### (Tangled Hypericum)

**Description**: An erect perennial with tangled branches to 45 cm tall.

**Flowers**: Yellow, 1-1.5 cm diameter, five petals. On short stalks in clusters at the end of branches. Flowers in summer.

**Leaves**: Opposite, 5-15 mm long and arrow shaped. Stem clasping with tiny black or translucent glands on the underside.

**Stems**: Erect and much branched which become red or brown with age and bearing numerous tiny black glands. Appearing tangled.

Note: Very persistent and competitive weed.

State Prohibited Weed



Economic Development, Jobs, Transport and Resources



Perennial

CONTROL OPTIONS

State Prohibited Weed please contact DEDJTR immediately on 136 186

## **THORN APPLES**

Herb

Datura spp.



### (Angel's Trumpet)

**Description**: Three species declared in Victoria but all have similar characteristics. Most common is Datura stramonium or Common Thorn Apple. 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 in spring and summer.

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

**Stems**: Erect, green but sometimes purple tinged, much forked, slightly hairy.

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

**Note**: All parts poisonous to humans and some stock. Can cause severe skin irritation.



## VARIEGATED THISTLE

Herb

Silybum marianum



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

**Description**: Beginning busy but develops into an erect thistle to 2.5 m tall.

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

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

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

Note: Very competitive in highly fertile pastures.



# WILD WATSONIA

Herb

Watsonia meriana var. 'bulbillifera'



### (Wild Watsonia)

**Description**: An erect perennial to 2 m tall from a corm each year.

**Flowers**: Spike 20-40 cm long with between 10-15 flowers on each spike. Flowers orange-red, or rarely pink or purple. Flowers 5-7 cm long, tubular, with six lobes slightly spreading at the end of the flower. Flowers in late spring early summer.

**Leaves**: Rigid, strap-like and sword shaped, growing up to 70 cm long, 4–5 cm wide. Has a central vein with numerous parallel veins, spreading from the corm.

**Stems**: Reddish-brown colour, standing erect with occasional branching occurring near the top.

**Note**: Spread easily by disturbance of sites by spreading numerous cormils that are formed on the flowering stems where the flower joins the stem. 50 plus cormils per stem.



#### Bulb

### ANGLED ONION

Allium triquetrum



### (Angled Onion, Three-cornered Garlic)

Description: A bulbous perennial 15-50 cm tall.

**Flowers**: White petals with a green central stripe. In loose clusters of 5-10 drooping flowers at the end of the stem. Flowers in late winter through to late spring.

**Leaves**: Light green and almost always found at the base of the plant. Up to 50 cm long and 5-20 mm wide. A definite strong smell of onions when crushed.

**Stems**: Fleshy, with triangular cross-section. A large number of small bulbs surround main mature bulb structure at the base of the plant.

Note: Bulbs spread easily by soil disturbance. Seeds are attractive to ants, which are important vectors of spread.



Bulb

### CAPE TULIP Moraea flaccida; Moraea miniata



#### (Cape Tulip)

**Description**: One-leaf Cape Tulip (*Moraea flaccida*) and Two-leaf Cape Tulip (*Moraea miniata*). One-leaf Cape Tulip produces viable seed, Two-leaf Cape Tulip doesn't. Two-leaf Cape Tulip develop a cluster of small cormils at the leaf axis and at the base of plant. Grows 30-60 cm tall reproducing from seed and corms.

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

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

**Stems**: Stiff, erect, somewhat zig-zagged and branched near the top.

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



# WILD GARLIC

Allium vineale



### (Crow Garlic, Field Garlic)

**Description**: An erect perennial which smells strongly of onions. It grows from a 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)**: Bulbils form at the top of the stem. They are brown, smooth and shiny.

Note: Will contaminate meat and milk products if eaten by stock. Spreads from seed, bulbs and bulbils. Spread by stock, vehicles, machinery and in farm produce.



## AFRICAN FEATHER GRASS

Pennisetum macrourum



#### (Veld Grass, Giant Veld Grass)

Description: An erect grass 1-2 m tall.

**Flowers**: Erect spike-like flower head, purplish yellow to brown, occurring at the end of the stems. Flower spikes are 10-30 cm long and 1-2 cm diameter. They contain many small florets surrounded by hairy bristles. Flowers in summer.

**Leaves**: Light green on top and darker underneath. Up to 1.2 m long and 1 cm wide with clear ribs. Sometimes curled at the edges with purple fringes and tips.

**Stems**: Erect, rounded and unbranched with several emerging from one crown.

**Note**: Spreads readily from seed and root growth. Tough, unpalatable and grows in dense patches.



# AFRICAN LOVEGRASS

Eragrostis curvula



#### (Weeping Lovegrass, Curved Lovegrass)

**Description**: A vigorous tussocky grass 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 1 mm 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 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 sparsely covered and disturbed areas. Spreads easily from seed.



### **BROWNTOP BENT GRASS**

Agrostis capillaris



#### (Browntop Bent)

**Description**: Tufted perennial grass to 70 cm tall. Has a creeping habit due to spread by underground rhizomes or by stolons.

Flowers: Usually purplish-brown. Flowers in spring and summer. Seed head open and branched.

**Leaves**: Narrow and flat, usually about 20 cm long and 4 mm wide, hairless but may be slightly rough.

**Note**: Spreads by seed movement and by movement of rhizomes, stolons or other plant fragments. Introduced into the high country as a soil stabiliser. Resistant to fire and grazing and thrives in soils of low fertility (especially acidic soils).



## CHILEAN NEEDLE GRASS

Nassella neesiana



#### (Chilean Needle Grass)

Description: Tussock grass growing to 1 m tall.

Flowers: A loose flowering head to 40 cm long.

**Leaves**: Narrow, hairless or sparsely hairy, flat or slightly in 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. Spreads mainly by seed.



# ESPARTILLO

Achnatherum caudata



#### (Stipa Caudata)

**Description**: This tussock forming perennial comes from South America.

**Flowers**: Hairy and arranged on long spikelets of 15-25 cm long. Flowers in late spring through summer until the lack of soil moisture inhibits flowering.

**Leaves**: Stiff and erect blades that can be up to 50 cm long and 2.5 mm wide. The leaves of the plant have strong ridges on both sides. Tussock nature of the plant means that leaves are tightly compacted at the base of the plant.

**Stems**: Up to 100 cm tall, the erect stems can be smooth or strongly ribbed, with up to four nodes present.

**Note**: This weed spreads solely through seeds. The fine, white hairs that are present on the seeds cling to wool, clothing and machinery.



### **KYLINGA** Cyperus brevifolius



### (Mullumbimby Couch)

**Description**: Shiny green perennial sedge to 15 cm tall tussock forming.

**Flowers**: Green knob like spikes 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. Difficult to control selectively. Not palatable to stock.



### LOBED NEEDLE GRASS

Nassella charruana



#### (Uruguayan Needle Grass)

Description: Perennial tussock to 1 m tall.

Flowers: Emerge from the top 10–20 cm of unbranched stems during spring.

**Leaves**: Bright green, rolled tightly inwards and 20–60 cm long.

Stems: Rolled tightly inwards and very smooth to touch.

**Seeds**: 4–10 mm long and less than 1 mm wide. Seeds have a distinctive off-white two-lobed collar at the base of the long awn (tail).

**Note**: Closely related to serrated tussock, highly invasive and unpalatable to stock. Invades open woodland and grassland habitats.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources

VECTOR OF SPREAD

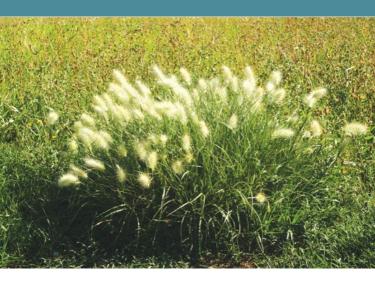
Perennial

CONTROL OPTIONS

State Prohibited Weed please contact DEDJTR immediately on 136 186

### LONG-STYLE FEATHER GRASS

Pennisetum villosum



#### (Foxtail, Feather Grass, Feather-top Grass)

**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. Flowers 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.



## **MEXICAN FEATHER GRASS**

Nassella tenuissima



#### (Tussock Grass)

**Description**: A dense, upright perennial tussock to 70 cm tall. It is almost identical to serrated tussock, except when it is in seed.

**Flowers**: Flowers/seeds are fluffy and white to cream in colour, appearing mainly in spring and summer.

Leaves: Leaves are tightly rolled and serrated or rough.

**Stems**: The stems (culms) are round, smooth and hairless, with 2–3 unthickened nodes.

**Seeds**: Seeds have a small pointed tip and a long awn (tail) with one or more bends, which resemble a large feather when clumped together.

Note: Hardy, drought tolerant and unpalatable to stock. It propagates readily from seed. May be found in gardens, as it was sold by a number of retail stores in 2008.

### State Prohibited Weed



Economic Development, Jobs, Transport and Resources

CONTROL OPTIONS

Perennial



State Prohibited Weed please contact DEDJTR immediately on 136 186

# PARRAMATTA GRASS

Sporobolus africanus



#### (Giants Rats Tail)

**Description**: A tough tussock grass which reproduces by seed.

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

**Leaves**: Slender, dark green and stiff, 6–18 cm long. Growing from the base, blades are rolled 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.



# PERENNIAL VELDT-GRASS

Ehrharta calycina



### (Veldt Grass)

Description: Perennial grass to 1.2 m tall.

**Flowers**: Flower spike 7-40 cm long, branched (redbrown colour). Beginning compact then becoming loose and open. Flowers in late spring, early summer.

**Leaves**: Blades 2-30 cm long, 2-8 mm wide and green to red green and red-purple at the base of blade. Flat or folded with rough edges, sometimes lightly haired.

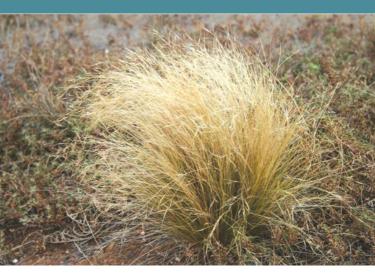
**Stems**: To 1.2 m tall, erect or arched, hairless, with swollen purple nodes.

**Note**: Reproducing by seed and occasionally by rhizome, this plant is easily spread by slashing, particularly on roadsides.



## SERRATED TUSSOCK

Nassella trichotoma



#### (Nassella Tussock, Yass River Tussock)

**Description**: Tussock grass to 50 cm tall and 25 cm across 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 borne at the end of stems.

Note: Unpalatable, invasive and a prolific seeder (100,000 seeds per plant).



# SPINY BURR GRASS

Cenchrus longispinus



### (Innocent Weed, Gentle Annie)

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 four florets covered with spines. Spines fine and purple tinged. Flowers from December to April.

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

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

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



Grass

# SPINY RUSH

Juncus acutus



#### (Sharp Rush)

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

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

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

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

**Note**: Invades poorer soils especially along drainage lines. Provides harbour for rabbits and foxes. Spreads mainly by seed.



# AFRICAN DAISY

Senecio pterophorus



#### (Winged Groundsel)

Description: An erect, busy shrub 1-3 m tall.

Flowers: Yellow and arranged in flat topped clusters at the end of stems. Each flower contains up to 100 tiny tubular florets in groups 1-1.5 cm across. Flowers during late spring and summer.

**Leaves**: Tapered, dark green above, leathery and woolly underneath. Up to 12 cm long and 7-20 mm wide. Clearly toothed along the edges and on short winged stalks or no stalks but a small wing on the main stem.

Stems: Grey-green, becoming woody on the lower stem.

Note: Highly invasive, autumn to spring growing and spreads by seed.



# BLACKBERRY

Shrub

Rubus fruticosis agg



#### (Bramble)

**Description**: An erect woody bush with scrambling, sprickly stems (canes).

**Flowers**: White to pink flowers with five 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 December to March. Initially hard green cluster of berry segments turning to red then black on ripening.

**Note**: Invades native vegetation and riparian zones as well as agricultural land. Prohibits natural regeneration and reduces agricultural productivity.



### **BONESEED** Chrysanthemoides monilifera



#### (Bitou Bush, African Boneseed)

**Description**: A woody shrub to 3 m tall which reproduces by seed.

**Flowers**: Bright yellow, 2–3 cm diameter and clustered at the end of branches. Usually 5–8 petals but can be up to 13. Flowers during winter and spring.

**Leaves**: Green, alternate on stems, oval shaped and tapering at the base. 3-8 cm long with some irregular serrations.

**Stems**: Woody and much branched. Upper stems often reddish purple.

**Fruit**: Fleshy and green to begin with, becoming black and flaking to leave a hard white coating. 6-8 mm diameter.

**Note**: Invasive weed that readily re-establishes after disturbance such as bulldozing or fire. Up to 50,000 seeds per plant. Originally introduced as a garden plant.



### **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 diameter and made up of five petals. Occurring singly or in pairs.

**Leaves**: Glossy green and appearing in clusters. Oval, 3.5 cm long and fleshy when plant is active, shed when 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, 1 cm diameter. Changing from green to red when mature. Contains many small seeds.

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



# CAMEL THORN

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 mm long, produced in clusters of up to eight on short branches and along spikes. Flowering occurs in late spring and 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.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources

VECTOR OF SPREAD

Perennial

CONTROL OPTIONS

### **CAPE BROOM** Genista monspessulana



#### (Montpellier Broom, Canary Broom)

**Description**: An erect evergreen shrub growing 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 nine in leaf axils and branch ends.

**Leaves**: Shortly stalked and made up of three leaflets which are hairy underneath. Middle leaflet longer than others.

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

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

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



### **ENGLISH BROOM**

Cytisus scoparius



# (Common Broom, Scotch Broom, Spanish Broom, Spiny Broom)

Description: An erect, deciduous woody shrub 1.5-3 m tall.

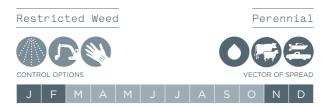
**Flowers**: Masses of bright yellow and pea-shaped flowers (15–25 mm long) are borne singly or in small clusters towards the ends of branches. Flowers from October to December.

**Leaves**: Dark green or grey-green, hairy underneath and may occur in clusters. Arranged alternately, the compound leaves have three small leaflets that are 5–10 mm long.

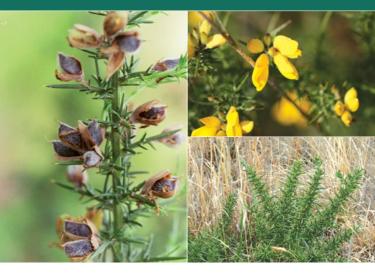
**Stems**: Green to brown, multi-branched from the base and armed with sharp, rigid spines to 75 mm long.

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

Note: Invades bushland, especially after disturbance. Spreads mainly by seed.







#### (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 between July to October and March to May.

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

**Stems**: Green when young and turning to brown and woody. 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.



### **HAWTHORN** Crataegus monogyna

#### (Whitethorn, White Hawthorn)

**Description**: An erect shrub to 6 m tall, reproducing by seed.

**Flowers**: White, cream or pink, from 8–13 mm diameter, in flat topped clusters at end of small branches. Strongly scented, occurring in spring.

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

**Stems**: Erect, much 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 is known to be a reservoir for Fire Blight.



### SPANISH HEATH

Erica lusitanica



#### (Heath)

**Description**: A woody shrub, like a miniature pine tree, to 2 m tall.

Flowers: Papery, 3–5 cm long, occurring in clusters on the ends of short branchlets. White to pink in colour.

**Leaves**: Leaves are 4–7 mm long, 0.5 mm wide, in rings of 3–4, with the outside of the leaves rolling under and touching.

**Stems**: Woody, brittle and covered with dense hairs. The trunk can reach 15 cm in diameter.

**Note**: Unpalatable to stock, this plant can be confused with the native Common Heath (*E. impressa*). Seed is spread by wind, water and machinery.



# SWEET BRIAR

Rosa rubiginosa



#### (Briar Rose, Wild Rose)

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

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



# WHEEL CACTUS

Opuntia robusta



#### (Prickly Pear)

Description: An erect succulent cactus to 3 m tall.

**Flowers**: 5-8 cm wide, yellow with red streaks on the back. Fleshy base attached to upper margins of top segments. Appears any time of the year depending on season.

**Stems**: A series of blue/green fleshy stems which are commonly thought of as leaves. Circular, to 40 cm diameter, flat and armed with tufts of sharp spines.

**Fruit**: Pink/purplish, barrel shaped, 8 cm long and 4 cm across with dark red flesh.

Note: Hardy, drought resistant, can form dense thickets.



## **BLACK WILLOW**

Tree

Salix nigra



#### (Black Willow)

**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.



# **CRACK WILLOW**

Tree

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) 40-60 mm long produced in spring.

**Leaves**: Alternate, shiny, dark green above and bluishgreen 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.



### **GIRAFFE THORN**

Tree

Vachellia erioloba (formerly Acacia erioloba)



#### (Camel Thorn)

**Description**: An African wattle that can grow either as a small, spiny shrub or as a large tree to 16 m tall.

**Flowers**: Ball-shaped flowers are yellow appear from winter to spring.

Leaves: Leaflets are small and opposite.

**Branches**: Young branches are bright green, older branches are brown.

Seeds: Seed pods are half-moon shaped (to 13 cm long) and are covered in velvety grey hairs.

Note: White paired thorns (to 6 cm long) grow from branches and often have a swollen base. Currently not know to occur in Australia but has the potential to be highly invasive.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources

Perennial

VECTOR OF SPREAD

CONTROL OPTIONS

### **GREY SALLOW WILLOW**

Tree

Salix cinerea



#### (Grey Willow, Wild Pussy Willow)

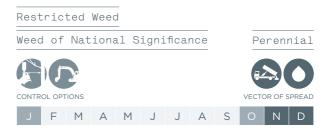
**Description**: Deciduous and large spreading shrub or small tree to 10 m tall.

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.



### **KAROO THORN** Vachellia karoo(formerly Acacia karoo)

Tree



#### (Sweet Thorn)

**Description**: An African wattle that can grow either as a small, spiny shrub or as a large tree 4–25 m tall.

**Flowers**: Ball-shaped flowers are yellow, fluffy and appear over summer. They grow in clusters of four and six and are sweetly scented.

**Leaves**: Leaves are light-green and fern-like, up to 120 mm long and approximately 50 mm wide, and composed of 8–20 pairs of oblong leaflets.

**Branches**: Young branches are bright green, older branches are brown.

**Seeds**: Seed pods are smooth, sickle-shaped, woody and slightly constricted between the seeds (up to 160 mm long and 10 mm wide).

Note: White paired thorns that grow from the branches and are 100-250 mm long. Has been removed from public gardens and zoos in Victoria.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources

CONTROL OPTIONS

Perennial



# MESQUITE

Tree



#### (Quilipie Mesquite, Honey Mesquite, Velvet Mesquite)

**Description**: Six species or subspecies recognised in Australia. Small trees or shrubs 1-15 m tall.

**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 seed pods, 10–20 cm long contain up to 20 hard black seeds.

Note: Invasive and aggressive competitors which exclude other vegetation.

#### State Prohibited Weed

VICTORIA State Government

Economic Development, Jobs, Transport and Resources VECTOR OF SPREAD

Perennial

CONTROL OPTIONS

### WEEPING WILLOW

Tree

Salix babylonica



#### (Babylon Weeping Willow)

**Description**: Deciduous, single trunked tree with weeping form 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.



### ALLIGATOR WEED Alternantheria philoxeroides



#### (Alligator Grass)

**Description**: Usually grows in aquatic habitats being rooted to the ground, however it can also be found free-floating in dense mats on the water surface or growing in terrestrial habitats.

**Flowers**: Silver/white in heads 1.2–1.4 cm diameter on 2–7 cm stems growing from leaf axils. Flowers generally produced January-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**: 10–70 cm long, yellow to dark green and can be simple or branched. Usually hollow and forming large dense mats.

**Note**: Highly invasive and destructive weed. Chokes waterways, depletes oxygen and collects sediment. Spreads mainly from plant pieces.

 State Prohibited Weed

 Weed of National Significance

 Victoria

 Economic Development, Jobs, Transport and Resources

 CONTROL OPTIONS

 State Prohibited Weed please contact DEDJTR immediately on 136 186

# ARROWHEAD

Sagittaria graminea



#### (Sagittaria, Delta Arrowhead, Slender Arrowhead)

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

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

**Leaves**: Emergent leaves broad and then tapering to an abrupt point. 10–25 cm long, 2–8 cm wide and on triangle shaped stems. Submerged leaves are strap like, 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.

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

Note: Competitive weed of waterways and rice fields. Spreads from rhizomes and seeds. Particular threat to natural lagoons and backwaters.





### CABOMBA Caboomba caroliniana



#### (Fanwort)

**Description**: Mostly submerged aquatic herb, usually rooted but sometimes free floating in mats.

**Flowers**: White or cream, sometimes with a pink tinge at the end and two yellow spots at base of petal. 2 cm diameter on short stalks with three petals. Flowers from November to March.

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

**Stems**: Slender, much branched, to more than 2 m long. Covered in a thin coating.

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



## DENSE WATERWEED

Egeria densa



#### (Egeria, Leaf Elodea, Giant Elodea, Pondweed)

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

Flowers: White with 3 petals 9–11 mm long. On thread-like stems up to 7.5 cm long which grow from upper leaf axils.

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

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

**Fruit**: On female plants which are not recorded in Australia.

**Note**: Forms extremely dense mats which can impact water flow. Spreads from plant fragments.



### LAGAROSIPHON Lagarosiphon major



#### (Oxygen Weed)

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

Flowers: Inconspicuous, purple, 3 mm across and growing on threads from the leaf axils. Flowers during summer and early spring.

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

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

Note: Aggressive fresh water weed of reservoirs up to 7 m deep. Not currently known to occur in Australia.

#### State Prohibited Weed Perennial Economic Development, Jobs, Transport and Resources IC TORIA State Government CONTROL OPTIONS

VECTOR OF SPREAD

## PARROTS FEATHER

Myriophyllum aquaticum



#### (Brazilian Water Milfoil, Water Feather, Thread of Life)

**Description**: A bright green freshwater herb which forms vigorous mats of tangled stems.

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

**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, to 5 m long, rooting from nodes at the base.

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





### **SALVINIA** Salvinia molesta



#### (Giant Salvinia, Water Fern)

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

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

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

**Note**: Forms dense mats which restricts water flows, hinders recreational use and reduces dissolved oxygen levels. Reproduces entirely from vegetation fragments.

#### State Prohibited Weed



Economic Development, Jobs, Transport and Resources

CONTROL OPTIONS

Perennial





### SENEGAL TEA Gymnocoronis spilanthoides



#### (Temple Plant, Spadeleaf Plant)

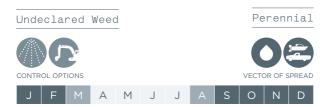
**Description**: A hardy plant, often forming a mass of tangled vegetation that covers the surface of either flowing or marshy water bodies.

**Flowers**: White florets that are grouped into heads of up to 2 cm in diameter, at the end of a branching stem. Appearing in spring-summer.

**Leaves**: Oval to elongated 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, growing from 1-1.5 m long, 1-2 cm wide when mature.

**Note**: Can impede water flows. Grows from both seeds and vegetatively through broken stem fragments.





# WATER HYACINTH

Eichhorina crassipes



#### (Pickerel Weed, Water Orchid)

Description: Erect floating weed forming dense mats.

**Flowers**: Bluish/purple, funnel shaped, 4-7 cm diameter with six petals. One petal having a yellow patch surrounded by dark purple. Usually about eight growing on a flower spike from mid-summer to autumn.

**Leaves**: Glossy green. Some 60 cm long, narrow and erect, others almost round, 30 cm wide and curved upward. Stalks to 50 cm long, each with a bladder like swelling to enable floating.

**Stems**: Erect 60 cm long and bearing flowers or horizontal and producing new plants.

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

**Note**: Extremely invasive and rapid growing weed which chokes waterways and fouls natural ecosystems.



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