# Central Tablelands
# Priority Weed Identification Guide

Local Land Services

NSW GOVERNMENT

# Acknowledgement of Country

The Central Tablelands Local Land Services region is situated in the traditional lands of the Wiradjuri Nation. The Central Tablelands Local Board acknowledges and pays its respects to Elders past, present and emerging.

Obligations to care for Country remain integral to Aboriginal and Torres Strait Islander lore, identity, culture and social and emotional well-being. The way in which traditional lands are being managed is of great interest to First Nations communities and Local Land Services understands that Aboriginal and Torres Strait Islander peoples have a significant contribution to make in relation to land management in the region.

# Acknowledgements

The Central Tablelands Local Land Services and Central Tablelands Regional Weed Committee wish to acknowledge a number of individuals and organisations who have made important contributions to the development of this guide.

- Local Control Authority weed officers and members of the Central Tablelands Regional Weed Committee for feedback on the various drafts of this guide.
- The development of this guide was supported by funding provided by NSW Department of Primary Industries and Regional Development through the NSW Weeds Action Program 2020–2025 and the Central Tablelands Local Land Services.
- Harry Rose – for researching species profiles and sourcing photos for use in this guide.
- Emma Knight (Epiphany Public Relations) for guide design, layout and artwork.
- Written and compiled by: Dr Marita Sydes, Central Tablelands Local Land Services with species research by Harry Rose.

**Published by Central Tablelands Local Land Services**

First published August 2024



Cover image: Sticky nightshade *(Solanum sisymbriifolium)* Marita Sydes Central Tablelands Local Land Services.

# Introduction

Welcome to the inaugural edition of the Central Tablelands Priority Weed Identification Guide.

Early detection, identification, and management of the priority weeds contained within this guide are collective responsibilities. This document provides landholders, communities and organisations with a locally relevant field guide for identifying and managing priority weeds in the Central Tablelands Local Land Services region.

While not intended to offer exhaustive information on each species and their control, additional sources of information and advice referenced throughout this guide should also be consulted.

This guide has been collaboratively developed by Central Tablelands Local Land Services and the Central Tablelands Regional Weed Committee, with contributions from various stakeholders.

Local Land Services is a regional-focused NSW Government agency delivering quality customer services to farmers, landholders and the wider community.

Local Land Services helps people make better decisions about the land they manage and assist rural and regional communities to be profitable and sustainable into the future.

Local Land Services connects people with groups, information, support and funding to improve agricultural productivity and better manage natural resources.

Local Land Services' integrated services play an important role in achieving effective management and control of invasive species, including weeds.

The Central Tablelands Regional Weed Committee, established under the *Local Land Services Act 2013*, serves as a local community advisory group.

The committee strategically plans and coordinates priority weed management at the regional level, reporting to the Central Tablelands Local Land Services Board.

Committee representation includes:

- Local Control Authorities (councils)
- NSW Department of Primary Industries and Regional Development - Agriculture and Biosecurity
- NSW National Parks and Wildlife Service
- Forestry Corporation of NSW
- Crown Lands
- Water NSW
- NSW Farmers
- Central Tablelands Local Land Services.

The committee's responsibilities include oversight of the Central Tablelands Regional Strategic Weed Management Plan.

The Central Tablelands Regional Strategic Weed Management Plan identifies high priority weed species for management and control in the Central Tablelands region. These high priority weeds are detailed in this guide.

# Table of contents

# Image credits

AB - Andrew Butko Wikimedia
AC – Arthur Chapman
AM – Anthony Mendoza Flickr
AR - Andreas Rockstein Flickr
AS – Andrew Storrie NSW DPI
AT – Anne Tanne Flickr
AY – Alexey Yakovlev, Flickr
AZ – Andrey Zharkikh Flickr
AZv - Andrei Zverev Flickr
B - Bic Wikimedia
BA&RM - B.A. Auld and R.M. Medd, NSW Department of Primary Industries
BC - B. Chisolm
BD - Bernard Dupont
BCh – Bob Chinock
BS - Bill Strong, Flickr
BK – Bas Kers Flickr
BT - Btcpg Wikimedia
BY- Bernadette York, NSW DPI
C - Cardex, Wikipedia
CC – Chris Cant
CCC – Campbeltown City Council
CH – Craig Hunter Flickr
CL - Claire Lock, Biosecurity Queensland
CN - Cerlin Ng Flickr
CR - Corey Raymond, Flickr
CSIRO – CSIRO Wikimedia
DC - Dick Culbert, Flickr
DH - Donald Hobern, Wikimedia
DS – Danny S Wikimedia
DV - Dinesh Valke, Flickr
E – E64 Wikimedia
ED - Etienne Dupuis Wikimedia
EvO – Elissa van Oosterhout, NSW DPI
F&KS - Forest and Kim Starr, Flickr
FX - Franz Xaver Wikimedia
G - gmihail Wikimedia
GP – G Pritchard Port Stephens Council
GRS – GR Sainty
HC – Hillary Cherry
HF - Hermann Falkner Flickr
HR - Harry Rose, Flickr
HRu – Henry Rutherford
JD – Jim Duggan Flickr
JG – Judy Gallaher wikimedia
JH - J. Hosking, NSW Department of Primary Industries
JHa – Jeff Hart Flickr
JK – Jenene Kidston, NSW Department of Primary Industries
JM – J Maughn Flickr
JR – Jon Richfield Wikimedia
JS – Jen Schabel
JuS – Juan Sanchez Flickr
JT - John Tann, Flickr
KZ - Krzysztof Ziarnek, Wikimedia
L - Linus 848 Wikimedia
LB – Larry Burrill, Oregon State University
LF – Lee Fontanni
LM – La Montagne, Wikimedia
LMe – Leslie Mehrhoff
M - Wikimedia
MB - Matthew Beziat Flickr
MeB - Meneerke Bloem Wiimedia
MD - Mike Dickson, Wikimedia
MG - Miltos Gika, Flickr
MH - Megan Hansen Flickr
MM - Mauricio Mercadante, Flickr
MMc – Melissa McMasters Flickr
ML - Matt Lavin, Flickr
MS - Marita Sydes, Central Tablelands Local Land Services
MSc - Marco Schmidt Wikimedia
MW – Michael Wolfe Wikimedia
NSW DPI - NSW Department of Primary Industries
ND – Nicola Dixon, NSW Department of Primary Industries
NT - Nava Tabak, Invasive Plant Atlas of New England
PG – P Gorham NSW DPI
PW – Philipp Weigell, Wikimedia
R – Rasbak Wikimedia
RC - Russell Cumming
RH – Robb Hannawacker Flickr
RK - Robert Knox, WA Department of Agriculture
RSa – Rosa Say Flickr
RS - Richard Spellenberg, Wikimedia
RSh – Ros Shepherd
RW - Randy Westbrooks, Wikimedia
S - Salicyna Wikimedia
SA – SA plants Wikimedia
SD – Steve Dewey Utah State University
SN – Sheldon Navie
SP - Shauna Potter, Biosecurity SA
SR - Show_ryu Wikimedia
Sra – S Rae Flickr
SS – Stan Shebs
TI – Terry Inkson
TR - Tony Rodd, Flickr
TRu - Ton Rulkens Wikimedia
US - USDA APHIS PPQ Wikimedia
V - Vengolis Wikimedia
VH - vhines200 Flickr
WD - Wer Du, Wikimedia
X - Xemenendura-Wikimedia

# Setout of the guide

The Central Tablelands Priority Weed Identification Guide details state and regional priority weed species from the Central Tablelands Regional Strategic Weed Management Plan.

The guide focuses on the Central Tablelands Local Land Services region, covering the local government areas of:

- Bathurst Regional Council
- Blayney Shire Council
- Cabonne Council
- Cowra Shire Council
- Lithgow City Council
- Mid-Western Regional Council
- Oberon Council
- Orange City Council.

Each weed profile includes information as outlined in figure 1 below and a QR code linking to additional details on the NSW WeedWise website.

## Plant form

Weeds are categorised by plant form and then listed alphabetically by scientific names. An index of common and scientific names is provided at the back of the book.

**Cactus** – a succulent plant with a thick fleshy stem which typically bears spines, lacks leaves and has brilliantly coloured flowers.

**Grass** – a member of the family Poaceae or the grass family.

**Herb** – a plant that does not develop a woody stem.

**Shrub** – a woody perennial plant without a single main trunk and smaller than a tree.

**Tree** – a woody plant, usually with a single main stem and more than 5 m tall.

**Vine** – a plant with long, slender stems which trail over objects.

**Water weed** – a plant that grows partly or wholly in water whether rooted in the mud or floating. Water weeds can be submerged, emergent or floating.

**Figure 1: Explanation of page layout.**

# How weeds spread

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

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

Seed or plant pieces are moved and spread in contaminated soil, compost, mud or gravel

Seed or plant pieces are dispersed through being are eaten or carried by birds or other native animals or pest animals

Seed or plant pieces are eaten or carried by livestock

Seed or plant pieces are carried and spread in water, including through floods, aquarium or pond waste and along waterways

Seed in wind blown

Seeds or plant pieces are readily dispersed on machinery, equipment and / or vehicles, including boats and other fishing equipment

Seed is readily spread by slashing or mowing

Humans assist the spread of seed or plant pieces via clothing, boots, and activities including intentional plantings and dumping of garden waste

Seed or plant pieces are spread by cultivation or soil disturbance events

# Weed control options

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

Biological control

Chemical control through use of herbicides

Reduction of flowering and seed development through cultivation, slashing, mulching or mowing

Competition, including shading, pasture management, rehabilitation, grazing management and cropping

Physical removal of weeds through manual hand weeding, mechanical removal, excavation and bulldozing

Fire

Hygiene practices including roadside, property and machinery hygiene practices or quarantining

Do not attempt to treat or dispose of this weed yourself. Report this plant if you see it anywhere in NSW by calling the NSW Biosecurity Helpline 1800 680 244

# Identifying weeds

This guide focuses on identifying priority weeds in the Central Tablelands and does not include widespread weeds. To distinguish priority from widespread species, refer to page 12.

Follow these steps for identification of priority weeds in the Central Tablelands:

1. Examine the plant's location, size, and distinguishing features like flowers, leaves, thorns, fruits, or seeds. What form is the plant?
2. If taking photos, capture the entire plant and close-ups of relevant features. Activate location details in case you need to relocate the plant.
3. Locate your plant form section in this guide and compare pictures for a potential match.
4. Read the plant description if there's a match; ensure it aligns with observed features.
5. Each species has a QR code linking to NSW WeedWise for further info on identification and control.
6. If uncertain, contact local authorities listed on page 10 or consult resources like NSW WeedWise, iNaturalist, WeedScan, or identification apps like Google Lens, Look Up Plant, Plantsnap, PictureThis, and PlantNet.
7. If needed, submit a plant specimen to the NSW Herbarium for identification (www.botanicgardens.org.au/our-science/our-services/plant-identification-service).

iNaturalist

WeedScan

NSW Herbarium

# Key contacts

## Weed biosecurity officers in the Central Tablelands

**Central Tablelands Weeds Authority**

7 Lee Street Kelso

Ph: (02) 6305 6388

Email:admin@ctwa.nsw.gov.au

https://ctwa.nsw.gov.au/

Central Tablelands Weeds Authority is a single purpose local government authority established as the control authority for biosecurity weed threats in the areas of Bathurst Regional Council, Blayney Shire Council, Lithgow City Council and Oberon Council.

**Cabonne Council**

99-101 Bank St

Molong, NSW, 2866

P: (02) 6392 3200

E: council@cabonne.nsw.gov.au

www.cabonne.nsw.gov.au/Environment/Weed-Biosecurity

**Cowra Shire Council**

16 Kendal Street

Cowra, NSW 2794

Ph: (02) 6340 2000

Email: council@cowra.nsw.gov.au

www.cowracouncil.com.au/Services/Environment/Priority-weeds

**Mid-Western Regional Council**

48 Depot Road, Mudgee NSW 2850

Ph: (02) 6378 2850

Email: weeds@midwestern.nsw.gov.au

www.midwestern.nsw.gov.au/Services/Weeds

**Orange City Council**

270 McLachlan Street, Orange NSW 2800

Ph: (02) 6393 8000

Email: council@orange.nsw.gov.au

www.orange.nsw.gov.au/natural-environment/weeds/


Central Tablelands Local Land Services

Ph: 1300 795 299

Email: admin.ct@lls.nsw.gov.au

https://www.lls.nsw.gov.au/regions/central-tablelands

Regional strategic weed management plans

www.lls.nsw.gov.au/help-and-advice/pests,-weeds-and-diseases/weed-control/regional-strategic-weed-management-plans

New South Wales Department of Primary Industries and Regional Development

www.dpi.nsw.gov.au/biosecurity/weeds

For control and biosecurity information on priority weed species visit NSW WeedWise. https://weeds.dpi.nsw.gov.au/

For further information on state priority weeds call the NSW Department of Primary Industries and Regional Development Helpline:

Ph: 1800 680 244

Email: weeds@dpi.nsw.gov.au

# What is the difference between priority and widespread weeds?

A PRIORITY WEED is a weed that can have serious economic or environmental impacts with their priority status being determined by the state and regional weed committees, NSW Department of Primary Industries and other advisory or regulatory bodies.

All priority weed species have had a weed risk assessment completed which takes into account the risk the weed poses combined with the feasibility of controlling the weed.

This publication provides information on both state and regional priority weeds for the Central Tablelands of NSW.

WIDESPREAD WEEDS are weeds that are already widespread within a region, with a low risk rating and for which it is not 'reasonably practicable' under the NSW Biosecurity Act to contain or eliminate the weed.

The majority of agriculture and garden weeds fall within the widespread weed category.

Land managers who need advice on controlling widespread weeds on their land should contact their local council weeds officer, Local Land Services, an agronomist from a private firm, industry or farming groups or a bush regeneration team, depending on their use of the land and the type of weeds that need to be managed.

Widespread weeds include, but are not limited to (pictured right): Bathurst burr (*Xanthium spinosum*), cape weed (*Arctotheca calendula*), common thorn apple (*Datura stramonium*) and sweet briar (*Rosa rubiginosa*).


NSW DPI


HR


MS


JT

# Weeds, the *NSW Biosecurity Act 2015* and a general biosecurity duty

Section 22 of the *Biosecurity Act 2015* (Biosecurity duty – dealing with biosecurity matter and carriers) states: "Any person who deals with biosecurity matter or a carrier and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised."

All weeds in NSW fall under Section 22 of the *NSW Biosecurity Act 2015* - general biosecurity duty.

Priority weeds are the focus for management in the Central Tablelands region to ensure that the limited resources for weed management are used to best effect possible.

The Central Tablelands Regional Strategic Weed Management Plan contains weed management objectives for all the priority weeds in the Central Tablelands. The plan also details the outcomes required to be undertaken by landholders in order to meet their general biosecurity duty.

**Image credit: Bernadette York.**

State and regional priority weeds have all been assigned a weed category that reflects the risk they pose and the reasonable practical management objective as outlined in the table below

| State priority weed category | |
|---|---|
| **Prevention** | These weeds have not established self-sustaining populations in NSW and pose a significant biosecurity risk to the state. Prohibiting these weeds from the state to prevent the biosecurity risk posed is a reasonably practical objective. |
| **Eradication** | These weeds are present in limited distribution and abundance and pose a medium to high biosecurity risk to NSW. The measures established under the control orders are necessary to prevent, eliminate, minimise or manage the biosecurity risk or biosecurity impact. |
| **Eradication and/or containment** | These weeds pose a medium to high biosecurity risk to NSW and vary in distribution and abundance in different parts of the state. The principal object of a biosecurity zone regulation is to provide for the long-term management of a biosecurity risk or biosecurity impact. |
| **Containment and/ or asset protection** | These weeds are widely distributed in some areas of the state. As Weeds of National Significance, their further spread through trade should be minimised to protect priority assets. |
| **Regional priority weed category** | |
| **Prevention** | These weeds are currently not found in the region, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective. |
| **Eradication** | These weeds are present in limited distribution and abundance in some parts of the region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective |
| **Containment** | These weeds are widely distributed in the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable. |
| **Asset protection** | These weeds are widely distributed in some areas of the region. Their spread should be minimised to protect priority assets. |

# Austrocylindropuntia species

*Austrocylindropuntia* species

Family: Cactaceae




***Austrocylindropuntia cylindrica***


***Austrocylindropuntia subulata***


***Austrocylindropuntia subulata***


***Austrocylindropuntia cylindrica***


***Austrocylindropuntia subulata***

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Two *Austrocylindropuntia* species are included in this guide: Eve's needle cactus (*A. subulata*) and cane cactus (*A. cylindrica*). Eve's needle cactus is a branching shrub that can reach 3 m in height. Stems are fleshy with grey–white spines to 7 cm in length. Leaves are short lived and up to 12 cm in length. Flowers are pink in colour. Fruits are green and egg shaped up to 10 cm long. Cane cactus is also an upright shrub that can reach 1.5 m in height. It has spiny, branching stems and often grows in patches many metres wide. Spines are white and about 1 cm long. Leaves are short lived to 1 cm in length. Flowers are pink-red in colour. The urn shaped fruits are green to green-yellow in colour up to 4.5 cm long.

**Similar species in the region:** *Austrocylindropuntia* species differ from *Cylindropuntia* species in that they lack papery sheaths on their spines.

## Problems caused:

Weeds of National Significance in Australia. Cacti have spines which can injure people, livestock, working dogs, pets and wildlife. They can devalue wool and hides and prevent shearing. Dense thickets of these cacti can also restrict the movement of animals and people. Cacti damage natural environments by excluding native plants. They also harbour pests including foxes, rabbits and fruit fly.

## Distribution:

Prickly pears in the *Austrocylindropuntia* genus originate from South America. Eve's needle cactus has been grown as an ornament plant in NSW and is often traded through online marketplaces. Plants have been found in the Greater Sydney region and there is suitable climate for it through many parts of NSW. It is currently a weed in South Australia. Cane cactus is not common in NSW. Plants, including cultivated plants, have been found in the Greater Sydney, Northern Tablelands, Riverina and Western regions. It is also a weed in Victoria and South Australia.

## Methods of reproduction:

Vegetative spread–when plant parts fall off and come in contact with soil they send out roots.

## Methods of spread:

## Control methods available:

# Cylindropuntia cacti

Including but not limited to Hudson pear and boxing glove cactus *(Cylindropuntia spp.)*

**Family: Cactaceae**




***Cylindropuntia fulgida* var. *mamillata***


***Cylindropuntia pallida***


***Cylindropuntia fulgida* var. *mamillata***

Do not sell this weed

Call your local council weeds officer if found.



## Description:

Succulent spiny shrubby cacti with stems are made up of cylindrical segments but are not regularly angled or winged. Areoles (small raised structures) are scattered over the segments; they are rounded and filled with brownish woolly hairs; barbed bristles are present, but are usually small and harmless; spines are brown, covered with papery sheaths. Flowers are borne at end of the stems and fruit are rounded and spineless.

**Similar species in the region:** Austrocylindropuntia species spines don't have papery sheaths like the *Cylindropuntia* species. Some *Opuntia* species also look similar.

## Problems caused:

All *Cylindropuntia* cacti are Weeds of National Significance which can have serious agricultural, environmental and aesthetic impacts, as well as posing a risk to human and animal welfare and safety. Photos of boxing glove cactus and Hudson pear are included on the facing page. Rope pear has an individual profile in this guide.

## Distribution:

Native to south western USA, Mexico and the West Indies. They are scattered throughout much of NSW but have rarely been recorded on the coast or tablelands. Although rope pear has been recorded in the Central Tablelands, other species including Hudson pear (*Cylindropuntia pallida*) and boxing glove cactus (*Cylindropuntia fulgida* var. *mamillata*) have not been recorded have not been recorded in the Central Tablelands region.

## Methods of reproduction:

Vegetative spread – when plant parts fall off and come in contact with soil they send out roots.

## Methods of spread:

## Control methods available:

# Rope pear

*Cylindropuntia imbricata*

Family: Cactaceae


AC


JH


ML


JH

Do not sell this weed

Call your local council weeds officer if found.

## Description:

Rope pear is a small tree or shrub that grows 1-3 m tall. It sometimes has a short trunk, the cylindrical segments are covered in white spines to 3 cm long. Spines, bristles, leaves, flowers, fruit, roots and new shoots all grow out of the areoles or bumps on the surface of the segments.

Flowers are dark pink to red in colour. The greenish–yellow fruits are egg shaped to 4 cm long. The fleshy leaves on rope pear are less than 2.5 mm long and only present for a few weeks on young plants.

**Similar species in the region:** Rope pear looks like many other *Cylindropuntia, Austrocylindropuntia* and *Opuntia* species. *Cylindropuntias* species differ from *Austrocylindropuntia* species in that they have papery sheaths on their spines.

## Problems caused:

A Weed of National Significance which can have serious agricultural, environmental and aesthetic impacts, as well as posing a risk to human and animal welfare and safety.

## Distribution:

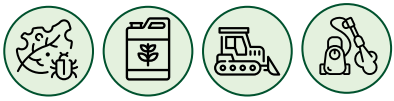
Native to the USA and central Mexico. It is a weed in all Australian states and territories, except Tasmania. Within NSW rope pear has been recorded from isolated locations across most of the state. In the Central Tablelands there are known stands of rope pear that are being managed for eradication.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:



# Harrisia cactus

*Harrisia species*

Family: Cactaceae




***Harrisia martini***


***Harrisia martini***


***Harrisia martini***


***Harrisia tortuosa***

Report this weed

Call your local council weeds officer if found.





## Description:

A spiny succulent perennial shrub. Stems are rope-like, not segmented, erect to clambering, green to purplish and 4-12 ridged. Stem ridges are covered with small, raised structures (areoles) which contain felted whitish to grey hairs, long central spines and mostly shorter radial spines. Flowers are large, funnel-shaped, pink with tinge of white. Fruit are red, rounded and spiny; these contain 400-1,000 small black seeds.

**Similar species in the region:** Harrisia can be confused with other cylindrical stem cacti but can be distinguished by ridged stems that are not segmented.

## Problems caused:

The sharp spines of harrisia are a hazard to humans and animals. Plants can infest large areas of pastures and natural ecosystems; they form impenetrable thickets (up 90% ground cover of an invaded area) rendering it useless for any activity. It is hard to control due to ability to produce seed after only 6 months and then nearly year-round.

## Distribution:

Native to the Americas. *Harrisia tortuosa* occurs in the upper Hunter Valley, and near Walgett and Lightning Ridge in NSW. *Harrisia martini* only occurs along the NSW border near Bogabilla. Neither of these species currently occur in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Prickly pears

*Opuntia species*

Family: Cactaceae




***Opuntia microdasys* subsp. *rufida***


***Opuntia leucotricha***


***Opuntia microdasys***

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

*Opuntia* species are commonly referred to as prickly pear. Opuntia are cacti usually with flattened or compressed segments or pads. Plants are often branched, sometimes have a defined trunk, and can reach heights of over 3 m.

There are many species with 15-20 species naturalised in Australia. Many species have become established and spread readily. Photos on this page are of Aaron's beard prickly pear (*O. leucotricha*) bunny ears cactus (*O. microdasys*) and blind cactus (*O.rufida*)

**Similar species in the region:** Further descriptions on tiger pear, common pear and Indian fig are given on following pages.

## Problems caused:

Prickly pears (*Opuntia* species) are cactus plants that can invade natural areas and pastures. Opuntias must not be sold in NSW except for Indian fig *Opuntia ficus-indica*. *Opuntia* species have been declared Weeds of National Signficance in Australia.

## Distribution:

*Opuntia* species are native to North and South America and were first introduced into Australia with the First Fleet to establish a cochineal dye industry with many species now established in Australia. Prickly pears are present in all regions of NSW from the coast to the far west.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Tiger pear

*Opuntia aurantiaca*

Family: Cactaceae




TR


JK


JK


TR

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Low-growing shrub 30-60 cm tall, but may grow to 2 m if supported by other plants. It grows as a series of relatively small, smooth, cylinder-like stem segments with bear barbed spines and short bristles. Flowers are 2.5-3.5 cm wide, with yellow petals, stamens and stigmas. Fruit are pear-shaped with a depressed top, spiny and red to purple when ripe; they only contain sterile seeds.

**Similar species in the region**: Tiger pear is similar to other cacti including harrisia that has ridged stems that are not segmented.

## Problems caused:

Regarded as one of the most troublesome of all cactus species in NSW. It can form impenetrable clumps and interfere with stock and machinery movement. The barbed bristles readily penetrate human skin and are difficult to remove. It is also regarded as a threat to forests, woodlands and grasslands of the tablelands and slopes.

## Distribution:

Native to South America, tiger pear is established in all eastern mainland states of Australia. In NSW, it occurs on the central and northern tablelands, western slopes and plains, and coastal districts. Tiger pear has been recorded in the northern parts of the Central Tablelands region.

## Methods of reproduction:

Vegetative (stem segments).

## Methods of spread:

## Control methods available:

# Indian fig

*Opuntia ficus-indica*

Family: Cactaceae


## Description:

Erect cactus, often forming a trunk and sometimes growing in large clumps to 7 m tall. Stems are made up of large, flattened, rounded, dull green or bluish green pads (30 - 50 cm) with no or very few short spines. Flowers are large (7 – 10 cm) and yellow, and present in late spring into summer. Mature fruit is egg-shaped to oval with a depressed top. Ripe fruit may be yellow, orange, red or purple, depending on cultivar.

**Similar species in the region:** Common pear (*Opuntia stricta*) is similar to Indian fig but has smaller pads (to 30cm long) usually with spines 1 – 5 cm long and has shorter more spreading form.

## Problems caused:

Indian fig was brought to Australia from South America almost 200 years ago. The plant has rarely caused any problems as it spreads more slowly than other *Opuntia* species and is more readily controlled. In the central tablelands there are a few locations where Indian fig is spreading from the parent clumps and it is in these areas where control activities are focussed.

## Distribution:

Indian fig has been grown as a domestic crop throughout arid and semi-arid parts of the world. In NSW and within the Central Tablelands region, Indian fig is widespread but not common, often associated with productive gardens or in some cases grown commercially.

## Methods of reproduction:

Seed, vegetative spread.

## Methods of spread:

## Control methods available:

# Common pear

*Opuntia stricta*

Family: Cactaceae



Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Erect, bushy cactus, often forming large clumps to less than 1.5 m tall. Stems are much-branched and are made up of large, flattened, rounded, dull green or bluish green pads. Pads are hairless, except in small raised structures (areoles) which have barbed bristles and hairs; these mostly lack spines, but sometimes have 1-2 stout yellow spines on the segment margins. Flowers are large and yellow. Mature fruit are fleshy, 4-5 cm long, dark purple; fruit contain large numbers of seeds.

**Similar species in the region:** Common pear looks similar to Indian fig (*Opuntia ficus-indica*), which can grow taller and often has a trunk. Indian fig has larger pads (30–50 cm long) and flowers (7–10 cm) and is not listed as a state priority species but is listed as regional priority category of asset protection.

## Problems caused:

Now largely controlled by cactoblastis and cochineal insect biocontrol, but if established it can prevent access to water and available fodder, provide harbour for pest animals such as rabbits, displace native animals and plants and cause injuries to people, livestock and wildlife.

## Distribution:

Native to the Central American region. In Australia common pear has established in all mainland states. It occurs throughout NSW and has been recorded widely across the Central Tablelands region.

## Methods of reproduction:

Seed, vegetative spread.

## Methods of spread:

## Control methods available:

# Gamba grass

*Andropogon gayanus*

Family: Poaceae




BT


MM


MM


MM


BT

Report this weed

Prohibited matter. If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

A warm-season softly-hairy perennial grass to 4 m tall and to 70 cm wide. Stems are softly hairy and arise from short rhizomes (underground stems), leaf sheaths are softly hairy. Leaf blades are long, up to 3 cm wide and hairless to hairy, with a white midrib. Flowerheads are large, much-branched and contain modified leaves and paired branches. Spikelets (flowers) are quite hairy and have a long, bent and twisted awn.

**Similar species in the region:** Whisky grass (*Andropogon virginicus*) that only grows to 1 m tall.

## Problems caused:

A Weed of National Significance. It can form tall, dense stands which outcompete native plants and fuels intense fires. It is a serious threat to rangelands and World Heritage Areas in northern Australia.

## Distribution:

Native to tropical and sub-tropical Africa. Gamba grass was introduced as a pasture grass to the northern parts of Western Australia, the Northern Territory and Queensland. It has not been recorded in NSW.

## Methods of reproduction:

Seed

## Methods of spread:

## Control methods available:

# Giant reed

*Arundo donax*

Family: Poaceae


HR


RC


HR


HR


F&KS

## Description:

Large clump-forming warm-season perennial grass to 6 m tall. Stems arise from large thick rhizomes (underground runners). Leaves are evenly spread in 2 rows along thick cane-like stems, remain green over winter and are relatively broad (10-80 mm wide). Flowerheads are large (to 60 cm long), silky-hairy, cream to reddish-brown and much-branched. Spikelets (flowers) are 8-15 mm long, hairy and have awns (bristles).

**Similar species in the region:** Giant reed looks similar to native common reed (*Phragmites australis*) that only grows to 1.5-3 m tall and has relatively narrow leaves (10-35 mm wide).

## Problems caused:

An ornamental grass which usually grows along riverbanks and roadsides and in moist or wet sites (wetlands, floodplains, urban bushland and drainage channels). It forms large dense colonies, which outcompete other vegetation and displace native plants and animals. It also chokes waterways and displaces habitat.

## Distribution:

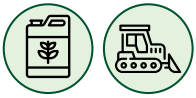
Native to southern Europe and Asia and now found in all states of Australia except for the Northern Territory and Tasmania. In NSW it is most common from Nowra to the Hunter, but also extends to the far north coast and north west slopes, with isolated occurrences elsewhere in the state. There are scattered stands of giant reed in the Central Tablelands region.

## Methods of reproduction:

Vegetative, rarely seed.

## Methods of spread:

## Control methods available:



# Spiny burr grass

*Cenchrus spinifex* and *Cenchrus longispinus*

Family: Poaceae




***Cenchrus longispinus***


***Cenchrus spinifex***


***Cenchrus longispinus***


***Cenchrus spinifex***

Report this weed

Call your local council weeds officer if found.



## Description:

Warm-season tufted, usually annual grasses found on sandier soils; plants usually grow to 30 cm tall, but can be double that. Leaves are wide (5-8 mm) and smooth, but sometimes twisted and wrinkled. Flowerheads are spike-like and 3-8 cm long. Spikelets (flowers) are contained within spiny burrs. Burrs are rounded and green or purple-tinged, with up to 70 flattened spines.

**Similar species in the region:** Hillside burrgrass (*Cenchrus caliculatus*) is a native species with occurrence in the Central Tablelands region. It can be distinguished by burrs that are usually dark purplish black and have an outer ring of spines which are not flattened.

## Problems caused:

Burrs contaminate wool and the spines penetrate skin and cause ulcers in the mouths of grazing animals. They also cause problems for workers in irrigated crops. These weeds are not very competitive in improved pastures. They are recorded as threats to tablelands woodland and grassland as well as slopes woodland, grassland and riparian areas.

## Distribution:

Native to the Americas. And now in all mainland states of Australia. In NSW, spiny burr grass is recorded mostly on the tablelands and slopes but is not common in the Central Tablelands region. It is scattered elsewhere in NSW, mostly on lighter soils.

## Methods of reproduction:

Seed

## Methods of spread:

## Control methods available:

# Pampas grass

*Cortaderia* species

Family: Poaceae




HR


HR


HR

## Description:

Pampas grass is a large densely tufted perennial that grows in large clumps up to 1.5 m wide. Leaves are sharply serrated along the edges. Flowers heads are large and plume like, up to 80 cm long and on tall erect stem to 6 m in height, well above the tuft of leaves. Plants are deep rooted and have rhizomes, a type of underground stem.

## Problems caused:

Pampas grass is an environmental weed that can outcompete native vegetation and harbour pests. It can also increase fire hazard.

## Distribution:

Native to southern South America but has been introduced into many countries as an ornamental grass. In Australia pampas grass is recorded in Victoria, NSW and Tasmania. In the Central Tablelands there are large established stands in the Lithgow area where it readily establishes in disturbed sites and along rail corridors.

## Methods of reproduction:

Seeds, vegetative spread via rhizomes.

## Methods of spread:

## Control methods available:

# Olive hymenachne

*Hymenachne amplexicaulis*

Family: Poaceae



Do not sell this weed

Call your local council weeds officer if found.

## Description:

Warm-season semi-aquatic perennial grass which has both above-ground and below-ground runners (stolons and rhizomes). Stems are trailing to erect, spongy and 1-2.5 m tall. Leaves are large and broad (15-45 cm long x 2-6 cm wide) with a heart-shaped and stem-clasping base, and hairy margins. Flowerheads are narrow, cylindrical and 10-40 cm long x 0.8-2 cm wide.

## Problems caused:

A Weed of National Significance that forms dense infestations that outcompete native plants, reduces biodiversity and threatens native fish populations and wetland habitats. Currently only occurring in isolated patches in NSW, it has the potential to become a major weed of wetlands and waterways.

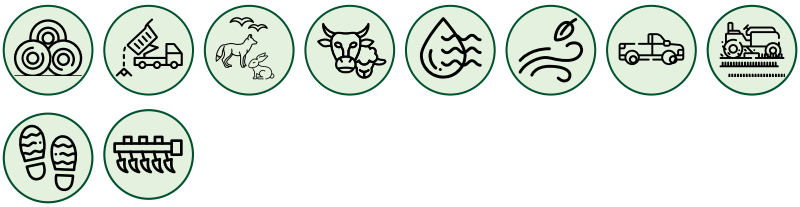
## Distribution:

Native to Central and South America. In Australia olive hymenachne occurs is Queensland, Northern Territory and NSW. It is also recorded in NSW on the north coast from Grafton to the Queensland border. It does not currently occur in the Central Tablelands region.

## Methods of reproduction:

Seed, vegetative.

## Methods of spread:



## Control methods available:

# Coolatai grass

*Hyparrhenia hirta*

Family: Poaceae




## Description:

Warm-season densely-tufted perennial grass to 1.2 m tall. Leaves are green to bluish-green, long and 1-5 mm wide. Ligules are white membranes 2-4 mm long. Flowerheads contain modified leaves (spathes) and spikelets (flowers) are borne on paired branches which form a V-shape. Each branch has 5-8 awns (bristles) and is covered in white to grey hairs.

## Problems caused:

An invasive drought, fire and herbicide tolerant tussock-forming grass which can seed in as little as 2 weeks after slashing. It has become a major invasive species in northern NSW, dominating pastures and capable of invading undisturbed natural ecosystems. Pasture dominated by Coolatai grass can be productive but requires very high levels of management. Coolatai grass is a major threat to natural biodiversity in stock routes, nature reserves and national parks.

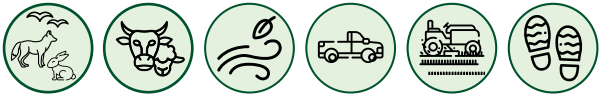
## Distribution:

Native of Africa, Coolatai grass is recorded in all mainland states of Australia except for Victoria. In NSW it is widely scattered but is more common north east of the state. Coolatai grass has been recorded in isolated patches along roadsides in the Central Tablelands and is expanding its range and density in the region.

## Methods of reproduction:

Seed.

## Methods of spread:



## Control methods available:

# Chilean needle grass

*Nassella neesiana*

Family: Poaceae





Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Perennial, tufted grass with stems to 80 cm tall; nodes are covered in short hairs. Leaves are 1-5 mm wide, strongly ribbed and hairy above and hairy below; there is a small tuft of hairs where the leaf blade arises. Flowerheads are open to contracted. Seeds are hairy in the lower half and have a long bent twisted awn (bristle) at their other end; the base of the awn is surrounded by a ring of tissue (corona).

Similar species in the region: native speargrass (*Austrostipa* species) and wallaby grass (*Rytidosperma species*) lack the combination of leaf and seed features.

## Problems caused:

A Weed of National Significance. It grows in native and introduced pastures and becomes dominant due to selective grazing if left uncontrolled. As it is relatively unpalatable, its main impact is to reduce potential carrying capacity of grazing lands. The seeds also injure stock and contaminate wool, skin and hides. It also reduces biodiversity of native groundcovers and is regarded as a threat to tablelands grasslands, grassy woodlands and riparian areas.

## Distribution:

Native to South America, it is widespread on the NSW tablelands and slopes (including the Central Tablelands region), as well as south-west Sydney and in the Wollongong region.

## Methods of reproduction:

Seed

## Methods of spread:

## Control methods available:

# Mexican feather grass

*Nassella tenuissima* (syn. *Stipa tenuissima*)

Family: Poaceae



Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Densely tufted grass to 70 cm tall. Leaves in the centre are usually the tallest and upright, while at the edge they droop away from the plant. Leaves are usually light green, 0.25–0.5 mm wide, tightly rolled (smooth to roll them between your fingers) and rough if you slide your fingers down the leaf. Flowerheads are much-branched but slender. 'Seeds' are 2-3 mm long, elongate and partially hairy, with a 4.5-9 cm long awn (bristle) at their tip and enclosed by 2 purplish glumes (bracts).

**Similar species in the region:** Serrated tussock (*Nassella trichotoma*) could be confused with Mexican feather grass but has 'seeds' that are about as long as wide and a seed head that breaks off from the plant after flowering. Native speargrass (Austrostipa species) also look similar but have 'seeds' that are hairy all over.

## Problems caused:

Mexican feather grass invades pastures, grasslands and woodlands and can dominate their ground layer. It is unpalatable to livestock, has very low feed value, is difficult to control, and has the potential to occupy two thirds of NSW.

## Distribution:

Native to southern USA, Central and South America. Mexican feather grass was introduced to Australia as an ornamental grass. A few isolated occurrences have occurred in the southern half of inland NSW, including a single site in the Central Tablelands; these have all been destroyed or are being managed for eradication.

## Methods of reproduction:

Seed.

## Methods of spread:

## Control methods available:

# Serrated tussock

*Nassella trichotoma*

Family: Poaceae


HR


HR


HR


HR


HR


HR

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Densely tufted grass to 60 cm tall. Leaves are bright green, very narrow, rough to the touch, erect when young and drooping in larger plants. Leaf bases are whitish, and ligules (at base of leaf blades) are short, tubular and white. Flowerheads are much branched and break off at maturity and blow along. Spikelets (flower clusters) are 1-flowered and have 2 purplish glumes (bracts). 'Seeds' are 1.5-2 mm long and about as broad, with a nearly straight awn (bristle) attached off-centre.

**Similar species in the region:** Serrated tussock looks like many native speargrass, poa tussock, snow grass and wallaby grass species. See the serrated tussock profile on NSW WeedWise for more information on distinguishing from these native grasses.

## Problems caused:

A Weed of National Significance, it is most invasive in over-grazed, non-arable and inaccessible grazing lands, but it will readily invade any sort of grassy vegetation on drier low fertility soils. It has extremely poor feed value, reduces carrying capacity by as much as 90% and livestock forced to graze it may eventually starve to death.

## Distribution:

Native to South America. A widespread weed in New Zealand and the south eastern states of Australia. In NSW the main infestations are on the central, southern and northern tablelands.

## Methods of reproduction:

Seed.

## Methods of spread:

## Control methods available:

# Giant Parramatta grass

*Sporobolus fertilis*

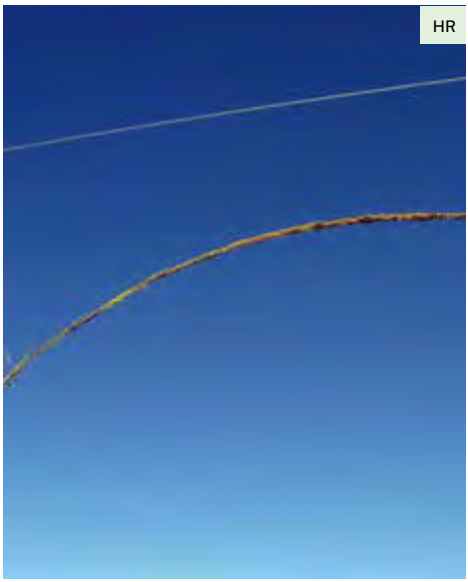
Family: Poaceae




AS


HR


HR


HR

Report this weed

Call your local council weeds officer if found.





## Description:

Warm-season densely-tufted perennial grass to 1.6 m tall. Leaf blades are tough and strap-like. Stems are tough, flattened at their base and mostly greater than 1 m tall. Flowerheads are dark, dense, long (25-45 cm) and narrow; they have many short branches held closely to the stem, but the lowest branches may droop slightly open. Spikelets are tiny (1.5-2 mm long), hairless and lack awns (bristles).

**Similar species in the region:** Native rat's tail grass (*Sporobolus creber* and *S. elongatus*) looks similar to giant Parramatta grass but the flowerheads are not as dense and interrupted for most of their length (stem visible).

## Problems caused:

Giant Parramatta grass invades pastures and replaces more productive types of grass, especially after overgrazing or soil disturbance. Because of its low grazing value, it decreases the productivity and economic viability of grazing land and lowers land values. It also invades native grasslands, open woodlands and wetlands where it excludes native species.

## Distribution:

Native to tropical Asia and the Malesia region. In Australia giant Parramatta grass is found in coastal areas from Cape York to southern NSW. It has been recorded in the Central Tablelands region in a few isolated occurrences and is being managed for eradication at these sites.

## Methods of reproduction:

Seed.

## Methods of spread:

## Control methods available:

# Burr ragweed

*Ambrosia confertiflora*

Family: Asteraceae


RS


AM


AM


RS


RS


BA& RM

Report this weed

Call your local council weeds officer if found.

## Description:

Strong smelling, finely hairy, perennial herb. Plants die back in winter but regrows rapidly in spring. Stems are erect, to 2 m tall and grow from underground runners (rhizomes). Leaves are grey-green, deeply divided, hairy and up to 16 cm long. Tiny, yellow male flowers have a greenish hood around them, and they are in spike-like clusters; female flowers are among the upper leaves and form brown, woody fruits covered with 10-20 short, hooked spines.

**Similar species in the region:** Burr ragweed is like 2 other introduced Ambrosia species that have been recorded in NSW. Perennial ragweed (*Ambrosia psilostachya*) that has lobed leaves with triangular lobes and annual ragweed (*Ambrosia artemisiifolia*) that has fruit that do not have hooked spines.

## Problems caused:

Unpalatable and highly competitive with pasture species, reducing carrying capacity. A problem in orchards where it competes for nutrients. Burrs cause vegetable fault in wool and are not easily removed due to the hooked spines. Its pollen is highly allergenic.

## Distribution:

Native to southern USA and Mexico and is introduced to the Australian states of Queensland and NSW. In NSW it is mainly confined to small colonies on the western slopes and plains. It has not been recorded in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Asparagus weeds

Including *Asparagus aethiopicus, A. africanus and A. plumosus*

**Family: Asparagaceae**


***A. plumosus***


***A. plumosus***


***A. aethiopicus***


***A. africanus***

Do not sell this weed

This weed must not be sold anywhere in NSW.

## Description:

Asparagus are mostly evergreen perennial plants that are usually shrubs or vines with prickly or smooth stems that persist or are replaced annually. Roots are fibrous or at time tuberous. *Asparagus officinalis* is the well-known edible asparagus. Various other species are cultivated as ornamentals, and all are potentially weedy as garden escapees or via seed distributed by birds (berries are mostly reddish when mature). Images of ground asparagus (*A. aethiopicus*), climbing asparagus (*A. africanus*) and climbing asparagus fern (*A. plumosus*) are included on this page.

**Similar species in the region:** In Australia there are 12 species of asparagus, including 1 native species. There are a number of asparagus weeds in NSW, an individual profile for bridal creeper (*A. asparagoides*) and bridal veil creeper (*A. declinatus*) is included in this book.

## Problems caused:

Most asparagus species are shade tolerant and form dense mats and can outcompete or smother native understorey plants. The dense root mats also prevent native plants from germinating and establishing. Invasion and establishment of exotic vines and scramblers has been identified as a key threatening process for many vulnerable and endangered species in NSW. Climbing asparagus and climbing asparagus fern are both listed as a threat.

## Distribution:

Ground asparagus (*A. aethiopicus*) is a native of South Africa that is found along the southern coast from Rockhampton in Queensland to Perth in Western Australia. Climbing asparagus (*A. africanus*) is a native of Africa and Saudi Arabia. It was introduced into Australia as an ornamental plant. Climbing asparagus has naturalised in coastal northern NSW. It grows as far south as Sydney. Climbing asparagus fern (*A. plumosus*) is a native to southern and eastern Africa and is now a weed in many countries in Australia. In Australia, climbing asparagus fern was introduced as a garden plant and is now a weed in Queensland, NSW, Victoria, South Australia and Western Australia. In NSW it is found along the coast.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Bridal creeper

*Asparagus asparagoides*

Family: Asparagaceae




Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Erect, climbing perennial with a mat of short, thick underground runners (rhizomes) that bear numerous fleshy tubers. Plants are actively growing in winter and spring, becoming dormant in summer. Stems are climbing, extensively branched, wiry and to 3 m long. 'Leaves' (modified stems) are soft, shiny green and mostly 10-30 mm long. Flowers are white, 6-petalled and 5-8 mm and occur in the axil of the 'leaves'. Fruit are round, sticky and red when mature; they are 1-seeded and may remain on the plant for months.

**Similar species in the region:** Bridal creeper could be confused with native species such as wombat berry (*Eustrephus latifolius*) that has yellow berries and scrambling lily (*Geitonoplesium cymosum*) that has black berries.

## Problems caused:

A Weed of National Significance, it is not regarded as a threat to agriculture, although it has been a problem in citrus orchards along the Murray River. It is a major threat to natural ecosystems, including grassy woodlands, slopes woodlands and riparian areas. Bridal creeper threatens 4 ecological communities in NSW. Invasion and establishment of exotic vines and scramblers like bridal creeper have also been identified as a key threatening process for many vulnerable and endangered species in NSW.

## Distribution:

Native to South Africa but now widespread worldwide. In Australia bridal creeper has naturalised in Victoria, South Australia, Western Australia and NSW. In NSW, it is widespread in coastal districts, as well as being widely scattered across the central and southern slopes. In the Central Tablelands region bridal creeper is widely scattered across much of the region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Bridal veil creeper

*Asparagus declinatus*

Family: Asparagaceae




Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Scrambler or weak climber with long perennial rhizomes and tubers. Annual aboveground shoots begin to appear in autumn and scramble across the ground. Dense foliage is produced in winter and usually dies in late spring. Stems are smooth and wiry. 'Leaves' (modified stems) are bluish-green, soft, needle-like and arranged in groups of 3. Flowers are 5-8 mm wide and have 6 greenish-white petals. Fruit are egg-shaped 3-9 seeded berries which are pale bluish-grey or whitish-translucent at maturity. Seeds are small and black.

**Similar species in the region:** Bridal veil creeper is similar to garden asparagus (*Asparagus officinalis*) that has 'leaves' arranged in groups of 1-5 and its fruit turns red when mature.

## Problems caused:

A Weed of National Significance, it is a highly invasive environmental weed that smothers ground and shrub layers and reduces recruitment of over-storey species. It currently infests coastal environments and urban bushland in Western Australia, South Australia and Victoria. Bridal veil creeper is not currently known to occur in NSW but has the potential to become a severe threat to biodiversity.

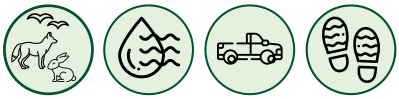
## Distribution:

Native to South Africa. In Australia bridal veil creeper has naturalised in Western Australia, South Australia and Victoria. It does not currently occur in NSW.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:



## Control methods available:

# Mother-of-millions

*Bryophyllum* species

Family: Crassulaceae


***Bryophyllum delagoense***


***B. daigremontianum x B. delagoense***


***Bryophyllum pinnatum***


***Bryophyllum delagoense***


***Bryophyllum delagoense***

Report this weed

Call your local council weeds officer if found.

## Description:

Succulent perennial herbs 30-200 cm tall. Stems are 4-angled or cylindrical and mostly unbranched. Leaves are cylindrical (mother-of-millions - *B. delagoense*), boat-shaped (hybrid mother-of-millions - *B. daigremontianum x B. delagoense*) or divided into leaflets (resurrection plant - *B. pinnatum*), but all produce plantlets (small projections) along their margins. Flowers are bell-shaped, red, orange-red or pinkish-red and occur in clusters at the top (or near to the top) of the stems. Seeds are numerous, minute and usually brown.

## Problems caused:

Mother-of-millions and hybrid mother-of-millions and resurrection plants are all poisonous when ingested. They are toxic to livestock, humans and other animals. They are very drought tolerant and reproduce by seeds and plantlets that quickly form new colonies.

## Distribution:

Native to Africa and Madagascar and now a weed worldwide. It's a serious weed on the coast and the northern tablelands of NSW and southeast Queensland. Mother-of-millions is known from a limited number of sites in the Central Tablelands region and the goal is to work to eradicating the weed from these sites.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Spotted knapweed

*Centaurea stoebe* subspp. *micranthos*

Family: Asteraceae


ML


ML


ML


ML


ML

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Slender, erect, branched, warm-season short-lived perennial herb to 1.2 m tall. Leaves are deeply lobed, stalked at the base of the plant but becoming smaller and stalkless towards the top. Flowers are pink and tubular; they occur in thistle-like heads which are surrounded by non-spiny bracts. Bracts have hard comb-like margins and black tips; the latter giving a spotted appearance. Seeds are brown, 2-3 mm long and may or may not have a short hairy pappus.

**Similar species in the region:** Spotted knapweed, and other knapweeds, look like thistles. Unlike thistles, knapweeds don't have sharp spines on the leaves. Call the Biosecurity Helpline if you see any spineless thistles with pink-purple flowers in NSW. Spotted knapweed is also similar in appearance to the more widespread star thistle (*Centaurea calcitrapa*) which can be distinguished by its spiny bracts.

## Problems caused:

Spotted knapweed is a serious weed of crops and pastures in the northern hemisphere, it suppresses the growth of other plants, contaminates grains and is generally unpalatable.

## Distribution:

Native to parts of Europe. There are currently no known occurrences in Australia, but 1 infestation has been previously recorded in the ACT. It is occasionally noted in Victoria and Tasmania.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Black knapweed

*Centaurea x moncktonii*

Family: Asteraceae



Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

A slender, upright, branched perennial herb that grows to 1 m tall. Although it looks like a thistle, it does not have spines on the leaves or flowers. Leaves in the basal rosette are soft, finely hairy to velvety, shallowly lobed and up to 15 cm long; stem leaves are much smaller. Flower heads contain many pink-purple, petal-like flowers; these are surrounded by rows of brown scale-like bracts which have comb-like edges.

**Similar species in the region:** Black knapweed (and other knapweeds) looks like thistles. Unlike thistles, knapweeds don't have sharp spines on the leaves. Call the Biosecurity Helpline if you see any spineless thistles with pink-purple flowers in NSW. Creeping Knapweed (*Rhaponticum repens*) looks similar to black knapweed but usually has deeply lobed rosette leaves.

## Problems caused:

Black knapweed invades pastures, crops and natural areas. It outcompetes pasture plants, is not usually eaten by stock and produces chemicals that suppress other plants. It is also difficult to control.

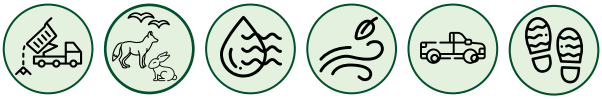
## Distribution:

Spotted knapweed is a native to Europe. In NSW, it has only been found in the Northern Tablelands in Tenterfield.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:



## Control methods available:

# Horsetails

*Equisetum* species

Family: Equisetaceae





Report this weed

Call your local council weeds officer if found.

## Description:

Herbs with perennial rhizomes (underground runners) and annual, aerial shoots that may be vegetative or fertile. Stems are hollow, jointed and ribbed with leaves in whorls (circles around the stem) around the stem's joints. Only common horsetail (*Equisetum arvense*) is naturalised in NSW. It has shoots 5-40 cm tall, with leaves in circles of 6-18 and rhizomes to several metres long. Unbranched, fertile shoots have club like structures 1-4 cm long containing spores; these emerge in spring before the branching vegetative shoots.

**Similar species in the region:** Young she-oaks (*Casuarina* and *Allocasuarina* species) can look a bit like horsetails but they have jointed branches that are not borne in whorls. Older she-oaks also become trees.

## Problems caused:

Horestails have the potential to become persistent weeds in moist-to-wet environmental areas. In high densities they also reduce crop yields by producing inhibitory substances that depress crop growth. All except common horsetail are toxic to livestock, but they have low palatability and poisoning usually only occurs if horsetails are in hay. All are spread by cultivation and are resistant to herbicides.

## Distribution:

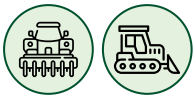
Native to North America, most of Europe and large parts of Asia. In NSW horsetails are rarely reported naturalised with limited number of sites found in the Greater Sydney area. In the Central Tablelands the only known population was in the Jenolan area.

## Methods of reproduction:

Spores, vegetative spread.

## Methods of spread:

## Control methods available:



# Blue Heliotrope

*Heliotropium amplexicaule*

Family: Boraginaceae





## Description:

Aromatic, stiffly hairy herb with creeping (prostrate) branched stems 15-30 cm tall. Root system is complex and can go to several metres in depth. Leaves are alternate, dull green and deeply veined; margins are mostly wavy. Flowers are small, tubular and bluish-purple with a yellow throat. They occur in 2 rows along 1 side of a coiled stem; these stems straighten with maturity. Fruit are rounded and separate into 2 sticky nutlets which each contain 2 seeds.

**Similar species in the region:** Blue heliotrope looks similar to common heliotrope (*Heliotropium europaeum*) which has white flowers with yellow centres.

## Problems caused:

Extremely drought-hardy and adaptable to a wide range of soil and climate types, which increases its ability to persist and spread. It also competes with desirable pasture plants, is toxic to all livestock and is easily spread by cultivation. These features have made it a major agricultural weed in NSW. It is also recorded as a threat to tablelands grasslands and slopes grasslands.

## Distribution:

Native to South America but now introduced to many countries worldwide. Blue heliotrope is widespread in disturbed or degraded areas throughout much of eastern Australia. In the Central Tablelands region, blue heliotrope has widespread records across most of the region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# St John's wort

*Hypericum perforatum*

Family: Hypericaceae





## Description:

Perennial herb to 1.2 m tall, but usually 30-70 cm. In autumn and winter stem growth develops from shallow underground runners (rhizomes) is along the ground, smothering other plants. In spring, erect flowering stems develop and remain into autumn. Leaves are opposite, paler green underneath and dotted with oil glands. Flowers are about 2 cm wide, with 5 yellow petals which have black marginal glands. Fruit are sticky capsules about 8 mm long. Seeds are tiny (0.5-1 mm long) and light brown to black.

## Problems caused:

St John's wort competes with pasture plants and causes photosensitisation in livestock when grazed; mostly during flowering in summer. It is mainly a problem with sheep but may also affect horses, cattle and goats. In forests, woodlands, grasslands and riparian areas St John's wort can displace native understorey species.

## Distribution:

Native to Europe, Asia and North Africa but is now spread worldwide. In NSW, the heaviest infestations are in the central and southern tablelands, but it is found throughout the tablelands and slopes, and occasionally further west and on the coast.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Ox-eye daisy

*Leucanthemum vulgare*

Family: Asteraceae





## Description:

Erect warm-season perennial herb. Stems arise from underground runners (rhizomes) in spring, usually grow 30-60 cm tall and then die down in autumn. Leaves form a basal rosette when young and are toothed to deeply lobed and arise on a long stalk. Upper stem leaves are smaller, narrower and stem-clasping, with entire to toothed margins. Flower heads (daisy flowers) are mostly 3-6 cm wide and typically daisy-like, with 10-35 white petal-like ray flowers and a centre of yellow tubular disc flowers. Fruit are about 2.5 mm long and lack a pappus (ring of fine hairs somtimes parachute like).

**Similar species in the region:** Ox-eye daisy looks similar to the annual introduced daisy stinking mayweed (*Anthemis cotula*) which has leaves that are finely divided into almost linear segments and smaller daisy flowers (1.5-3 cm wide).

## Problems caused:

Ox-eye daisy invades degraded pastures and disturbed areas. It competes strongly with other vegetation, is unpalatable to livestock, will taint milk and reduce carrying capacities. Also, a threat to native grasslands, woodlands and wetlands; it has become a major problem in undisturbed areas of Kosciuszko National Park.

## Distribution:

Native to Europe and western Asia. Ox-eye daisy is now naturalised worldwide. In NSW it occurs on the northern, central and southern tablelands. In the Central Tablelands region, it is most common southeast of Oberon, Orange and Mudgee areas but has also been at other locations across the region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Broomrape

*Orobanche* species except the native *O. cernua var. australiana* and *introduced O. minor*

**Family: Orobanchaceae**







Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

An annual root parasitic herb in which only the flowering stems can be seen above ground. Stems are erect, densely branched at ground level (in branched broomrape), brown or straw-yellow, covered with soft woolly hairs and up to 30 cm tall. Leaves are reduced to purplish scales at the base of the stems. Flowers occur in erect spikes, resemble small snapdragons and vary from white to blue or violet. Fruit are small capsules containing many tiny, brown, dust-like seeds.

**Similar species in the region:** *Orobanche minor* (common or clover broomrape) is a common weed of pasture and may require expert help to distinguish from the other prohibited matter species. There is also an Australian broomrape (*O. cernua* var. *australiana*) but this species is only recorded from the far northwest of NSW. Broomrapes can look similar to the native potato orchid (*Gastrodia sesamoides*), which is taller (up to 75 cm) and its flowers are brownish on the outside.

## Problems caused:

Parasitic on a wide range of crops and pastures species, they are among the world's worst crop weeds. They pose a serious threat to broadleaf grain and vegetable industries in Australia as they can cause partial or total crop losses and reduce the ability to grow some crops in heavily affected areas.

## Distribution:

Mostly native to the temperate Northern Hemisphere, such as southern Europe, western Asia and northern Africa. They do not currently occur in NSW.

## Methods of reproduction:

Seeds

## Methods of spread:

## Control methods available:

# Parthenium weed

*Parthenium hysterophorus*

Family: Asteraceae






Report this weed

Probibited matter: If you see this plant report it.
Call the NSW DPI Biosecurity Helpline 1800 680 244

## Description:

Annual warm-season herb 1-1.5 m tall. Stems are ribbed and many-branched in their top half when mature. Leaves are pale green, up to 20 cm long, deeply lobed and covered with fine soft hairs. Flower heads are creamy white and small (4-6 mm wide), with tubular disc florets and 5 tiny petal-like ray florets. Seeds are tiny, wedge-shaped and black, with 2 thin white scales at their tip.

**Similar species in the region:** ragweed (*Ambrosia* species) stems are not ribbed. bishop's weed (*Ammi majus*) and hemlock (*Conium maculatum*) flowerheads are 3-7 cm wide.

## Problems caused:

Probibited matter in NSW. Grows quickly, outcompetes disturbed or degraded pastures and is allelopathic (releases chemicals which inhibits other plants). It is unpalatable to livestock, lowers carrying capacity, can cause kidney disease, dermatitis and milk taint in livestock. It also causes respiratory problems and severe dermatitis in people, reduces crop yields and contaminates grain.

## Distribution:

Native to North and South America. In NSW scattered infestations have mostly been recorded in the North West and Northern Tablelands regions, these have all been eradicated or are being managed for eradication. Smaller outbreaks have also been recorded in the Hunter, South East, North Coast and Central West regions. It does not currently occur in the Central Tablelands region.

## Methods of reproduction:

Seed

## Methods of spread:

## Control methods available:

# Hawkweed

*Pilosella,* and *Hieracium* species (except *Hieracium murorum)*

**Family: Asteraceae**


***Pilosella aurantiaca***


***Pilosella aurantiaca***


***Pilosella aurantiaca***


***Pilosella aurantiaca***

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Hawkweeds from the genera *Pilosella* and *Hieracium* are grouped together in this guide. Hawkweeds are hairy perennial herbs 15-40 cm tall; rhizomes are present and sometimes stolons; hairs are stiff and star-shaped as well as glandular and non-glandular. Plants exude a milky sap when broken. Leaves usually form a rosette and their margins are not (or little) toothed. Flower heads are solitary or occur in branched clusters, 10-20 mm wide and daisy-like, with strap-like yellow, orange or red florets; bracts surrounding the heads usually have some/numerous blackish-coloured hairs. 'Seeds' are purplish-black, ribbed and topped with a bristly tuft of hairs.

**Similar species in the region:** Hawkweeds may be confused with other introduced yellow daisy species including dandelion (*Taraxacum officinale*), catsear (*Hypochaeris* species) and hairy hawkbit (*Leontodon saxatilis*) which all have bracts that do not have blackish-coloured hairs.

## Problems caused:

Hawkweeds are highly invasive, capable of forming dense stands and have the potential to seriously degrade Australia's ecosystems. They are a major threat to biodiversity in conservation areas and native grasslands but can also compete with pastures and reduce grazing productivity.

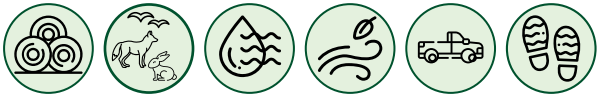
## Distribution:

Hawkweeds (*Pilosellas*) are native to the northern hemisphere, South Africa and South America. Several species have become major weeds of pastures, gardens and natural areas in eastern North America, Japan, Patagonia and New Zealand. In Australia, orange hawkweed (*Pilosella aurantiaca*) is present in NSW in Kosciuszko National Park and on farmland nearby. It is also present in Victoria and Tasmania. Mouse-ear hawkweed (*Pilosella officinarum*) is present in NSW in Kosciuszko National Park, and in Victoria and Tasmania. King devil hawkweed (*Pilosella piloselloides*) has been found in Victoria but not NSW.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:



## Control methods available:

# Fireweed

*Senecio madagascariensis*

Family: Asteraceae




HR


HR


JT


HR

Report this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.

## Description:

Mostly an erect annual or biennial herb to 70 cm tall. Leaves are mostly 2-8 cm long and lance-shaped or elliptical; margins are margins entire or variously toothed, but never deeply lobed. Flowerheads are loose clusters of yellow heads, each to 2 cm wide. Heads usually have 13 (varies from 12–15) petal-like ray flowers and 1 row of 19-21 bracts.

**Similar species in the region:** Some plants within the native *Senecio pinnatifolius* complex look similar to fireweed, but these species have leaves that are often deeply dissected leaves and often grow in undisturbed sites and bushland. Another weed that may be mistaken for fireweed is cineraria (*Cineraria lyratiformis*) which also has yellow daisy like flowers but the leaves are usually shaped like a lyre.

## Problems caused:

A Weed of National Significance, fireweed readily invades degraded pastures and disturbed areas. It is poisonous to livestock, especially cattle and horses. Sheep and goats are relatively resistant, but the toxins can ultimately affect them as well.

## Distribution:

Native to southeast Africa. It is widespread throughout NSW coastal regions and has spread into parts of the tablelands including into the eastern areas of the Central Tablelands region.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Silverleaf nightshade

*Solanum elaeagnifolium*

Family: Solanaceae




HR


HR


HR


HR


HR

Report this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.

## Description:

Warm-season perennial herb 40-60 cm tall which often forms suckers. Branches are white woolly and prickly; prickles are less common elsewhere. Leaves are lance-shaped to oblong, silvery-green, hairy, slightly paler underneath and 5-10 cm long. Lower leaves are shallowly lobed, but upper leaves are entire. Flowerheads are 1–4-flowered. Flowers are 2-3 cm wide and have fused blue (rarely white, pink or deep purple) petals. Fruit are initially light green berries with dark green stripes, becoming orange when ripe.

**Similar species in the region:** Silverleaf nightshade is like the native quena (*Solanum esuriale*) which has smaller plants to 15-30 cm tall with fruit that are yellow-brown when ripe and rarely has spines on the stems.

## Problems caused:

A Weed of National Significance, it is a serious weed of cropping and pastures. It greatly reduces yields, and while only moderately palatable to livestock it is toxic if eaten. Ripe fruit are the most poisonous part of the plant. Once established, it is very difficult to control.

## Distribution:

Native to North America and now spread worldwide. Silverleaf nightshade is widespread in the south-eastern states of Australia. In NSW it mostly occurs on the slopes and southwest plains. It is most frequent in the Cowra and eastern areas from Mudgee to Bathurst in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Sticky nightshade

*Solanum sisymbriifolium*

Family: Solanaceae





Report this weed

Call your local council weeds officer if found.



## Description:

Erect warm-season annual or short-lived perennial herb to 1.5 m tall; most parts are covered in glandular, star-shaped hairs and sharp prickles. Leaves are 5-14 cm long, deeply lobed, sticky, hairy and prickly. Flowers are 3.5-5 cm wide and have white or pale blue fused petals and yellow anthers. Mature fruit are 1.5-2 cm wide, rounded, bright-red berries with prickly sepals at least three quarters the length of the berry. Seeds are pale yellow and about 3 mm long.

**Similar species in the region:** Other *Solanum* species don't have the combination of plants covered in prickles and star-shaped hairs, berries red with prickly sepals at least three quarters the length of the berries and petals white or pale blue.

## Problems caused:

An emerging threat to landholders in the Central Tablelands. A weed of disturbed areas, it competes with pastures, crops and native plants. It is suspected of causing livestock poisoning in the Greater Sydney region and prickles can cause injuries to animals.

## Distribution:

Native to South America. In NSW, it is mostly found in western Sydney and the Central Tablelands. However, it also has isolated records in other regions including the Central West, South East, Hunter, North Coast and Murray.

## Methods of reproduction:

Seed, vegetative.

## Methods of spread:

## Control methods available:

# Tropical soda apple

*Solanum viarum*

Family: Solanaceae


VH


DV


JD


DV


FX

Report this weed

This plant must not be sold anywhere in NSW.
Call the NSW DPI Biosecurity Helpline 1800 680 244 or your local council weeds officer if found.

## Description:

Prickly, erect, branching, warm-season, perennial shrub 1–2 m tall; prickles are straight, cream-coloured and to 12 mm long. Leaves are 10-20 cm long x 6-15 cm wide, shallowly to deeply 5-7-lobed and densely covered in short hairs; mid-veins and primary lateral-veins are cream-coloured. Flowerheads are 3-6-flowered; flowers have 5 white petals 2-4 mm long. Fruit are 2-3 cm wide; initially pale green with dark green veins, turning yellow with maturity.

**Similar species in the region:** Expert help may be required to distinguish the many other native and introduced prickly nightshades from tropical soda apple. Many native *Solanum* species can be distinguished from tropical soda apple by the purple flowers and fruits that are green in colour.

## Problems caused:

Invades open to semi-shaded areas, particularly pastures and riparian zones, but also forests, roadsides, recreational areas, and horticultural and cropping areas. It displaces native plants, is unpalatable to livestock and thus reduces carrying capacities, forms thorny thickets which create a physical barrier for animals, is a host for many diseases and pests of cultivated crops, and is poisonous to humans.

## Distribution:

Native to South America but now has a worldwide distribution. In Australia tropical soda apple is predominantly found in north-eastern NSW and south-eastern Queensland.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Witchweed

*Striga* species (except the native *S. parviflora*)

Family: Orobanchaceae


***Striga gesnerioides***


***Striga gesnerioides***


***Striga gesnerioides***


***Striga hermonthica***


***Striga asiatica***

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Root parasitic herbs mostly 15-20 cm tall (some to 60 cm); some only emerge above ground to produce flowers. Stems are generally bright green, square, 1-2.5 mm wide and sparsely covered with coarse short bulbous-based hairs. Leaves are nearly opposite, narrowly lance-shaped and about 1-3 cm long. Flowers occur in the leaf axils and are small and stalkless, with a 2-lipped, shortly-hairy, red, orange or yellow, pink, white or purple corolla. Fruit are 5-sided capsules with narrow wings and contain dust-like sticky seeds.

**Similar species in the region:** There is 1 native witchweed species (*Striga parviflora*) that occurs in northern NSW, Queensland and the Northern Territory. This species is found in woodlands but has also been found in sugarcane and maize crops.

## Problems caused:

Witchweed is a serious parasitic weeds of maize, millet, rice, sugarcane, sorghum and legume crops. It can stunt, kill and contaminate crops, and is very difficult to control. It's seed is viable for up to 15 years.

## Distribution:

Native to tropical Africa, India, the Middle East and China. Red witchweed (*Striga asiatica*) was found in Queensland near Mackay and is the target of an eradication program. Witchweed does not currently occur in NSW.

## Methods of reproduction:

Seeds.

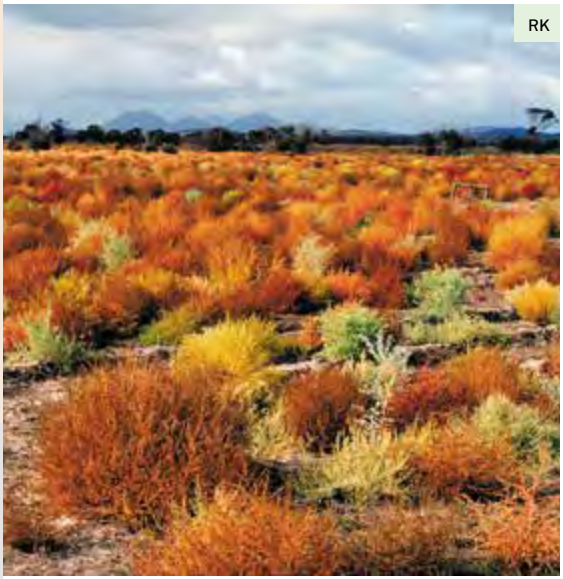
## Methods of spread:

## Control methods available:

# Kochia

*Bassia scoparia* (excluding subspp. *trichophylla)*

**Family: Chenopodiaceae**


RK


LB


SD


RK

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Warm-season, annual shrub with a rounded appearance and 25-200 cm tall. It often changes from green to pale yellow, pink and then to rusty brown with age. Mature plants break off and are blown around by the wind. Lower branches curve upwards; Leaves are flat, up to 6 cm long, relatively broad (up to 8 mm), 3-veined and often hairy on their margins. Flowers are tiny, surrounded by a dense tuft of long hairs and clustered near the tips of the branches.

**Similar species in the region:** The ornamental subspecies *Bassia scoparia* subspecies *trichophylla* (commonly known as summer cypress or burning bush) can still be found in older gardens. It has an oval rather than rounded shape, the leaves are only 1 mm wide and it does not have long hairs around the flowers. Kochia looks similar to native species including roly-poly (*Salsola australis*) which has lower leaves that are fleshy and very narrow and upper leaves are spine-tipped, and copper-burr (*Sclerolaena* species) that have spiny fruit.

## Problems caused:

Kochia is on the National Environmental Alert List and can form dense infestations that reduce the abundance of native plants and alter fire regimes in natural ecosystems. It also has the potential to infest pastures and crops and reduce production, as it is allelopathic (produces chemicals which inhibit other plants) and toxic to livestock.

## Distribution:

Native to Europe and western Asia and has been introduced to North America. In Australia Kochia has been eradicated from Western Australia and Tasmania. It does not currently occur in NSW.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Green cestrum

*Cestrum parqui*

Family: Solanaceae





## Description:

A medium-sized woody shrub which has a strong and unpleasant smell when crushed. Leaves are alternately arranged, lance-shaped, narrow, shiny, green to dark green and paler underneath. Flowers are tubular, 20-25 mm long, normally yellow but can be greenish, unpleasant smelling during the day and sweet smelling in the evening. Mature fruit are egg-shaped, 10-15 mm long, black berries.

**Similar species in the region:** Red cestrum (*Cestrum elegans*) is similar to green cestrum except it has pink or reddish flowers. All *Cestrum* species in NSW are introduced.

## Problems caused:

Green cestrum is a poisonous plant; it is toxic to most animals including cattle, sheep, horse, pigs, poultry, kangaroos and humans. It is also a vigorous plant which suckers and creates thickets that can outcompete other vegetation if left uncontrolled. Bushes are still poisonous after they have been cut down or sprayed.

## Distribution:

Native to South America but now a weed in many areas of the world including North America, Europe and South Africa. Within Australia green cestrum is naturalised in Queensland, South Australia, Victoria and NSW. In the Central Tablelands region, larger infestations are being managed in the Cowra and Mudgee areas.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Siam weed

*Chromolaena odorata*

Family: Asteraceae






Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.



## Description:

Perennial thicket-forming shrub; to 20 m tall when supported by other vegetation. Stems are hollow, longitudinally ridged and woody at the base when mature; branches are oppositely arranged. Leaves are opposite, almost triangular, softly hairy, waxy, aromatic when crushed and 5-12 cm long; they have 3 prominent veins and a few coarse teeth towards their apex. Flowerheads are flat-topped with small heads that contain tubular, white to pale lilac flowers.

**Similar species in the region:** Crofton weed (*Ageratina adenophora*) differs from Siam weed with flowers that are white and solid stems.

## Problems caused:

Siam weed is on the National Environmental Alert List and considered one of the world's worst weeds. It invades and outcompetes pastures, crops and native vegetation, is toxic to livestock, can cause allergic reactions in people, and harbours pest animals.

## Distribution:

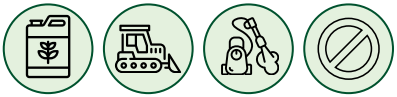
Native of tropical South America to Mexico and the Caribbean islands. It occurs in north Queensland and the Northern Territory but does not currently occur in NSW.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:



# Boneseed

*Chrysanthemoides monilifera* subspp. *monilifera*

Family: Asteraceae


Report this weed

This plant must not be sold anywhere in NSW.
If you see this plant call your local council weeds officer or the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

A perennial shrub with erect woody branched stems which grow up to 3 m tall. Young growth is usually covered by a cottony down. Leaves are bright green, leathery and 3-9 cm long, with irregularly toothed margins. Flowerheads are bright yellow, daisy-like and typically have 5-8 'petals'. Fruit are round, black, fleshy, 1-seeded berries. Seeds are bone coloured when dry, hence the name 'boneseed'.

## Problems caused:

A Weed of National Significance due to its ability to invade areas of native vegetation ranging from mallee scrub to eucalypt forests, especially along the coastal fringe. It mostly invades disturbed sites and quickly spreads due to its vigorous growth and ability to regenerate. It is also a threat to a number of significant rare or threatened species.

## Distribution:

Native to South Africa and now naturalised as a weed in Australia in Victoria, Tasmania, Western Australia South Australia and NSW. In NSW it forms scattered infestations along the south and central coasts. Isolated infestations have also occurred in south western parts of the state.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Bitou bush

*Chrysanthemoides monilifera* subspp. *rotundata*

Family: Asteraceae




Report this weed

Call your local counicil weeds officer if found.

Eradication and/or containment

Not listed as a regional priority weed

## Description:

Perennial shrub with spreading succulent woody stems. Young growth is usually covered by a cottony down. Plants typically grow 1-2 m tall and 2-6 m wide, but under shade may smother canopies up to 10 m in height. Leaves are bright green, leathery and 1.5-5 cm wide; with more or less entire margins. Flowerheads are bright yellow, daisy-like and typically have 11-13 'petals'. Fruit are black fleshy 1-seeded berries.

## Problems caused:

Bitou bush is highly competitive due to its high growth rate and, possibly, by releasing chemical inhibitors. It displaces native plants leading to decreasing floral biodiversity and, consequently, changes in faunal diversity. It can also harbour pest animals, such as foxes and introduced birds, which feed on and disperse the seeds.

## Distribution:

Native to South Africa, it was widely sown for sand dune stabilisation. In Australia, bitou bush has naturalised in Queensland, Victoria and NSW. It occurs along the NSW coast and is particularly prevalent on the central and north coasts. A population was also planted and has persisted near Menindee in western NSW. It has not been recorded in the Central Tablelands region.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Koster's curse

*Clidemia hirta*

Family: Melastomataceae



Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.



## Description:

A perennial shrub which usually grows to 2 m tall (but to 5 m in moist shady sites) and is covered in reddish-brown bristly hairs. Leaves are oppositely arranged, bright shiny green above and paler underneath; they have 5 longitudinal veins and many obvious cross veins. Flowers white or pink and occur in 6-20 flowered clusters in the leaf axils or at the end of branches. Fruit are dark purple berries and contain over a hundred very small seeds.

## Problems caused:

Koster's curse grows in disturbed and undisturbed areas and is allelopathic (produces chemicals which inhibit other plants). It can rapidly form dense thickets which smother other plants and prevent their regeneration in forests, plantations and pastures. It has no fodder value and is toxic to livestock.

## Distribution:

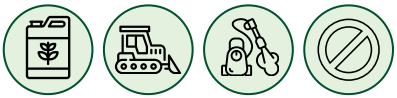
Native to Central and South America and is an invasive weed in tropical parts of Asia, Africa and many Pacific and Indian Ocean islands. It does not currently occur in NSW.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:



# Scotch or English broom

*Cytisus scoparius* subspp. *scoparius*

Family: Fabaceae


CSIRO


E


AT


F&KS

Do not sell this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.

## Description:

Erect, evergreen long-lived shrub; plants are usually 1-2 m tall (occasionally to 4 m) and have 5-angled branches. Leaves can have 3 leaflets or 1 leaflet or be absent; leaflets are shortly stalked, softly hairy and 5-20 mm long. Flowers are solitary or paired in the leaf axils and are yellow, pea-like and 2-2.5 cm long. Fruit pods are 25-60 mm long, brown-black, flattened, elongate and 5-22-seeded; hairs are confined to the margins. Seeds are flattened, about 3 mm long and usually brown.

**Similar species in the region:** Cape broom (*Genista monspessulana*) and Flax-leaf broom (*Genista linifolia*) are both similar to scotch broom but have pods that are generally smaller (15-30 mm long) and covered all over in silky or downy hairs.

## Problems caused:

A Weed of National Significance, it invades disturbed bushland and, as a nitrogen fixing legume can transform ecosystems covering areas with their leaf mulch. It also forms dense stands which smother desirable vegetation, reduces stocking rates, limit livestock and human access, but provides harbour for feral animals. It is one of the major weed threats in the alpine and subalpine areas of Australia, is toxic to humans and also difficult to control.

## Distribution:

Native to Europe, North Africa and Asia and now an invasive weed in parts of North and South America, New Zealand and Australia. In NSW it is confined to cool temperate areas, particularly the tablelands. It has most frequently been recorded in predominately southern areas of the Central Tablelands region.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Spanish heath

*Erica lusitanica*

Family: Ericaceae




## Description:

Erect shrub to 3 m tall with hairy branches. Leaves are arranged in whorls (circles around the stem) of 3-4 around the stem; they are thick, hairless and linear (3-7 mm long x less than 1 mm wide), with a longitudinal groove underneath. Flower buds are pink-tinged. Flowers are profuse and often nearly hide the foliage; they are white, 4-5 mm long, tubular bells with dark purple anthers. Fruit are 2-3 mm long capsules containing many fine seeds.

**Similar species in the region:** Native heaths (*Epacris, Leucopogon, Lissanthe* and *Monotoca*) mostly have alternate leaf arrangements, larger leaves and flowers, and sparser flowers.

## Problems caused:

A garden escape that grows in heathlands, pastures, woodlands, forests, disturbed areas and on roadside or rail corridors. In cool moist climates it can dominate the understorey of woodlands and forests by forming a dense shrub layer.

## Distribution:

Native to south-western Europe. Spanish heath is a weed in south eastern Australia and New Zealand. In NSW, it occurs in the central and southern tablelands and coast. In the Central Tablelands records of Spanish heath are restricted to around the Lithgow area.

## Methods of reproduction:

Seeds.

## Methods of spread:

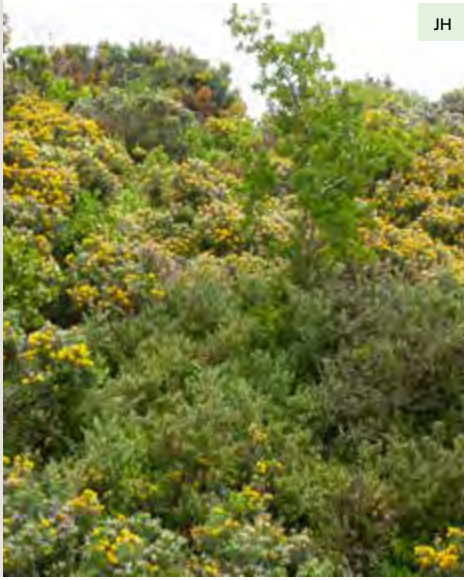
## Control methods available:

# Flax-leaf broom

*Genista linifolia*

Family: Fabaceae






Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Flax-leaf broom is a long lived, evergreen shrub to 3 m high. Leaves have 3 leaflets that are arranged alternatively along the stem; the leaflets are narrow and slender with pointed ends 10-25 mm long and 1-4 mm wide. Flowers are bright yellow and occur in clusters of 3-16 at the tips of branches. Fruit pods are hairy, 10-30 mm long, oval in shape, contain 2-3 seeds and are a brown–black colour when mature. Seeds are rounded, olive green–brown in colour and 2-3 mm in diameter.

**Similar species in the region:** Flax-leaf broom is similar to other introduced brooms including cape broom (*Genista monspessulana*) and Scotch or English broom (*Cytisus scoparius* subspp. *scoparius*).

## Problems caused:

A Weed of National Significance, flax-leaf broom produces large amounts of seed and can tolerate a range of environmental conditions. It quickly forms dense thickets, particularly in areas that are disturbed or degraded. It is an invader of roadsides, pastures, forestry, drains and areas of high conservation value. Thickets of flax-leaf broom can also provide harbour for pest animals and reduce the food resources available for native fauna.

## Distribution:

Native to the Mediterranean Islands, southern France, Spain, Algeria, Morocco and the Canary Islands. In Australia, flax-leaf broom was widely planted as an ornamental shrub and hedge plant, and it has now naturalised in Western Australia, South Australia, Victoria and NSW. In NSW localised infestations of flax-leaf broom occur in the Blue Mountains, Riverina, Bega Valley and various locations in the south west slopes regions of NSW. Larger infestations occur around Sydney. Flax-leaf broom has not been recorded in the Central Tablelands.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Cape broom

*Genista monspessulana*

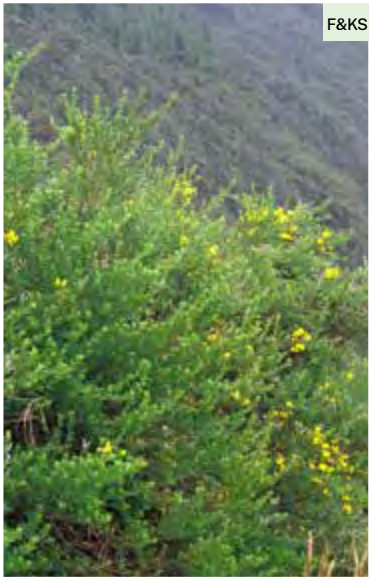
Family: Fabaceae


PW


TR


PW


X


F&KS

Do not sell this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.

## Description:

Erect perennial shrub up to 3 m tall. Young stems are ridged, green and lightly hairy, becoming hairless with age. Leaves have 3 leaflets which are mainly hairy underneath; the centre leaflet is on a slightly longer stalk than the outer 2. Flowers are bright yellow, pea-like, 8–12 mm long and found in clusters at the end of branches. Fruit are brown to black, densely-hairy, 15–25 mm long pods. Seeds are rounded, black and 2.5 mm long.

**Similar species in the region:** Broom (*Cytisus scoparius* subspp. *scoparius*) has large pods (25-70 mm long), which are only hairy along their edges. Gorse (*Ulex europaeus*) is spiny and lacks true leaves.

## Problems caused:

A Weed of National Significance, it is a major weed of bushlands, pastures and roadsides across southern Australia. Infestations replace native shrubs and groundcovers, impede the regeneration of overstorey plants, can increase fire intensity and frequency and encourage weed invasion due to its ability to fix nitrogen and thus increase soil fertility.

## Distribution:

Native to the Mediterranean region, it is now considered an invasive plant in many countries including New Zealand, Chile, South Africa and the USA. Cape broom has naturalised in south eastern Australia and in NSW there are large and well-established populations in coastal and highland areas. It is widespread in the southern parts of the Central Tablelands region.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Tutsan

*Hypericum androsaemum*

Family: Hypericaceae




Report this weed

Call your local council weeds officer if found.

## Description:

Spreading, soft-wooded shrub to 1.5 m tall, but commonly only to 1 m. Stems are reddish. Leaves are in opposite pairs, sessile, egg-shaped, 3.5-9 cm long and paler underneath; they have a reddish tinge in autumn and a curry odour when crushed. Flowers are yellow and occur in terminal clusters. Fruit are rounded, 7-10 mm long and turning from green to red to black with maturity. Seeds are tiny (1 mm).

**Similar species in the region:** Tutsan is similar to St. John's Wort (*Hypericum perforatum*) which has smaller leaves (0.5-4 cm long) and is not shrubby.

## Problems caused:

Tutsan may invade overgrazed or neglected pastures and is suspected of causing photosensitisation in ruminants and horses. Typically invades moist, shady, disturbed sites such as forest margins and from there invades undisturbed woodlands, forests and riparian areas competing strongly with native species.

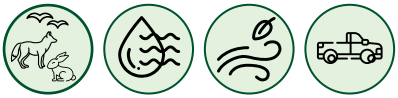
## Distribution:

Tutsan is a native to Europe, Asia and Africa and was introduced to Australia as an ornamental plant; it has been recorded in NSW, Victoria and Tasmania. In NSW tutsan occurs in the Blue Mountains and on the central and southern tablelands. It mostly occurs south east of Oberon in the Central Tablelands region.

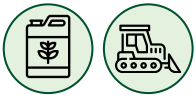
## Methods of reproduction:

Seeds.

## Methods of spread:



## Control methods available:



# Bellyache bush

*Jatropha gossypifolia*

Family: Euphorbiaceae




Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Squat, thick-stemmed shrub to 4 m tall. Young leaves are sticky, purple and 3-lobed, older leaves are green and up to 5-lobed. Flowers are small and red with yellow centres. Fruit are dark brown when mature, about the size of a cherry and contain 2-3 brown seeds 6-8 mm long.

**Similar species in the region:** Bellyache bush is similar to castor oil plant (*Ricinus communis*) which is taller, has larger fruit and leaves, and the leaves have 7-9 lobes.

## Problems caused:

A Weed of National Significance, it invades disturbed areas and overgrazed pastures, forming dense thickets that crowd out other vegetation. Seeds are highly toxic to animals; its sap can cause dermatitis and all parts of the plant are toxic to humans.

## Distribution:

Native from Mexico to Paraguay. In Australia there are records for bellyache bush across northern parts of Queensland, Northern Territory and Western Australia. Bellyache bush is a frost sensitive tropical species which is unlikely to survive in NSW.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Lantana

*Lantana camara*

Family: Verbenaceae






Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Much-branched shrub with many shallow horizontal roots. Stems are thorny and square in cross-section when young and become cylindrical with age. Leaves are opposite, rough, finely hairy and pungently smelly when crushed. Flower heads consist of 20–40 white, yellow, orange, red or pink tubular flowers. Mature fruit are clustered shiny purple-black berries that contain a single pale seed.

## Problems caused:

A Weed of National Significance, it usually invades disturbed areas and riverbanks in a wide range of habitats such as pastures, woodlands and forests where it can form dense impenetrable thickets. It is allelopathic (produces chemicals which inhibit other plants), reduces pasture productivity, can be toxic to livestock and humans and is a serious threat to biodiversity in many areas.

## Distribution:

Native to tropical and subtropical Central and South America. In Australia the main infestations of lantana range are in the coastal areas from southern NSW to Cape Melville in northern Queensland. The main infestations in NSW are along the coast north from Bega. Lantana has not been recorded in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# African boxthorn

*Lycium ferocissimum*

Family: Solanaceae




Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Thorny and sometimes deciduous shrub up to 4 m tall; thorns are up to 15 cm long on the main stem, with stout thorns on the ends of branches. Leaves are slightly fleshy, bright green, 10-40 mm long and clustered along the branches. Flowers are white to purple, fragrant, tubular and usually present in spring and summer, but can occur year-round. Fruit are 5-10 mm wide, orange-red berries.

**Similar species in the region**: Chinese boxthorn (*Lycium barbarum*) has smaller berries (3-4 mm wide) which are oval in shape.

## Problems caused:

A Weed of National Significance, it invades pastures, roadsides, reserves, remnant bushland and waterways. It forms thickets which can block access for vehicles, livestock and people, while providing shelter and food for pest animals. Poisonous to humans and its thorns can injure livestock and people and puncture vehicle tyres. African boxthorn is also a host for pest insects including fruit fly, tomato fly and house fly.

## Distribution:

Native to South Africa, it was brought to Australia as a hedge plant and has spread into open areas across NSW but is most common on well drained soils of the western slopes and plains. African boxthorn has been recorded in the Central Tablelands region, particularly in the areas around Cowra, Bathurst and Mudgee.

## Methods of reproduction:

Seeds, suckers.

## Methods of spread:

## Control methods available:

# Mimosa

*Mimosa pigra*

Family: Fabaceae






Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Spiny perennial shrub to 6 m tall. Stems have large thorns (5-10 mm long), with smaller thorns present on the central leaf stalks. Leaves are bright green, fern-like and 20-25 cm long; they shut up at night or when touched. Flowerheads are round, 1-2 cm wide, pink and many-flowered. Fruit are 6-8 cm long, hairy, brown pods which break into segments when mature; each segment contains 1 oblong-shaped seed 4-6 mm long.

**Similar species in the region:** Mimosa is not the same plant as mimosa bush (*Vachellia farnesiana*), which is recorded in NSW and common in the north west of the state. Mimosa bush has yellow, pom-pom shaped flowers and paired, straight thorns that are 5–25 mm long and only occur on the woody stems. Mimosa can also look similar to some native wattles (*Acacia species*).

## Problems caused:

A Weed of National Significance, it is an aggressive invader of wet places in the tropics. It forms dense spiny thickets which displaces native vegetation and wildlife in the wetlands of the top end of northern Australia, smothers grasslands, blocks access to water and lowers the productivity of land.

## Distribution:

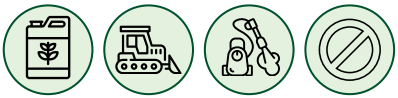
Native to tropical America. Mimosa has been found in the Northern Territory but it does not currently occur in NSW.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:



# Blackberry

*Rubus fruticosus* species agg.*

Family: Rosaceae




JT


JT


R


RC


DS

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

*Rubus fruticosus* species aggregate is the collective name for what is now recognised as 9 species of European blackberry in NSW. It is a shrub with tangled, generally prickly stems. Leaves consist of 3-5 leaflets, which are darker above and covered in short, curved prickles; leaves are deciduous in cooler climates. Canes (stems) are up to 7 m long, vertical, arched or horizontal on the ground. Flowers are white or pink, 5-petalled and 2-3 cm wide. Fruit are dark coloured berries, each with 20-30 seeds.

**Similar species in the region:** It can be hard to tell different *Rubus* species apart. Contact your local council weeds officer for advice on identification.

## Problems caused:

A Weed of National Significance, it quickly infests large areas, forms dense thickets that restrict access, takes over pastures, is unpalatable to most livestock, reduces native habitat for plants and animals, fuels bushfires and provides food and shelter for feral animals such as rabbits, foxes and starlings.

## Distribution:

Blackberry is native to Europe and has spread worldwide. It infests about 9 million hectares of land in Australia. In NSW it mostly occurs east of the Newell Highway, although infestations also occur as far west as Bourke. Blackberries have been in the Central Tablelands since the 1830s and are widespread in the region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

*(except the varietals *chester thornless, dirksen thornless, loch ness, silvan, black satin, murrindindi, smooth stem, thornfree* and *chehalem).*

# Gorse

*Ulex europaeus*

Family: Fabaceae


TR


F&KS


JT


F&KS


JT

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Erect densely branched shrub up to 4 m tall, but commonly 1-2.5 m tall, and up to 3 m wide. Green stems become brown and woody with age; they are ridged longitudinally, hairy and are covered with spines up to 5 cm long and short branches terminate in spines. Leaves are small (1-3 cm long), narrow and also spine-like. Flowers are bright yellow and pea-like. Fruit pods are 1-2 cm long, densely hairy and 1-6-seeded.

**Similar species in the region:** Gorse is similar to cape broom (*Genista monspessulana*) however cape broom lacks spines.

## Problems caused:

A Weed of National Significance, it is an invasive shrub that forms dense spiny impenetrable thickets. It can reduce pasture carrying capacities, block access and provide shelter for pests. In environmental areas, it can compete with native vegetation and increase the risk of bushfires, as it contains flammable oils and increases fuel loads by retaining dead vegetation.

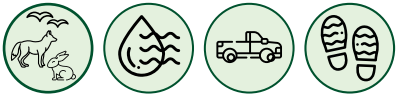
## Distribution:

Gorse is native to Europe and has become a weed in the USA, New Zealand, Chile and Hawaii along with the southern states of Australia. In NSW gorse is generally confined to the cool temperate parts on the southern and central tablelands, including the Blue Mountains and the Lithgow – Bathurst – Oberon area.

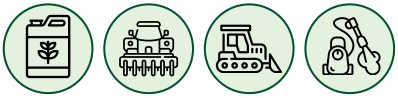
## Methods of reproduction:

Seeds.

## Methods of spread:



## Control methods available:



# Karoo acacia

*Vachellia karroo* (syn. *Acacia karroo*)

Family: Fabaceae


BD


JR


AC


BD


AY

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Shrub or tree that forms dense thorny thickets to 12 m tall. Stems have paired thorns usually up to 10 cm long and bark which is rough and dark red-brown to blackish. Leaves, to 12 cm long, have 8-20 pairs of light green oblong leaflets. Flowers occur in clusters of 4-6 and are sweetly-scented, yellow and rounded (very similar to wattle flowers). Fruit are sickle-shaped, woody pods which are slightly constricted between the seeds. Seeds are shiny brown and 3-9 mm long.

**Similar species in the region:** Native wattles such as kangaroo thorn (*Acacia paradoxa*) look similar to karoo acacia, however native wattles do not have a pair of large spines at the base of each leaf.

## Problems caused:

Karoo acacia forms dense, thorny thickets and is well suited to Australia's rangelands. It is identified as a threat to biodiversity. Dense thickets reduce agricultural productivity as they suppress the growth of grasses, prevent stock movement and add to the costs of mustering.

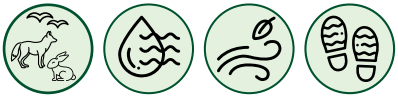
## Distribution:

Karoo acacia is native to southern Africa. It is a favourite food of the black rhinoceros and was planted in Australian botanical gardens and zoos in Dubbo, Sydney and Newcastle to represent African landscapes. These plants have since been eradicated. Recently a single location of karoo acacia has been found in the south east of NSW.

## Methods of reproduction:

Seeds.

## Methods of spread:



## Control methods available:

# Pond apple

*Annona glabra*

Family: Annonaceae


F&KS


F&KS


F&KS


F&KS


F&KS

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.





## Description:

Usually single-stemmed semi-deciduous small tree, with grey bark and sometimes buttressed at its base. Leaves are alternate, glossy green, paler underneath and 7-12 cm long, with a prominent midrib. Flowers are 2-4 cm wide and have creamy white to light yellow petals with a reddish base; there are 3 large outer petals and 3 smaller inner petals. Fruit are rounded, smooth, 5-15 cm wide and green turning to yellow when ripe; they contain a large number of pumpkin-seed-like seeds.

## Problems caused:

A Weed of National Significance, it is an environmental weed which can form extremely dense thickets in disturbed and undisturbed, wetter, tropical and subtropical habitats (e.g. brackish and freshwater wetlands, rainforests and creek lines). The thickets prevent the regeneration of other overstorey and understorey species and eventually replaces all other species. It is also becoming a threat to the sugar cane and cattle industries in low-lying areas.

## Distribution:

Native to North, Central and South America and West Africa. In Australia pond apple is found in the wet tropics of northern Queensland and in the Northern Territory. It does not currently occur in NSW.

## Methods of reproduction:

Seeds, suckering.

## Methods of spread:

## Control methods available:

# Honey locust

*Gleditsia triacanthos*

Family: Fabaceae






## Description:

Spreading, deciduous, leguminous tree growing up to 10 m tall and with simple or branched spines 2-10 cm long along its trunk and branches. Leaves are once-divided (pinnate) into 5-30 pairs of leaflets. Flowerheads are drooping with pale yellow/golden pea-like flowers. Fruit pods are dark brown, 15-40 cm long x 3-4 cm wide and 15-25-seeded. Plants may have separate male and female plants, but some have both.

Garden varieties derived from *Gleditsia triacanthos* var. *inermis* cutivars are not included in this listing. However, if the grafted top dies, then the rootstock wildings should be controlled.

## Problems caused:

Forms dense, spiny thickets that can outcompete native vegetation, provides a haven for pests, and injures livestock, wildlife, humans and vehicle tyres. It is a major threat to the environment and pasture production.

## Distribution:

Native to North America. Honey locust has been recorded widely in south eastern Australia. In NSW, it is widespread east of the Newell Highway and has been recorded at Cowra, Mudgee and the Capertee Valley in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Privet

Species *Ligustrum lucidum*, *L. sinense* and *L. vulgare*[*]

**Family: Oleaceae**

JT


TR


HR

***Ligustrum lucidum***


JT

***Ligustrum sinense***


JH


NT

***Ligustrum vulgare***

## Description:

Much-branched shrubs or small trees. Leaves are oppositely arranged, stalked and have entire margins. Flowerheads are branched clusters at the stem tips. Flowers are cream or white, tubular, 4-lobed and fragrant. Fruit are small and berry-like, changing from green to purplish black as they mature. Broad-leaf privet (*L. lucidum*) leaves are hairless, large and paler below; flowerheads are long. European privet (*L. vulgare*) leaves are hairless, small and shiny dark green on both sides; flowerheads are short. Narrow-leaf privet (*L. sinense*) leaves are hairy below, small and dull green on both sides; flowerheads are short.

## Problems caused:

Invasive environmental weeds of grasslands, woodlands, forests, tree plantations, and stream banks. They form dense shady thickets and can outcompete other vegetation, threaten biodiversity, cause allergic reactions and hay fever, reduce yields, and are difficult to control.

## Distribution:

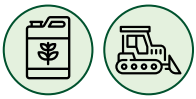
Native to southern Europe, northern Africa and eastern Asia. All 3 species of privet are widespread in coastal and tablelands areas of south eastern Australia. In the Central Tablelands region, narrow-leaf privet and broad-leaf privet are most common; especially between Lithgow and Cowra, but are found elsewhere.

## Methods of reproduction:

Seeds, suckering.

## Methods of spread:

## Control methods available:



*Three species of privet are included in Regional Strategic Weed Management Plan for the Central Tablelands - *L. lucidium* (broad-leaf privet), *L. sinense* (narrow-leaf privet), and *L. vulgare* (European privet). Urban areas, except for in Orange City Council, are not being targeted for management of privet under the regional plan.

# Miconia

*Miconia* species (all species)

Family: Melastomataceae





Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.



## Description:

Small tree to 15 m tall. Leaves are elliptic, usually 60-70 cm long, dark green above, purple-blue below, 3-nerved and oppositely arranged; young leaves are velvety hairy. Flowerheads are branched and have numerous sweet-scented, white or pink, tiny, short-lived flowers. Fruit are dark purple berries about 1 cm wide, each containing 50-200 tiny seeds.

## Problems caused:

Highly invasive in moist habitats, and a potentially devastating weed of Australian rainforests. It can form dense thickets in the understorey and replace the native vegetation.

## Distribution:

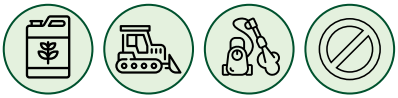
Miconia is native to South America. In Australia, Miconia has been recorded in the coastal areas of far north Queensland and on the Gold Coast. In NSW, 1 species of Miconia occurs in wet gullies in forests on the far North Coast. It does not currently occur in the Central Tablelands.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:



# African olive

*Olea europaea* subspp. *cuspidata*

Family: Oleaceae




## Description:

Evergreen tree which grows to 15 m tall. Leaves are simple with entire margins, mostly 6–10 cm long, 10–25 mm wide, shiny grey-green above and green or yellowish brown; the tips are often hooked. Flowers are small, green-cream and occur in the leaf axils. Fruit are black to dark purple when mature and single-seeded.

**Similar species in the region:** Common Olive (*Olea europaea* subspecies *europaea*) leaves are mostly shorter, narrower, whitish or silvery underneath and lack a hooked tip. Native mock olives (*Notelaea* species) leaves are generally much larger.

## Problems caused:

African olive invades streambanks, bushland and rocky hillsides and can produce dense shade which suppresses understory plants. It can permanently change plant diversity and may also harbour diseases and pests of commercial olives. Its fruit is not edible.

## Distribution:

African olive is native to Africa and Asia, and is found across the coast, ranges and slopes of south eastern Australia. In NSW it is widespread in the coast and slopes. In the Central Tablelands there are known stands of African olive established in the Cowra and Mudgee areas.

## Methods of reproduction:

Seeds, suckering.

## Methods of spread:

## Control methods available:

# Parkinsonia

*Parkinsonia aculeata*

Family: Fabaceae


RC


RC


F&KS


RC

Report this weed

This plant must not be sold anywhere in NSW.
Call the NSW DPI Biosecurity Helpline 1800 680 244 or your local council weeds officer if found.

## Description:

Shrub or small tree to 8 m tall, but usually smaller. Stems are green, smooth, slender, slightly zig-zagged and drooping. Leaves consist of a flattened central stalk with numerous small green oblong leaflets along each side; spines (5-15 mm long) occur at the base of the leaves. Flowerheads are elongated and have 8-12 flowers; each flower is about 2 cm wide and has 4 yellow petals and 1 erect orange or orange-spotted petal. Fruit are hairless, leathery, straw-coloured, usually 1-4-seeded pods; these are straight constrictions between the seeds.

**Similar species in the region:** Parkinsonia is similar to mimosa bush (*Vachellia farnesiana*) that can be distinguished by havng fluffy wattle-like flowers.

## Problems caused:

A Weed of National Significance, it is a highly invasive weed of rangelands, floodplains and wetlands. It forms dense infestations which displace native vegetation, reduce primary production and access for livestock and people. Wetlands are particularly vulnerable as it can lower their water tables and take over huge tracts of floodplain.

## Distribution:

Native to Central America, Parkinsonia was brought into Australia as a shade tree and has since naturalised throughout most of northern Australia. In NSW, small outbreaks have been recorded from isolated areas of north west. It does not currently occur in the Central Tablelands region.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Mesquite

*Prosopis* species

Family: Fabaceae


CH

***Prosopis pallida***


RH

***Prosopis glandulosa***


RSa


JM

***Prosopis pallida***

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Multi-stemmed shrubs or single-stemmed trees with a spreading canopy 3-15 m tall. Branches have a zig-zag shape. Leaves occur in groups of 1-3 pairs and are twice-divided into 4-45 mm long leaflets; leaves have 1-2 straight spines (usually more than 1 cm long) at their base. Flowerheads are cigar-shaped and 5-8 cm; they contain greenish cream–yellow flowers. Fruit are straight or slightly curved pods, up to 20 cm long and slightly constricted between the seeds; they contain 5-20 hard flattened and rounded seeds.

**Similar species in the region:** Mesquite is similar to many native wattles (*Acacia* species) but the wattles lack the thorns at the base of the leaves.

## Problems caused:

A Weed of National Significance, plants can form dense thorny impenetrable thickets in rangelands (especially around drainage lines), reduces pastoral productivity and makes mustering difficult. It has the potential to invade all areas of western NSW.

## Distribution:

Mesquite in native to southern North America through to northern South America. It has been found in all states of Australia except Tasmania. In NSW there are occasional and localised infestation west of the dividing range, especially near Broken Hill and Griffith. It does not currently occur in the Central Tablelands region.

## Methods of reproduction:

Seeds.

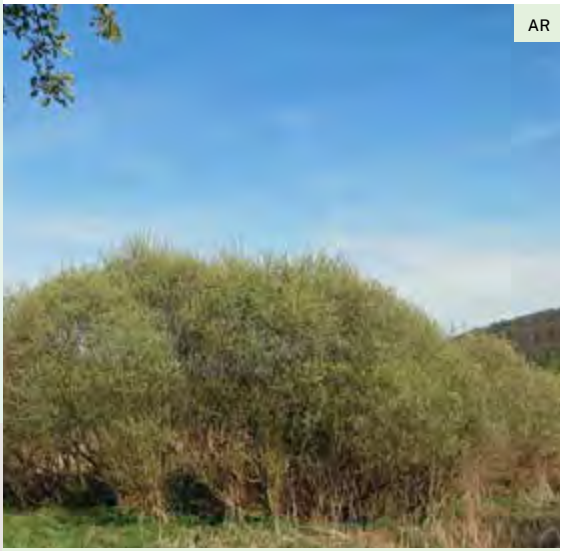
## Methods of spread:

## Control methods available:

# Willows

*Salix* species*

Family: Salicaceae


AR

*Salix cinerea*


AR

*Salix cinerea*


AR

*Salix cinerea*




MMc

*Salix nigra*


JG

*Salix nigra*


MB

*Salix nigra*

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Shrubs or trees which never sucker from the roots. Leaves are mostly deciduous, long and narrow, and paler underneath; margins are finely toothed and leaf stalks are less than a quarter as long as the blades. Flowerheads (catkins) are dense, cylindrical and usually drooping and carry numerous, tiny, greatly-reduced, single-sex flowers. Fruit are capsules containing small seeds, each with a tuft of silky or cotton-like hairs.

**Similar species in the region**: There are 9 species and hybrids of willow in the Central Tablelands region. These can be difficult to identify without visiting them in different seasons and seeking expert help.

## Problems caused:

Willows are regarded as threats to riparian and wetland areas within tableland woodlands and grasslands as well as swamps and wetlands. They increase water loss through transpiration, reduce stream flow and alter the course of waterways, shade riparian vegetation and increase nutrient input via deciduous leaf fall. Black willow (*Salix nigra*) and grey sallow or pussy willow (*Salix cinerea*) have photos included on the opposite page. These are among the most invasive willows in Australia.

## Distribution:

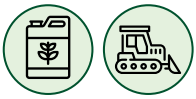
Mostly native to temperate areas of the northern hemisphere. In NSW, there are more than 20 different willows which occur on the coast, tablelands and slopes. Many are naturalised in the Central Tablelands region along streams and around waterways.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:



* Except *S. babylonica, S. X calodendron and S. x reichardtiji.*

# Athel pine

*Tamarix aphylla*

Family: Tamaricaceae




Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Small tree to 10 m tall with slender, drooping, greyish branches. Trunks are thick, rough, dark grey to black barked at maturity. Leaves are tiny and each forms a continuous sheath around the needle-like branches; the segments between each sheath are 1-2 mm long. Flowers are small, pinkish-white and occur in sprays on the ends of the previous year's branches. Fruit are tiny and bell shaped.

**Similar species in the region:** She-oaks (*Casuarina* and *Allocasuarina* species) can look similar to athel pine but have branch segments 5-10 mm long and fruit are like small pine cones.

## Problems caused:

A Weed of National Significance and one of Australia's worst weeds because of its invasiveness, potential for spread and impacts. Forms dense stands along inland rivers where it reduces the number and quality of watering holes due to its high water use. It concentrates salt around its base, causing many salt-sensitive plants to be excluded. It can also change river flow patterns, cause overland flooding and bank erosion, decrease the frequency of fires and alter vegetation structure.

## Distribution:

Native to northern Africa and Asia, it was extensively planted for shade, wind breaks and erosion control in arid and semi-arid rural Australia. Plantings have mostly been recorded around Broken Hill and in the Riverina region but is rarely or perhaps still not naturalised in NSW. There are no records for athel pine in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

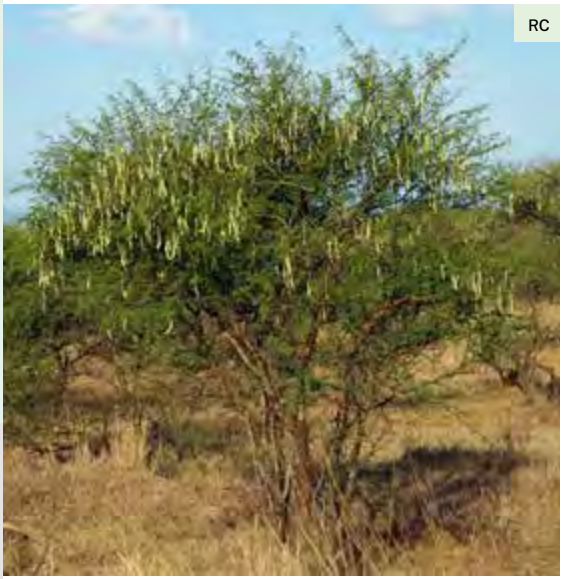
## Methods of spread:

## Control methods available:

# Prickly acacia

*Vachellia nilotica* (syn. *Acacia nilotica*)

Family: Fabaceae


RC


RD


RD


AC


RC

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.





## Description:

A thorny, spreading tree to 4-5 m tall (occasionally to 10 m). Bark is initially thorny, smooth and tinged with orange and/or green, becoming largely thornless, rough and dark. Branchlets are more or less hairy. Thorns at the base of each group of leaves are paired and 2-50 mm long (often small). Leaves are fern-like with very small, narrow green leaflets. Flower heads occur in groups of 2-6 at leaf bases and are rounded, yellow, about 1 cm wide and wattle-like. Fruit are grey-green, finely-hairy, 10-20 cm long and necklace-like (strongly constricted between the 8-10 seeds).

**Similar species in the region:** Prickly acacia could be confused with mimosa bush (*Vachellia farnesiana*) which is distinguished by having hairless branchlets. Native wattles (*Acacia* species) also look similar, but leaves do not have paired thorns at their base.

## Problems caused:

A Weed of National Significance, it is one of the worst weeds in Australia due to its invasiveness, potential for spread, and economic and environmental impacts. It forms dense thorny thickets can greatly reduce biodiversity and productivity of grasslands, movement of wildlife, livestock and people, and tourism.

## Distribution:

Native to Ethiopia, Somalia, Pakistan, India and Burma. In Australia prickly acacia is widespread in the northern parts of Queensland and the Northern Territory where it was introduced as a shade fodder tree. It does not currently occur in NSW.

## Methods of reproduction:

Seeds.

## Methods of spread:

## Control methods available:

# Cat's claw creeper

*Dolichandra unguis-cati*

Family: Bignoniaceae


F&KS


F&KS


M


F&KS


F&KS


RC

Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

A perennial woody vine with much-branched roots that produce large tubers and stems to 15 cm thick. Leaves are opposite, each with a basal pair of lance-shaped leaflets and a third leaflet modified into a 3-pronged tendril; tendrils have stiff tips that form hooks (like cat's claws) that aid climbing. Flowers are large, yellow and trumpet-shaped. Fruit are long (15-45 cm long) and narrow (0.8-1.2 cm wide) capsules containing numerous large 2-winged seeds.

## Problems caused:

A Weed of National Significance, it invades forests and riparian zones, killing trees and understorey plants. In NSW cat's claw creeper is listed as a Key Threatening Process because of its potential to impact on endangered and vulnerable plants as well as Lowland Subtropical Rainforest, which is an Endangered Ecological Community.

## Distribution:

Native to Central and South America and the West Indies and now has a worldwide distribution. In Australia, it's found primarily down the eastern coast. Cat's claw creeper is now widespread and common in coastal areas of NSW north of Sydney, especially along waterways and has been recorded in isolated sites in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Madeira vine

*Anredera cordifolia*

Family: Basellaceae



Do not sell this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.

## Description:

Perennial climber with tuberous roots and underground runners (rhizomes). Stems are green to reddish when young and later become rope-like with numerous aerial tubers. Aerial tubers are warty, 1-3 cm long and the main means of reproduction. Leaves are heart-shaped, somewhat fleshy and 3-15 cm long. Flowers are white, fragrant and small; occurring in elongate drooping flowerheads to 30 cm long. Madeira vine does not set seed in Australia.

## Problems caused:

A Weed of National Significance, it is an invasive environmental weed which smothers other vegetation and is difficult to control. It is most problematic in moist forests, rainforest margins and riverbank vegetation.

## Distribution:

Madeira vine is native to South America but has now spread worldwide. In Australia it is found mainly in coastal areas from Adelaide to north of Brisbane but has also spread to more isolated locations in the dryer inland areas. There are limited records for Madeira vine in the Central Tablelands region.

## Methods of reproduction:

Vegetative spread.

## Methods of spread:

## Control methods available:

# Chinese violet

*Asystasia gangetica* subspp. *micrantha*

Family: Acanthaceae




Report this weed

This plant must not be sold anywhere in NSW.
Call the NSW DPI Biosecurity Helpline 1800 680 244 or your local council weeds officer if found.

## Description:

Perennial sparsely-hairy herb with an annual creeping mat of stems produced in spring; stems grow to 1 m tall, but can clamber over vegetation up to 3 m tall. Leaves are oppositely arranged, bright green, paler underneath, oval to almost triangular and 2.5-16.5 cm long. Flowers are bell-shaped, 2-2.5 cm long and white with 2 purple stripes. Fruit capsules are 3 cm long, club-shaped and contain 4 flattened seeds.

**Similar species in the region:** There is another cultivated subspecies of Chinese violet (*Asystasia gangetica* subspecies *gangetica*) that has lavender-pink flowers and is a weed in north Queensland and in the Northern Territory.

## Problems caused:

This plant is on the National Environmental Alert List. It is a potentially serious environmental and agricultural weed in Australia as it can completely smother other vegetation, removing habitat, and reducing biodiversity and productivity. It infests crops such as rubber, coffee and palm oil overseas.

## Distribution:

Native to India, the Malay Peninsula and Africa. It is a major weed in Malaysia, Indonesia and the Pacific Islands. In Australia, Chinese violet has been recorded in Queensland and in NSW there are scattered infestations on the north coast, especially around Newcastle-Port Stephens. Chinese violet has not been recorded in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Rubber vine

*Cryptostegia grandiflora*

Family: Apocynaceae


RC


SA


MM


F&KS


MM


SA

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.



## Description:

Untidy shrub, 1-2 m tall when unsupported or a vine growing up to 30 m tall when supported. Plants exude a white sap when broken. Leaves are oppositely arranged, dark green, glossy and 6-10 cm long x 3-5 cm wide. Flowers are paired, large, funnel shaped, 5-lobed and white to light purple. Fruit usually occur in widely diverging pairs, are rigid and 10-12 cm long x 3-4 cm wide, and contain hundreds of brown seeds that have white tufts of long silky hairs.

## Problems caused:

Can form dense thickets in pastures, waterways and natural areas. It can smother other vegetation up to 30 m tall, makes animal and vehicular movement difficult and degrades waterways. It is also poisonous to livestock and people.

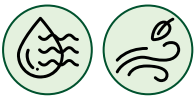
## Distribution:

Native to south western Madagascar. In Australia rubber vine is found in locations along the Queensland coast and across to the Gulf of Carpentaria. Rubber vine has recently been recorded from sites in the northwest of NSW. These sites are being managed for eradication. There are no records for rubber vine in the Central Tablelands region.

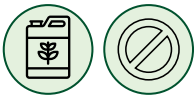
## Methods of reproduction:

Seeds.

## Methods of spread:



## Control methods available:



# Mikania vine

*Mikania micrantha*

Family: Asteraceae


DV


DV


DV

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

A multi-stemmed vine. Stems are to 20 m long, slender and ribbed with fine white hairs, although some stems may be hairless. Leaves are oppositely arranged, heart-shaped with a pointed tip, 4-13 cm long X 2-9 cm wide, on a stalk 2-8 cm long. Flower heads occur in flat-topped clusters, and heads are 4.5-6 mm long and contain 4 whitish 2-4 mm long tubular florets. Seeds are black, tiny and flat, and each is topped by a tuft of fine whitish bristles (pappus).

**Similar species in the region:** Headache vine (*Clematis glycinoides*) looks similar but has leaves that have 3 leaflets and flowers have 4 obvious petals.

## Problems caused:

It is a serious threat to the biodiversity of tropical and subtropical forests, plantation crops and infrastructure as it grows rapidly, can smother vegetation to 20 m tall and is allelopathic (produces chemicals which inhibit other plants).

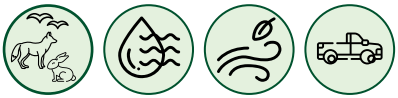
## Distribution:

Native to Central and South America and now a widespread weed of the tropics. In Australia, the first mikania vine infestation was discovered in far north Queensland in 1998. An eradication campaign aims to get rid of the infestations in Queensland. Mikania vine does not currently occur in NSW.

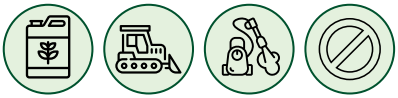
## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:



## Control methods available:



# Alligator weed

*Alternanthera philoxeroides*

Family: Amaranthaceae




Report this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.





## Description:

Plants are terrestrial to aquatic and can form dense floating or rooted rafts up to 1 m thick. Roots can become thick and rhizome-like. Stems are hollow with oppositely arranged leaves. Leaves are shiny, spear-shaped, sessile (no stalk) and about 2–7 cm, and margins are entire. Flowerheads are white, rounded and paper-like on ends of stalks.

**Similar species in the region:** Flowerheads of other *Alternanthera* species, including species native to NSW are sessile (not on stalks).

## Problems caused:

Grows aggressively both in water and on land, is extremely invasive and difficult to control. It causes reduced yields and production losses and contamination of crops and pastures. It has a high control cost and can cause paddocks to be unusable for long periods during control measures. It is difficult to identify in dense vegetation when not in flower and has the potential to be a serious problem in the Central Tablelands region if unrecognised and unchecked.

## Distribution:

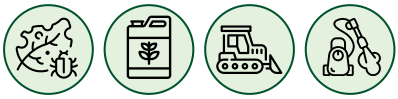
Native to South America, in Australia alligator weed has been recorded in Queensland near Brisbane, in the ACT and Melbourne areas. In NSW the core areas of infestation are the lower Hunter and Greater Sydney sub-catchments, but it also occurs to a lesser extent in other high rainfall areas and inland river/irrigation systems. It has been recorded in the Central Tablelands region near Mudgee.

## Methods of reproduction:

Vegetative spread – stem fragments.

## Methods of spread:

## Control methods available:



# Cabomba

*Cabomba caroliniana*

Family: Cabombaceae




Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Rooted, aquatic, submerged, perennial herb; it usually grows in shallow water to 3 m deep and only its flowers and occasional floating leaves emerge. Stems have white or reddish hairs and root at their nodes. Submerged leaves are covered in a sticky mucous and divided into many strands giving them a feathery fan-like appearance. Floating leaves are narrow to diamond-shaped. Flowers are 1-2 cm wide, 6-petalled and mostly white or cream with yellow bases.

## Problems caused:

A Weed of National Significance, its dense underwater stands can taint drinking water, entangle swimmers, block pumps, prevent boating and water sports, outcompete native water plants and cause water to become stagnant and unsuitable for aquatic animals. It has the potential to invade most waterways in eastern, central and southern NSW.

## Distribution:

Cabomba is native to America and is recorded in isolated locations in Australia in Queensland, Western Australia and NSW. Within NSW it mostly occurs on the north coast, but infestations extend south to Sydney and up to the Blue Mountains. It does not currently occur in the Central Tablelands region.

## Methods of reproduction:

Vegetative spread.

## Methods of spread:

## Control methods available:

# Anchored water hyacinth

*Eichhornia azurea*

Family: Pontederiaceae


BD


BD


BD


BD

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.



## Description:

Aquatic herb which roots to the bottom. It is very similar to water hyacinth, except the leaf stalks are slender. Emergent leaves vary in size (5-16 cm long X 2-16 cm wide) and are rounded. Underwater or heavily shaded leaves are elongated and about 1 cm wide. Flowering stems grow 8-12 cm above water. Flowers are funnel-shaped, purple and 6-petalled. The uppermost petal has a distinct yellow spot. Seeds are 1-2 mm long.

**Similar species in the region:** Water hyacinth (*Eichhornia crassipes*) is similar to anchored water hyacinth except that it has both slender and bulbous leaf stalks.

## Problems caused:

Invades still or slow-moving bodies of fresh water such as streambanks, dams and wetlands. Forms dense smothering mats in and across the water, which creates undesirable environmental, agricultural and recreational impacts. The weed mats also harbour mosquitoes.

## Distribution:

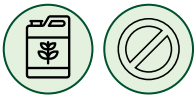
Anchored water hyacinth is native to central and south America and has been introduced to countries including the United States, Japan, China, Singapore and New Zealand as an ornamental. It has no records in Australia or NSW.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:



# Water hyacinth

*Eichhornia crassipes*

Family: Pontederiaceae


HR


HR


HR


F&KS


F&KS


F&KS

Report this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.



## Description:

Free-floating, aquatic, perennial herb to 60 cm tall. Plants have short runners (stolons) that produce daughter plants. Roots are black-purple and feathery. Leaves are hairless, glossy, generally bright green, oval-shaped to circular and to 25 cm wide. Stalks may be bulbous or non-bulbous. Flowers are 4-7 cm wide, with showy, funnel-shaped, purple to mauve 'petals'. The upper 'petal' has a darker blue patch with a yellow centre. Flowerheads bend into the water when fruiting. Seeds are only 1-1.5 mm long but can survive for up to 20 years.

**Similar species in the region:** Water hyacinth is similar to anchored water hyacinth (*Eichhornia azurea* ) that has slender leaf stalks and roots to the bottom.

## Problems caused:

A Weed of National Significance, it is one of the world's worst aquatic weeds as it forms large dense mats which devastate aquatic environments and costs billions every year in control costs and economic losses. It infests still and slow-moving waters, including rivers, dams, wetlands and irrigation channels. It degrades water quality, replaces native species, limits access for humans, machinery, animals and birds and has a much large evapotranspiration rate than open water.

## Distribution:

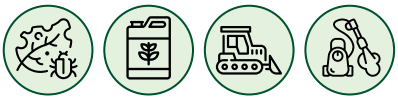
Native to South America but naturalised throughout the world. Water hyacinth has been recorded in all states of Australia. In NSW, it occurs along the coast as far south as Corunna on the south coast, but most infestations north from Sydney. Inland, it is found in the Gwydir Wetlands west of Moree and north of Albury. There are no records for water hyacinth in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:



# Hydrocotyl/water pennywort

*Hydrocotyle ranunculoides*

Family: Araliaceae


B


HR


DC

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.





## Description:

Aquatic hairless perennial herb which has long runners that root at the nodes. Emergent leaves are circular to kidney-shaped, thickened, 2-10 cm wide and 3-7-lobed; the margins are shallowly toothed. Flowers are 2–3 mm wide and greenish white, they occur in 5-10-flowered clusters below the leaf canopy and are surrounded by bracts. Fruit are almost circular, 2-3 mm wide, flattened and ribbed.

**Similar species in the region:** There are many native *Hydrocotyle* species including species like stinking pennywort (*Hydrocotyle laxiflora*) that is a terrestrial plant which emits an unpleasant smell when crushed.

## Problems caused:

Hydrocotyl is a potential weed of all freshwater environments, being able to quickly form dense mats in still and slow-moving water such as marshes, wetlands and streams.

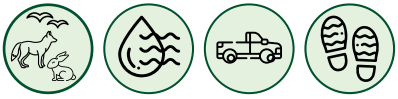
## Distribution:

Hydrocotyl is native to the North America, Africa and the Middle East, but due to its popularity as a pond plant is has naturalised in parts of Europe, Central and Southern America and Western Australia. It does not currently occur in NSW.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:



## Control methods available:

# Lagarosiphon

*Lagarosiphon major*

Family: Hydrocharitaceae


GP


GP


BC

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Submerged aquatic perennial herb with underground runners, usually attached to the substrate, but can be free-floating. Stems are 3-5 mm wide, easily broken, sparsely branched and to 5 m long (sometimes more). Leaves are short, finely toothed, more closely spaced at the top of the stem than the bottom and alternately spiralled. The leaf tips curve downwards towards the stem, but are straight when water is less alkaline. Female flowers are very small and attached to a very thin filament-like stalk. Male flowers break off and float freely.

## Problems caused:

Forms dense mats up to 6.5 m thick in clear water (to 1 m in murky water) of freshwater lakes, dams and slow-moving streams. The mats reduce light penetration and water quality, and displace native vegetation and aquatic animals. It also chokes waterways, restricts swimming, fishing and boating and blocks water intakes. Being a submerged weed, it is extremely difficult to control.

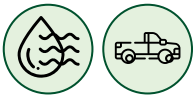
## Distribution:

Lagarosiphon originates from southern Africa and has become major weed in parts of Europe and New Zealand. Plants have been found in NSW and Victoria, mainly as an ornamental in aquaria and ponds. All infestations have been eradicated. There are currently no naturalised infestations in Australia.

## Methods of reproduction:

Vegetative spread.

## Methods of spread:



## Control methods available:

# Frogbit/spongeplant

*Limnobium laevigatum, L. spongia*

Family: Hydrocharitaceae



***Limnobium laevigatum***


***Limnobium spongia***

Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Free-floating aquatic perennial plants with stolons (runners). Leaves are floating or emergent, arranged in rosettes along the stolons. Leaf stalks are short or elongate. Leaf blades are rounded to kidney-shaped, veins are faint, arising from 1 point and fanning out. Margins are entire, and underside of blade has distinct green or red sponge-like material.

**Similar species in the region:** Water Hyacinth (*Eichornia crassipes*) is superficially similar to frogbit and spongeplant, but water hyacinth has swollen leaf stalks.

## Problems caused:

Both frogbit and spongeplant form dense mats that shade out and replace other aquatic plants, reduce oxygen levels as the large mats decay, impede water movement and interfere with recreational activities. They can double in 5 days through vegetative spread and also produce huge numbers of seed.

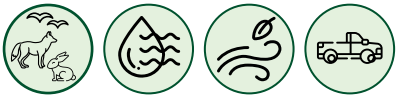
## Distribution:

Native to the tropical and subtropical America. Spongeplant has not been recorded in NSW, but frogbit has been recorded at Forster and advertised for sale around Sydney.

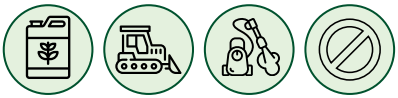
## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:



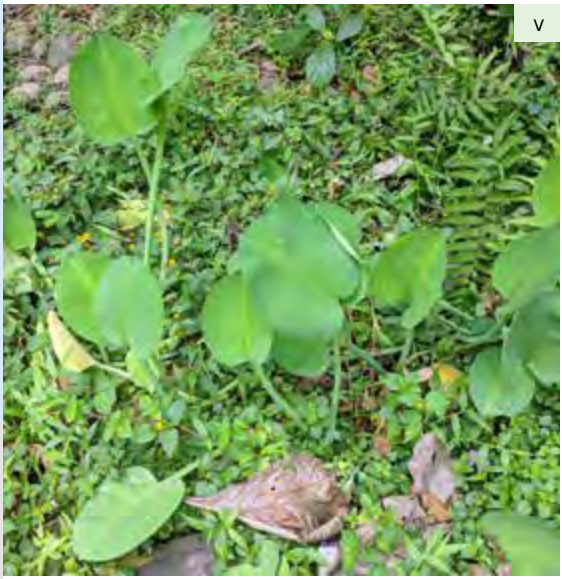
## Control methods available:



# Yellow burrhead

*Limnocharis flava*

Family: Alismataceae







Report this weed

Prohibited matter: If you see this plant report it. Call the NSW DPI Biosecurity Helpline 1800 680 244.





## Description:

Attached aquatic perennial herb 0.2-1.2 m tall. Leaf blades are pale green, velvety, fairly narrow to oval and to 30 cm long, they arise from angular stalks and have 11-15 parallel veins. Flowerheads have 5-15 flowers, each with 3 yellow petals and numerous bright yellow stamens. Fruit are rounded capsules which split into 12-18 floating segments. Each segment contains about 1,000 dark brown seeds 1-1.5 mm long.

## Problems caused:

Has the potential to become a major weed of freshwater systems in tropical and subtropical Australia. Forms dense infestations that choke waterways, displace native plants and animals, causes siltation and can impact agriculture.

## Distribution:

Native to Central and South America. Traditionally this plant is an important vegetable in parts of Indonesia, the Philippines, Vietnam, Laos, Thailand and parts of India. It does not currently occur in NSW.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Eurasian water milfoil

*Myriophyllum spicatum*

Family: Haloragaceae




BK


HF


LMe


DH


BD

Report this weed

Prohibited matter: If you see this plant report it.
Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

A submerged aquatic perennial plant which is rooted in the substrate and most commonly grows in depths of up to 3 m. Stems are reddish-brown to whitish-pink, hairless, slender and up to 7 m long; they branch profusely near the surface to form a dense canopy. Leaves are usually submerged, olive-green, less than 4 cm long, soft, feather-like and usually arranged in whorls (circles around the stem) of 4. Flowers are small, pinkish, in along the erect flowerhead and held above the water. Flowers are small, pinkish, whorls of 4 along the erect flowerhead and held above the water.

**Similar species in the region:** There are other *Myriophyllum* species, including native species in NSW. Landholders may require help to distinguish species.

## Problems caused:

Dense infestations shade out and replaces other aquatic plants, support fewer aquatic insects which serve as a food resource for fish, reduce oxygen levels as the large mats decay, impede water movement and interfere with recreational activities.

## Distribution:

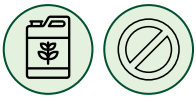
Native to Europe, Asia and northern Africa. Eurasian water milfoil does not currently grow in Australia.

## Methods of reproduction:

Mostly vegetative spread, rarely seed.

## Methods of spread:

## Control methods available:



# Sagittaria

*Sagittaria platyphylla*

Family: Alismataceae



Do not sell this weed

This plant must not be sold anywhere in NSW.
Call your local council weeds officer if found.

## Description:

Emergent aquatic perennial herb to 150 cm tall and which has rhizomes (underground runners) and tubers. Stems are 3-sided. Submerged leaves form a rosette and are strap-like, to 50 cm long. Emergent leaves are linear to lance-shaped and to 25 cm long x 10 cm wide. Flowerheads have 1-8 3-flowered whorls. Female flowers lack petals and occur in the lower whorls and male flowers have 3 white petals (sometimes with a purple spot at their base), are 3 cm wide and occur in the upper whorls.

**Similar species in the region:** Water plantain (*Alisma plantago-aquatica*) is a native waterplant that looks similar to sagittaria except that it has leaves that have heart-shaped bases and flowers that are smaller (1 cm wide).

## Problems caused:

A Weed of National Significance, it grows in permanent shallow water up to 50 cm deep and can block irrigation channels, impede water flows and choke natural watercourses and wetlands. This leads to reductions in natural flow regimes, biodiversity, irrigation supply effectiveness, water storage capacities and the ability to undertake aquatic recreational activities.

## Distribution:

Native to North America. In Australia, sagittaria has been recorded in all mainland states except for Northern Territory. In NSW it is most common in the Murray irrigation district and around Sydney and Newcastle. It is also widely dispersed in other areas of southern NSW with isolated infestations occurring on the northwest slopes, central west slopes, and in the Central Tablelands region.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Salvinia

*Salvinia molesta*

Family: Salviniaceae





Do not sell this weed

This plant must not be sold anywhere in NSW.

## Description:

Free-floating, aquatic fern 5-20 cm long. Fronds are round to oval, grow in opposite pairs, and have erect waxy “hairs” above and densely-matted brown hairs below. Sporocarps (fruiting bodies) are elongate, sterile and borne on the ‘roots’.

**Similar species in the region:** Salvinia could be confused with other floating water ferns including azolla (*Azolla filiculoides* and *A. pinnata*) which has leaves that are tiny and scale-like. Duckweed (*Landoltia punctata*), could also be confused with salvinia but the plants are much smaller being only 2-5 mm long.

## Problems caused:

A Weed of National Significance, it is fast growing and forms dense mats which affect water quality, biodiversity, recreational activities and river management structures. It also provides breeding habitat for mosquitos.

## Distribution:

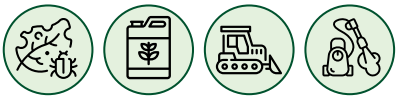
Native to South America but is now widely distributed worldwide in tropical and subtropical areas. In Australia salvinia has been recorded in most states. In NSW it occurs along the coast and is occasionally recorded in inland garden ponds, but it does not currently occur in the Central Tablelands region.

## Methods of reproduction:

Vegetative spread.

## Methods of spread:

## Control methods available:



# Water soldier

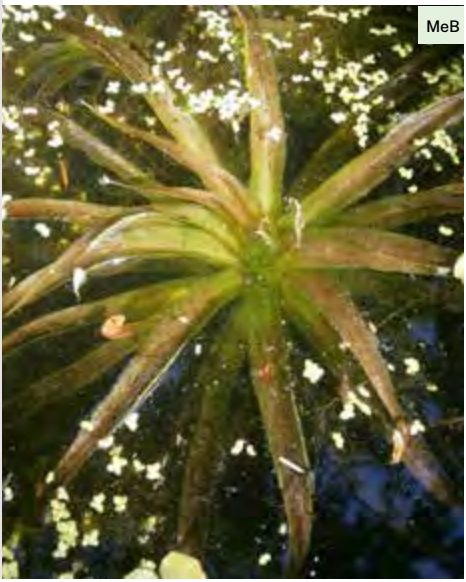
*Stratiotes aloides*

Family: Hydrocharitaceae




AZv


KZ


MeB


KZ

Report this weed

Prohibited matter: If you see this plant report it.
Call the NSW DPI Biosecurity Helpline 1800 680 244.

## Description:

Attached aquatic submerged herb with male and female plants. It produces runners (stolons) and grows in depths of up to 5 m. Plants float to the surface in spring and flower. As older leaves become waterlogged in autumn, plants sink again. Leaves resemble those of aloe plants. Emergent leaves occur in rosettes and are thick, rigid, brittle, dark green and less than 40 cm long, with spiny margins. Flowers are up to 4.5 cm wide, smell of decomposing flesh and have 4 white petals and yellow stamens and stigmas.

## Problems caused:

Usually inhabits nutrient enriched stagnant waters and is mainly found in larger lakes, wetlands and ditches. It produces dense stands which exclude native species, impact water flow and quality, and destroy aquatic habitats.

## Distribution:

Native to Europe and north western Asia. It does not currently occur in Australia.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Water caltrop

*Trapa species* (all species)

Family: Lythraceae


KZ


KZ


KZ


KZ


ED

Report this weed

Prohibited matter: If you see this plant report it.
Call the NSW DPI Biosecurity Helpline 1800 680 244.





## Description:

Warm-season, annual, aquatic herb which is anchored into the mud and dies over winter then grows back in spring. Submerged leaves (considered by some to be roots) are feather-like and arranged in whorls along the stem. Floating leaves form a rosette and are glossy above, hairy below, fan-shaped, toothed and 4-6 cm long. Flowers are small, with 4 white petals. Fruit are large nuts with 4 sharp spines.

## Problems caused:

Forms dense mats in shallow to deep, freshwater habitats, this restricts light, reduces oxygen levels, displaces native species, and restricts aquatic activities and access to water. The sharp spines can cause injuries.

## Distribution:

Native to warm temperate parts of Eurasia and Africa. It does not currently occur in Australia.

## Methods of reproduction:

Seeds, vegetative spread.

## Methods of spread:

## Control methods available:

# Index

Local Land Services

NSW GOVERNMENT