

# Help Protect NSW's Natural Environment from Environmental Weeds

A handbook for the Cut Flower and Foliage Industry and the *Biosecurity Act 2015* 





## No Space for Weeeeeeeeeeeds

## Selling plants? Protect your business.

Don't buy, sell or move plants, flowers or foliage that put NSW at risk. Plants that have the potential to damage the environment, economy, and communities within NSW are called 'priority weeds'. The sale and movement of priority weeds is restricted under the **NSW Biosecurity Act 2015**. Restrictions apply to all parts of the plant, and to cultivars and hybrids. Check NSW WeedWise for guidance and information at weeds.dpi.gov.au.

## A handbook for the Cut Flower and Foliage Industry and the *Biosecurity Act 2015*

This handbook offers guidance on certain environmental priority weeds that must not be sold within the Cut Flower and Foliage Industry, along with an overview of the *Biosecurity Act 2015*.

The *Biosecurity Act 2015* is regulated under the NSW Act that governs biosecurity matters to protect the state of NSW from pests, diseases, and other biosecurity risks. It provides a framework for managing biosecurity threats to plant, animal, and human health within NSW.

Under the Act, pest plants that can have a negative impact on the environment, community or economy are regulated under the general biosecurity duty.

Engaging in the buying or selling of state and regional priority weeds as well as widespread weeds in NSW may be a violation of the *Biosecurity Act 2015*, and individuals may be subject to fines.



## **GROUND ASPARAGUS**

## Scientific name: *Asparagus aethiopicus*

## **Distinguishing Features:**

Ð	Leaves	up to 2 cm long, clusters on each branch are less dense than in foxtail fern making the 'arms' look messy, scruffy, fluffy or cloud-like
J.L	Stems	short, sharp spines
**	Flowers	creamy white to pale pink in clusters of 4-8
9	Berries	glossy, 5-8 mm diameter, green to red and contain- ing a single black seed

## **Reproduction & Dispersal:**

- Ground asparagus reproduces both by seed and vegetatively from its crown or corm.
- Fragments of the short, crown-forming rootstalks can generate new plants.
- Birds feed on its fruit and disperse the seed.
- Plants can shoot from the crown or parts of the crown and people can spread this weed by dumping garden waste.

# This is a serious environmental weed because it:

- Outcompetes native plants for water and nutrients
- Smothers and kills small native herbs and shrubs
- Reduces habitat and restricts movement for native animals
- Changes soil and leaf litter composition, affecting soil life.







## **MUST NOT BE SOLD**

Can only be sold in NSW if stems have been preserved with glycerine and surfactant, bleach and dye.

# **BUNNY EARS**

## Scientific name: *Opuntia microdasys*

# Pads round to oval shape, generally 6-15cm long and 4-12cm wide Fleshy and covered in velvety hairs Fleshy and covered in velvety hairs Oblong to circular Oblong to circular Image: Spines not present but has white, yellow or golden fluffy spots with fine, hair-like bristles (glochids).

## **Reproduction & Dispersal:**

- New plants can grow from parts of the stem or fruit when they come in contact with the soil.
- Plant parts can be spread by water, sticking to animals and vehicles and people dumping garden waste.

# This is a serious environmental weed because it:

- Outcompetes native plants
- Limits movement of animals and people
- Competes with pasture plants reducing productivity
- Has barbed bristles which can easily detach and injure people and animals
- Can restrict recreational activities such as bushwalking and camping









## **MUST NOT BE SOLD**

It is prohibited to import *Bunny Ears* into NSW or sell it in NSW. A person who contravenes this mandatory measure can be charged with an offence under s.25 of the NSW *Biosecurity Act 2015*.

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• STATE PRIORITY WEED - MUST not be sold | • STATE PRIORITY WEED - MUST not be sold except under permitted condition

# CHICKEN DANCE CACTUS

Scientific name: Opuntia schickendantzii

## **Distinguishing Features:**

\$	Pads	dull green, oblong and flattened fleshy and covered in velvety hairs.
	Areoles	are close together are woolly and contain dense tufts
**	Flowers	4–5 cm in diameter yellow, sometimes tinged with pink

## **Reproduction & Dispersal:**

- Mostly been spread by people growing it as an ornamental plant.
- New plants can grow from parts of the stem or fruit when they come in contact with the soil.
- These plant parts can be spread by water, sticking to animals or vehicles and by people dumping garden waste.

## This is a serious environmental weed because it:

- Causes painful injuries to people, livestock, working dogs and pets
- Injures and sometimes kill wildlife that get trapped in the spines
- Devalues wool and hides and prevent shearing
- Gets stuck around the mouth of lambs or calves and prevent them from feeding.



STATE PRIORITY WEED







## **MUST NOT BE SOLD**

It is prohibited to import *Chicken* dance cactus into NSW or sell it in NSW. A person who contravenes this mandatory measure can be charged with an offence under s.25 of the NSW Biosecurity Act 2015.

# **BLIND CACTUS**

## Scientific name: Opuntia rufida

### **Distinguishing Features:**

ų.	Pads	round to oval shape, generally 6-15cm long and 4-12cm wide; tend to be bigger than bunny ears
î,	Spines	not present, but has brown, reddish or cinnamon coloured fluffy spots with fine, hair-like prickles (glochids)

## **Reproduction & Dispersal:**

- Mostly been spread by people growing it as an ornamental plant.
- New plants can grow from parts of the stem or fruit when they come in contact with the soil.
- These plant parts can be spread by water, sticking to animals or vehicles and by people dumping garden waste.

## This is a serious environmental weed because it:

- Outcompetes native plants
- Limits movement of animals and people
- Competes with pasture plants reducing productivity
- Has barbed bristles which can injure people and animals
- Can restrict recreational activities such as bushwalking and camping.







## **MUST NOT BE SOLD**

It is prohibited to import **Blind cactus** into NSW or sell it in NSW. A person who contravenes this mandatory measure can be charged with an offence under s.25 of the NSW Biosecurity Act 2015.

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🔎 REGIONAL PRIORITY WEED - THINK before you sell | 🔍 WIDESPREAD WEED - THINK before you sell

## **FOXTAIL FERN**

## Scientific name: Asparagus densiflorus

Distinguishing Features:		
D Leaves	needle-like, up to 2 cm long	
Leaf Clusters	denser and shorter than in ground asparagus, making each arm look like a long Christmas tree or a tentacle	
Berries	glossy green to red, 5-8 mm diameter	

## **Reproduction & Dispersal:**

- A perennial plant that escapes cultivation.
- It is difficult to control after it has established in the ground due to the extensive root system.
- Bird-dispersed fruit and shade tolerance are some of the reasons this ornamental plant is considered invasive.

# This is a serious environmental weed because it:

- Can regrow from small parts of roots and difficult to control once established due to an extensive root structure.
- Invades moist, low-light areas.
- Forms dense mats that suppress the germination of more desirable species.



STATE PRIORITY WEED



## MUST NOT BE SOLD

It is prohibited to import **Asparagus densiflorus** into NSW or sell it in NSW. A person who contravenes this mandatory measure can be charged with an offence under s.25 of the NSW **Biosecurity Act 2015**.

# **EVE'S NEEDLE CACTUS**

## Scientific name: Austrocylindropuntia subulata

#### STATE PRIORITY WEED

## **Distinguishing Features:**

\$	Pads	Elongated columns/ cylinders up to 50cm long and 4-5cm diameter
AF.	Spines	Grey-white, in groups of four, 8cm long Light yellow, up to 1.5cm long on the monstrosa form
Ø	Leaves	Green, curved and fleshy, up to 12cm long. Green or pink on the monstrosa form, up to 5cm long

## **Reproduction & Dispersal:**

- Mostly been spread by people growing it as an ornamental plant.
- New plants can grow from parts of the stem or fruit when they come in contact with the soil.
- These plant parts can be spread by water, sticking to animals or vehicles and by people dumping garden waste.

# This is a serious environmental weed because it:

- Cause painful injuries to people, livestock, working dogs and pets
- Injure and sometimes kill wildlife that get trapped in the spines
- Devalue wool and hides and prevent shearing
- Get stuck around the mouth of lambs or calves and prevent them from feeding.





## **MUST NOT BE SOLD**

It is prohibited to import *Eve's Needle cactus* into NSW or sell it in NSW. A person who contravenes this mandatory measure can be charged with an offence under s.25 of the NSW *Biosecurity Act 2015*.

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• REGIONAL PRIORITY WEED - THINK before you sell | • WIDESPREAD WEED - THINK before you sell

## DARK-LEAVED OR BLACK WILLOW

## Scientific name: Salix nigra

## STATE PRIORITY WEED

### **Distinguishing Features:**

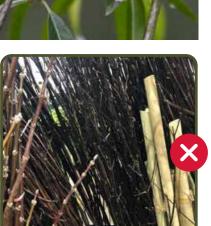
Ø	Leaves	bright green, slender, 4–10 cm long and 7–17 mm wide with toothed edges
¥.	Stems	dark reddish-brown to reddish-grey in colour, to 1.5cm diameter.
***	Flowers	tiny, yellow-green, drooping cylinder 4-12 cm long

## **Reproduction & Dispersal:**

- Salix nigra is dioecious, which means it has separate male and female trees.
- They start producing seeds when around 10 years old and wind and water spread the light, fluffy seeds.
- Black willow can grow from small pieces of stems, twigs and even wood chips.
- Plant parts can float many kilometers downstream while new roots will grow in water.

# This is a serious environmental weed because it:

- Outcompetes native plants for water and nutrients
- Reduces habitat and restricts movement for native animals
- Smother tree branches and cause them to fall
- Forms dense mats underground that prevents other plants from germinating.



#### MUST NOT BE SOLD / PROHIBITED FROM SALE AND IMPORT.

Can only be sold in NSW if the stems are traceable to an authorised seller operating under a Biosecurity Permit issued under s.333 and s.336 of the Biosecurity Act.

## TORTURED OR CORKSCREW WILLOW

## Scientific name: Salix matsudana

## Distinguishing Features:

Ø	Leaves	8–13 cm long, 10–25 mm wide, strongly contorted, with toothed edges.
-	Branches	golden or tan in colour, twisting, spiralled, curly, contorted.
***	Flowers	tiny, yellow-green, clustered densely along a drooping cylinder 1-2cm.

## **Reproduction & Dispersal:**

- A small, deciduous tree introduced to Australia for stabilizing watercourses and road fill.
- Spread by broken twigs taking root downstream.
- Easily broken branches provide material for vegetative spread.

# This is a serious environmental weed because it:

- In urban environments, willows have aggressive root systems that damage footpaths and drains.
- Invades watercourses, riverbanks and creekbanks.
- Can cause stream management problems and reduce watercourse environmental value.



STATE PRIORITY WEED



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● REGIONAL PRIORITY WEED - THINK before you sell | ● WIDESPREAD WEED - THINK before you sell

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## **CLIMBING ASPARAGUS FERN**

Scientific name: *Asparagus plumosuss* 

STATE PRIORITY WEED

## **Distinguishing Features:**

∛	Habit	fern-like with flattened branches
Ø	Leaves	fine, needle-like, 0.5 mm wide, to 7 mm long, in clusters of ten
₩X	Stems	spineless
**	Flowers	greenish white, single or in pairs on stems
69	Berries	4-5 mm diameter, glossy green when unripe, black when ripe like a peppercorn, contain 1-3 black seeds

## **Reproduction & Dispersal:**

- Climbing asparagus fern can spread from seed or plant parts (rhizomes, or root fragments).
- Seeds are spread by water and animals that eat the fruit and then pass the seeds.
- Root fragments are spread by dumping of green waste, deliberate planting in gardens and contaminated machinery or vehicles.

# This is a serious environmental weed because it:

- Outcompetes native plants for water and nutrients
- Reduces habitat and restricts movement for native animals
- Smother tree branches and cause them to fall
- Forms dense mats underground that prevents other plants from germinating.







## MUST NOT BE SOLD

Can only be sold in NSW if stems have been preserved with glycerine and surfactant, bleach and dye

# **BIOSECURITY DIRECTION**

If you are found buying or selling regional priority and widespread weeds, you will be given the chance to cease the activity, or given the option to show:

1. how you've minimised the risk created by the plant

2. that you've communicated to your customers that the plant creates a risk to the environment, economy and community.

# 3. that the plant is not capable of regenerating or reproducing (by providing a sample for testing)

If you can't show these things, you may be given a biosecurity direction that tells you what you must do to minimise the risks created by the plant. If you don't comply with the biosecurity direction an authorised officer could seize the plants and give you an on-the-spot penalty infringement notice of \$1000.







Privet (broad & narrow-leaf)

Pampas Grass

**Balloon Vine** 

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## **ASPARAGUS FERN**

## Scientific name: Asparagus virgatus

## **Distinguishing Features:**

¥	Habit	branching stems with feathery, fern-like leaves arranged like a wispy broom at the stem tips and curved upwards
Ø	Leaves	soft, hairless, cylindrical and relatively small (3-15 mm long and about 0.5 mm wide)
Ð	Berries	4-6mm diameter, green when unripe, orange when ripe, dangle on slender stems
**	Flowers	small, greenish white

## **Reproduction & Dispersal:**

- Primarily reproduces from seed but can also spread vegetatively from stems.
- Fruit are spread by birds, foxes, reptiles and other animals that can deposit seeds far from the parent plants.
- Fruit are also spread in water and garden waste.

## This is a serious environmental weed because it:

- Invades a wide range of coastal and sub-coastal plant communities, in areas north from Sydney.
- Competes with native ground cover and understory plants by forming dense infestations.
- Competes with germinating plants and inhibits water penetration.
- Can form very large, continuous infestations.







## SHOULD NOT BE SOLD

Can only be sold in NSW if stems have been preserved with glycerine and surfactant, bleach and dye

# PAMPAS GRASS

## Scientific name: Cortaderia species

#### **Distinguishing Features:**

	Ð	Leaves	finely serrated on the edg- es, dull green, upright and arched (common pampas), bright green, arching with leaf tips touching the ground (pink pampas).
-	孙	Roots	Grey-white, in groups of four, 8cm long Light yellow, up to 1.5cm long on the monstrosa form.
-	*} <sup>¥</sup>	Flowers	up to 80 cm long, white, pink or mauve (common pampas). Pink when young, fading to dark brown (pink pampas).

## **Reproduction & Dispersal:**

- Wind spreads the seed. Garden plants are often the source of new infestations
- Pampas grasses can spread out via rhizomes (underground stems).
- Common pampas grass has female and hermaphrodite plants. The female plants produce more seeds if they are pollinated by a hermaphrodite plant.

## This is a serious environmental weed because it:

- Outcompetes native vegetation
- Is a fire hazard
- Harbours vermin
- Could threaten forestry

#### **REGIONAL PRIORITY WEED**





## SHOULD NOT BE SOLD

Stems and seed heads may be sold within NSW provided they have undergone gamma radiation treatment, and sellers are required to furnish supporting documentation.

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🔎 REGIONAL PRIORITY WEED - THINK before you sell | 🔍 WIDESPREAD WEED - THINK before you sell

## **MING ASPARAGUS**

## Scientific name: Asparagus macowanii

#### **Distinguishing Features:**

∛	Habit	fern-like appearance
Ø	Leaves	needle-like, hairless, usually slightly curved, 12-25 mm long and about 0.5 mm wide, clustered densely giving 'pom pom' appearance especially near ends of stems.
66	Berries	7-10 mm diameter, round- ed, green when unripe, purple-blue to pinkish-red when ripe, contain 1-2 seeds.
**	Flowers	white to cream in dense clusters

## **Reproduction & Dispersal:**

- Primarily reproduces from seed but can also spread vegetatively from the roots.
- Flowering chiefly occurs in spring and early summer. Fruit set occurs from spring to summer, but fruit can be present year-round.
- Fruit are spread by birds, foxes, reptiles and other animals that can deposit seeds far from the parent plants.
- Fruit are also spread by water and dumping garden waste.

# This is a serious environmental weed because it:

- Invades a wide range of coastal and sub-coastal plant communities
- Competes with native ground cover and understorey by forming dense infestations that can smother and prevent the germination and establishment of other plants.

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• Can attain very large and continuous infestations,



REGIONAL PRIORITY WEED



#### SHOULD NOT BE SOLD

Can only be sold if the flowers, berries and roots have been removed

## **PRIVETS** (BROAD & NARROW-LEAF)

## Scientific name: Ligustrum lucidum, Ligustrum sinense.

## Distinguishing Features:

Ø	Leaves	broad-leaf privet: glossy, 4-24 cm long, 2.5-8 cm wide
		narrow-leaf privet: 2-7 cm long,1-3 cm wide, can be hairy
9	Berries	bluish-black, not shiny, 5-10 mm diameter, in large clusters, often with a waxy coating.
**	Flowers	~6 mm wide, in large clusters at tip of stems

## **Reproduction & Dispersal:**

- Seeds are commonly spread by fruit-eating birds.
- Privet seedlings often germinate in clusters, as a result of birds regurgitating the seeds.
- Birds and rabbits assist germination by removal of the soft coating around the seed.
- Privets are also spread through the sale of garden plants from nurseries and markets and the sale of foliage in floral arrangements containing fruit and seeds.

# This is a serious environmental weed because it:

- Invades native and plantation forest industries, orchards, and pastures.
- Threatens biodiversity.
- Pollen causes allergic reactions and hay fever. Berries and leaves are mildly toxic to humans and livestock.

#### WIDESPREAD WEED





## SHOULD NOT BE SOLD

Can only be sold if the flowers, berries and roots have been removed

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STATE PRIORITY WEED - MUST not be sold | STATE PRIORITY WEED - MUST not be sold except under permitted condition

REGIONAL PRIORITY WEED - THINK before you sell | WIDESPREAD WEED - THINK before you sell

## **TURKEY RHUBARB**

## Scientific name: Acetosa sagittata

### **Distinguishing Features:**

¥	Habit	climbing or scrambling vine.
Ð	Leaves	arrow-shaped, slightly fleshy, 2-10 cm long and 1-7 cm wide
69	Fruit	three papery wings 4-7 mm long, 6-10 mm wide, which turn from green to pink to brown as they mature.

## **Reproduction & Dispersal:**

- Turkey rhubarb can produce fruit within one year of germination. It produces many seeds which can remain dormant for at least 2 years.
- Seeds are spread by wind, water and by people dumping garden waste.
- This plant reproduces vegetatively by tubers and stems. These are spread by water, moving contaminated soil and by people dumping garden waste.







#### This is a serious environmental weed because it:

- Is highly invasive, growing vigorously during spring and summer.
- Forms dense tangles that smother ground flora and small shrubs.

# **BALLOON VINE**

## Scientific name: Cardiospermum grandiflorum

#### WIDESPREAD WEED

## **Distinguishing Features:**

∛	Habit	vine with hairy stems.
Ø	Leaves	made up of 9 leaflets, sometimes have a curly tendril at their base.
9	Fruit	45-65 mm long, 30-45 mm wide, inflated, papery and look like balloons with a pointy tip.
**	Flowers	1-2 cm wide, have four white petals, grow in clusters.

## **Reproduction & Dispersal:**

- Most balloon vine spread is by seed. The seeds sprout above the ground rather than in the soil. They can remain viable for up to two years if they remain moist. Viability is lost when they dry out.
- The fruit can float and remain viable in freshwater or seawater for at least 6 months.
- Seeds are also spread by the wind and by people dumping garden waste.







## This is a serious environmental weed because it:

- Smothers other plants limiting their growth or killing them.
- Brings down branches and trees which collapse under the weight of the vines.
- Reduces food and shelter for native animals.
- Harbours pests and diseases.



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For more information contact Strathfield Biosecurity Weeds Officer on 02 9748 9999 or Biosecurity Helpline on 1800 680 244 or visit: weeds.dpi.nsw.gov.au or download the free NSW WeedWise and WeedSCAN apps

weedscan

