

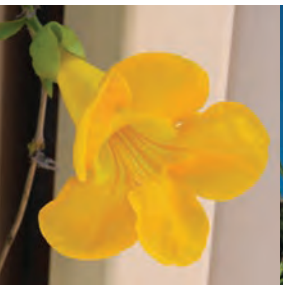

GARDEN ESCAPEES

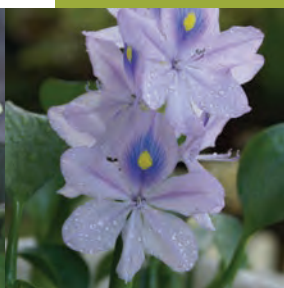
AND OTHER WEEDS OF BUSHLAND AND RESERVES

A responsible gardening guide for the Mid North Coast and Hunter Region of New South Wales

MIDCOAST council

4th Edition



Acknowledgements:

Principal author and developer: Terry Inkson

Photography credits: Terry Inkson (unless otherwise marked)

Contributors & Reviewers: Isabelle Strachan, Mat Bell, Royce Holtkamp, Terry Schmitzer, Helen Kemp, Hank Bower, Sue Bower, Mike Smith, Grant Taylor, Greg Egan, Wendy Bushell, Mark Tull, Andrew Staniland, Steve Howard, Kerrie Simmons, Miles Dixon, Dr Stephen Johnson, John Hosking, Gordon Rowland, Daryn Apolony, Erin Masters, Anthony Marchment, Stephen Griffiths Belinda Kennewell, Peter Goonan, Matt Ansley, Will McCaffrey, Kylie Ostler, Alysha Wynan, Matt Kennedy, Maria Edmonds, Boyd Carney,

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Disclaimer:

This booklet has been prepared by the authors in good faith on the basis of available information. Although precautions have been taken to ensure the accuracy of information provided, the publishers, authors and printers do not accept responsibility for any claim, loss, damage or liability arising out of the use of this resource.

Report this plant to you local Council Weed Officer.

When you see this statement, click and follow the link to the MidCoast Council **'weed spot and plot'** priority weed mapping system.

Look out for symbols throughout this booklet that identify priority values

Look for hyperlinks throughout the electronic resource to internal pages and various credible resources.

High Risk to Socio-economic Values GBD

High Risk to Biodiversity GBD

High Risk to Biosecurity

Global Invasive Species Database

Weed of National Significance (WoNS)

Not to be sold or traded in NSW

Seed spread long distances by birds

Gardening Responsibly

NSW WeedWise

Known to be toxic or injurous to humans or animals

Biological control establishing

PlantNET Floraonline

Front Cover:

Ground Asparagus (*Asparagus aethiopicus*)
Blue Heliotrope (*Heliotropium amplexicaule*)
Moon Flower (*Ipomoea alba*)
Montpellier Broom (*Genista monspessulana*)
Cat's Claw Creeper (*Dolichandra unguis-cati*)
Cotton Bush (*Gomphocarpus fruticosus*)
German Ivy (*Senecio macroglossus*)
Water Hyacinth (*Eichhornia crassipes*)

Back Cover:

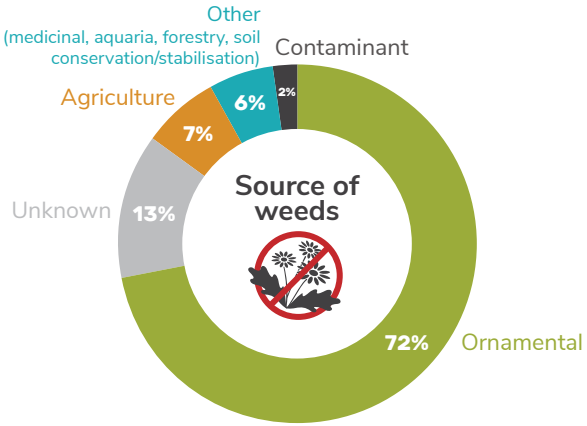
Common Lantana - red flowering (*Lantana camara*)
Mickey Mouse Plant (flower) (*Ochna serrulata*)
Moth Vine (*Araujia sericifera*)
Blue Passion Flower (*Passiflora caerulea*)
Blue Periwinkle (*Vinca major*)
Glory Lily (*Gloriosa superba*)
Blue Morning Glory (*Ipomoea indica*)
Mickey Mouse Plant (fruit) (*Ochna serrulata*)

CONTENTS

WHAT IS A WEED?... AND WHY THEY NEED TO BE MANAGED

Weeds by definition are plants that are growing where they are not wanted. In the context of this guide, weeds are plants that occur in environments outside of their natural distribution. Weeds can impact human health, cause problems for agriculture and impact the natural environment. The latter invade and threaten natural ecosystems, where they compete with the native flora for space, water, nutrients and light; water weeds choke waterways. Not only do weeds reduce biodiversity by outcompeting the native flora, they often alter and destroy habitat for native insects and animals, and thereby harm our unique fauna.

Over 27,000 alien plant species have been introduced to Australia. Of these about 10% (2,779) are now established in Australia's environment. This number is unfortunately rising by about 10 species every year and the rate is increasing. As you can see on the chart below, about 72% of weeds invading reserves and bushland areas are ornamental and have originated from urban gardens, often termed 'garden escapees'. Once established, these weeds become difficult and expensive to control (let alone eradicate), and compromise the health of the environment.



The Global Invasive Species Database (GISD) www.iucngisd.org/gisd/100_worst.php is a free source of information about invasive alien species. It covers all taxonomic groups from micro-organisms to animals and plants, in all ecosystems. The GISD aims to increase public awareness about introduced species that negatively impact biodiversity, and to facilitate effective prevention and management activities by providing easy access to authoritative invasive species information. The database is available through Link to GISD 100 of the World's Worst Invasive Alien Species.

The **Invasive species compendium** (ISC) is an encyclopedic resource that brings together a wide range of different types of science-based information to support decision-making in invasive species management worldwide. **https://www.cabi.org/isc/about Scientific names in this resource link to CABI data sheets where possible or other credible sites.**

Plants escape from gardens in a variety of ways, but the main cause of spread from gardens is by green waste dumping in bushland and road reserves. This practice is harmful to the bush for many reasons, such as:

- introducing weeds (plant fragments, roots, tubers, seeds, spores).
- smothering native plants.
- increasing nutrient loads.
- increasing fire risk by increasing fuel loads.

Dumping in bushland and reserves is illegal and can attract considerable fines.

Garden plants may also spread into bushland reserves directly from gardens where they are planted. "Weedy" garden plants may be identified by: the ability to spread by vegetative means (e.g. bulbs, corms, tubers, root parts, stem fragments) (e.g. Glory Lily, Coral Tree, Trad).

- berries that can be eaten by birds and animals (e.g. Asparagus Ferns, Cotoneasters, Olives, Camphor Laurel, Blackberry).
- production of large amounts of seed that is easily distributed by wind, animals, water etc.) (e.g. Formosa Lily, Longleaf Willow Primrose, Balloon Vine, Moth Vine, Narrow Leaf Cotton Bush).
- high viability of seed.
- a general ability to survive under extreme conditions.
- a history of weediness in similar climates.


Mayers Flat NSW 2423

RESPONSIBLE GARDENING

You can make a difference by what you do in your garden. We suggest that you:

- Replace invasive plants in your garden with safe and preferably native alternatives.
- Regularly prune your garden plants after flowering. Not only will this prevent seed set, it will also promote healthy and vigorous growth.
- Dispose of garden waste responsibly, never dump it over the back fence, on roadsides or in bushland. Green waste is accepted at all Landfill operations in the Hunter Region and Mid North Coast of NSW. Contact your local Councils Waste Management section for a schedule of fees.
- Dispose of plant bulbs, tubers and seed heads in your general waste bin not green waste.
- Cover your trailer when taking garden waste to the landfill to stop weeds and seeds from blowing off and invading roadside and bushland areas. The NSW Environment Protection Authority (EPA) has a web portal for smart devices, to assist in reporting such offences. http://www.epa.nsw.gov.au/
- Buy a mulcher and mulch appropriate garden waste on site, then use it in the garden or compost it.
- Actively report any illegal dumping in your neighbourhood.
- Join your local Landcare group and help clean up the public reserves and bushland areas in your neighbourhood. Contact your local Council for more information.

Forster Community Garden 2428

ILLEGAL DUMPING OF GREEN WASTE IS A CRIME

Under the POEO Act 1997 penalties for green waste dumping range from $2,000 for individuals and $8,000 for corporations.

Dispose of green waste responsibly; never dump it over the back fence, on roadsides or in bushland. Green waste is accepted at all waste management centres in the wider Hunter region.

About 72% of weeds invading reserves and bushland areas have originated from urban gardens and are often a result of green waste dumping. https://www.epa.nsw.gov.au/

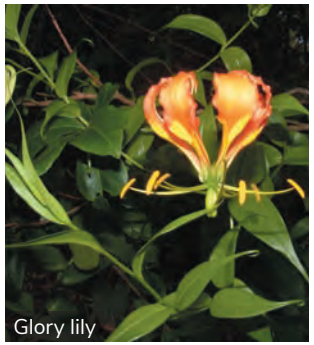
RECORD IT

REPORT IT

DON'T IGNORE IT

Japanese honeysuckle

Black eyed susan



Glory lily

Ochna

Mother of millions

Daisies

ENHANCING BACKYARDS FOR BIODIVERSITY VALUES

4 Backyards Biodiversity

CREATE AN URBAN SANCTUARY FOR SMALL ANIMALS

Plant local native plants within a circle of distinct zones to create habitat, shelter and food. Also consider installing a water bath for small birds. Add rocks and logs for visual interest and to create shelter for ground dwellers, such as blue tongue lizards.

General information

Inner sanctum

Tall, soft shrubs, 1-2 m high that provide a safe haven for small birds, as well as food resources, such as insects, nectar and seeds. Include a vine to create more protective cover. Local native species that could be used include - *Gompholobium latifolium*, *Ozothamnus diosmifolius*, *Indigofera australis*, *Cordyline stricta*, *Banksia spinulosa*, *Banksia ericifolia* and *Hardenbergia violacea*.

Protective circle

Spiky, protective shrubs, 1-2 m high that form a thicket for birds to hide in when closely planted. Local native species that could be used include - *Acacia ulicifolia*, *Banksia robur*, *Leptospermum juniperinum*, *Hakea teretifolia*, *Correa reflexa*, *Bursaria spinosa*.

Biodiverse shrub circle

Small attractive shrubs that provide food and shelter for birds and animals, and visual amenity for people. Local native species that could be used include - *Melaleuca thymifolia*, *Tetratheca thymifolia*, *Pultenaea villosa*, *Pimelea linifolia*, *Ricinocarpos pinifolius*, *Dianella caerulea*, *Patersonia sericea*, *Prostanthera rotundifolia*.

Eating out

Mixed native grasses and groundcovers that attract insects and seed eating birds. Include a water bath in this zone. Local native species that could be used include - *Hemeda triandra*, *Poa labillardierei*, *Microlaena stipoides*, *Echinopogon caespitosus*, *Xerochrysum bracteatum*, *Brachyscome multifida*, *Viola hederacea*, *Dichondra repens*.

Adaption created from original artwork by:
Habitat Network
www.habitatnetwork.org

BIOLOGICAL CONTROL

Biological control involves the introduction of natural enemies such as insects, mites and plant pathogens, mostly from the native range of the target weed species, into areas where their host plant has become a weed. The aim is to reduce the density of the weed to a level that is acceptable and maintain the weed density at that level. Biological control of weeds is usually aimed at weeds that form dense stands on uncultivated land. It is a cheap form of long term control and in many cases it is the only economically-viable form of rangeland weed control. Biological control also has the advantage that the target weed and/or closely related species are the only plants damaged.

Benefits of Biological Control

- Control is usually specific to the target weed
- Environmentally friendly and non-toxic
- Self perpetuating once established
- Provides long term control
- Effect not restricted to one area
- Long term cost is low with high benefit/cost ratios
- Good against weeds where other control methods are non viable or prohibitive.

Limitations of Biological Control

- Initial research when introducing a new agent may take several years to complete resulting in high short term cost.
- Long term commitment to a program usually requires Government or other funding agency support.
- The release of natural enemies may raise unreasonable expectations resulting in the abandoning of existing control measures.
- In Australia, substantial or useful reduction of the target weed only occurs in two thirds of long term programs.

Several steps are involved in a biological control program:

1. Determine the weed's area of origin and study it's ecology and natural enemies in its native range.

2. Identify possible biological control agents

- Determine natural enemies that appear to be most damaging and are known not to attack other plants. It is important to match potential agents with the correct host.
- Request permission to import natural enemies to an Australian quarantine facility.

3. Host Testing

- Rigorously test imported agents to ensure they will not damage any Australian native or economic plants.
- Following successful testing request permission to release agents.
- The most commonly expressed fear is that the biological control agent will feed on some other plant after it has controlled the target pest. The vast majority of organisms which attack plants only attack a particular species or group of species. Host specificity testing prior to release of potential biological control agents means that the range of plants likely to be attacked by the agent is known prior to release. If the agent is not sufficiently specific it is not released.

4. Mass rear control agents and release in selected areas

5. Pre and post-release monitoring to determine impact of the imported agents.

Biological control status in the Hunter region.

Common name	Scientific name	Status
Alligator weed flea beetle	*Agasicles hygrophila*	established / localised
Bitou bush leaf roller moth	*Tortrix sp.*	established / localised
Bitou bush seed fly	*Mesoclanis polana*	established / widespread
Bitou bush tip moth	*Comostolopsis germana*	established / widespread
Blackberry rust fungus	*Phragmidium violaceum*	established / widespread
Bridal creeper rust fungus	*Puccinia myrsiphylli*	established / widespread
Cactoblastis Moth (Prickly pear)	*Cactoblastis cactorum*	established / widespread
Cat's claw creeper leaf mining buprestid beetle	*Hylaeogena jureceki*	establishing
Cat's claw creeper tingid	*Carvalhotingis visenda*	establishing
Cochineal (Prickly pear)	*Dactylopius opuntiae*	established / localised
Crofton weed rust fungus	*Baeodromus eupatorii*	current release program
Crown rot fungus (GPG)	*Nigrospora oryzae*	establishing
Lantana rust fungus	*Prospodium tuberculatum*	established / widespread
Madeira vine leaf beetle	*Plectonycha correntina*	establishing
Mist flower smut fungus	*Entyloma ageratinae*	established / widespread
Salvinia weevil	*Cyrtobagous salviniae*	established / localised

MIDCOAST council

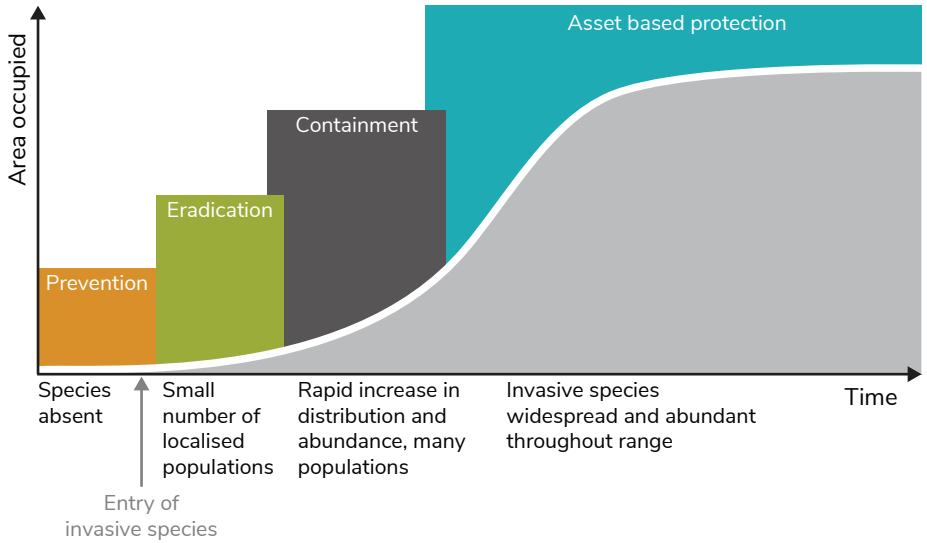
nswweedbiocontrol TASKFORCE

HUNTER REGIONAL weeds

HOW WEEDS ARE MANAGED

The most effective way to manage weeds is to prevent them from establishing in the first place. Weeds have the ability to establish rapidly in new areas so require a timely and rapid response. Many weeds are already widely established in NSW, and their eradication across large areas is not achievable with existing resources. Priorities for the control of these weeds must be determined, focusing resources on areas where the benefits of control will be greatest. Weeds are managed differently based on the length of time they have been established, their density, their distribution and the threat they pose to our environment, our health and/or our economy. When detected early, new and emerging species like plume poppy and tropical soda apple have a greater likelihood of eradication, so become the highest priority for management. Long established and widespread species such as Lantana or privet are managed mainly for asset protection in certain areas.

In this booklet you will find that each weed has a priority status. A "priority weed" is a weed that has been assessed to cause problems for agriculture, impact our natural and recreational environments or might potentially impact human or animal health. A particular weeds priority status is determined on state, regional and local levels. The invasiveness of individual weed species and the risks it poses, is evaluated using the NSW Weed Risk Management System. Any plant can undergo a formal weed risk assessment, at any time.



Economic returns (indicative only)

1:100	1:25	1:5-10	1:1-5
Prevention	Eradication	Containment	Asset based protection

The priority status of a particular weed may vary from area to area either **locally**, **regionally** or within the **State**, depending on distribution and density of the species in question and/or the classification and environmental value of neighbouring assets at threat, being protected. At each level, control categories are assigned to each weed species which require landowners and other relevant parties to take action to comply with their General Biosecurity Duty. These categories, as you can see in the graph below, are aimed at prevention, eradication, containment or asset protection outcomes at the relevant scale.

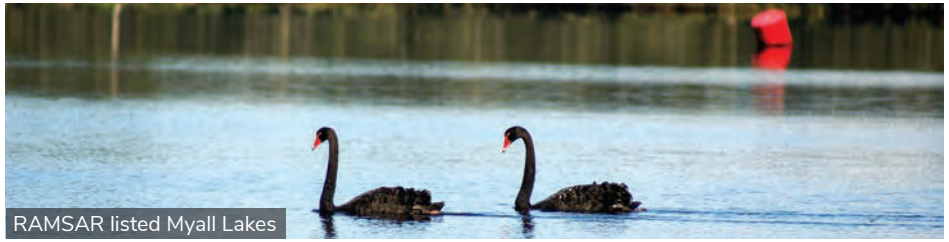
The General Biosecurity Duty (GBD) means that any person dealing with plant matter must take measures to prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable). Local councils continue to have a major role and responsibility for controlling priority weeds and administering the *Biosecurity Act 2015* in their areas.

The Biosecurity Act 2015 is the primary legislation for managing weeds (and other biosecurity risks) in NSW. For weeds, the Act:

- applies equally to all land in the state, regardless of whether it is **publicly** or privately owned;
- is premised on the concept of risk, so that weed management investment and response is appropriate to the risk; and
- employs the legally enforceable concept of a General Biosecurity Duty.

The Biosecurity Act 2015 includes a range of tools for the management of biosecurity threats and risks. The tools allow for the management response and practical requirements to be proportionate to the risk and include:

- a high-risk category known as **prohibited matter**, that acknowledges the severe consequences of some pests and diseases (such as foot and mouth disease, Frogbit and Parthenium weed);
- **emergency powers** that allow swift action to be taken to respond to significant biosecurity risks to the economy, environment and community;
- **a general biosecurity duty** that provides that people who **deal** with biosecurity matter or a carrier, and who have knowledge of the biosecurity risks posed are to take reasonable steps to manage those risks; and
- numerous other management tools such as **biosecurity zones**, **control orders**, **recovery of cost fees**, registration, biosecurity certificates, undertakings, biosecurity directions and permits.


RAMSAR listed Myall Lakes

BIOSECURITY ACT 2015

Weeds are no longer classified into Classes as they were under the provisions of the **Noxious Weeds Act 1993 (repealed).** **Local government** in NSW has a legal responsibility for managing weeds across their lands under the ***NSW Biosecurity Act 2015.***

Weeds are risk assessed and dealt with according to how they score on a risk matrix.

This may vary between regions depending on cost effectiveness for control program, how widespread it is and the impact it may have on the environment.

Assessment is based on the weed capacity to reproduce and survive in landscapes.

Priority weeds are those that have the greatest risk for negative impact on livestock / human health, environment and which are in limited distribution, and it is cost effective to control or eliminate.

Everybody has a biosecurity duty to manage weeds to prevent their spread. Some weeds are subject to a Control Order. Control Orders specify requirements of managing a particular weed species.

Weed zones (Biosecurity Zones) specify the level of control required in certain landscapes eg. Where the priority weed is more widely distributed in one area, but not in others.

General Biosecurity Duty is about a person who deals with or is a carrier of , or who ought to know the risk posed by biosecurity matter, is to ensure, in so far as is reasonably practicable that the risk is prevented, eliminated or minimised. Read more at ***Biosecurity Act 2015 S.22 - 26.***

WEEDS OF NATIONAL SIGNIFICANCE (WONS)

Under the **National Weeds Strategy;**
32 introduced plants were identified as Weeds of National Significance (WoNS).

This list of 32 weeds was developed based on:

Invasiveness + Potential for Spread

X

Impacts + Socioeconomic & Environmental Values

Equal weighting was given to each of these four criteria.

National management strategies have been published for many of these species.

Further information about the Weeds of National Significance program, including national management arrangements, is available from the Weeds Australia Website **http://www.weeds.org.au/**

This resource has been designed to assist residents living in the Mid North Coast and Hunter region of New South Wales identify problematic plants in their gardens and landscapes, surrounding bushland reserves and to offer advice on control methods and expert advice.

Local native alternatives to weed species have been suggested on our plant me instead pages, Links with Plant sure “Gardening responsibly” can further provide you with safer options with ornamental species. However you should check your choice by visiting a reputive local nursery professional for advice on a safer alternative that will grow well in your garden.

Shauna Potter

PLANTS NOT TO BE SOLD IN ALL OR PARTS OF NSW

The Biosecurity Act 2015 places restrictions on the trade and movement of plants that harm the NSW environment, economy and community. Those plants are called **'priority weeds'** and the restrictions on trade and movement apply to all parts of the plant including cuts, cultivars and hybrids.

'State priority weeds' MUST NOT be sold anywhere in NSW.

People that buy or sell state priority weeds in NSW are committing an offence under the Biosecurity Act 2015 that carries large penalties. The following legal instruments apply:

Prohibited Matter – A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. The definition of 'dealing' is broad and includes having, buying, selling, moving, growing and disposal.

Control Order – Requires all parts of the plant to be destroyed until eradicated.

Mandatory Measure (Prohibition on Dealings) – Must not be imported into the State or sold.

'Regional priority weeds' should not be sold or moved in certain Local Land Services regions of NSW. If you buy, sell or move regional priority weeds you may be failing to discharge your general biosecurity duty to prevent, eliminate or minimise risks as far as is reasonably practicable, and this also carries large penalties.

Visit NSW WeedWise for details of each weed's biosecurity duties.

COMMON WEED CONTROL METHODS

Integrated Pest management is the coordinated use of a variety of control methods, reducing reliance on herbicides alone, and increasing the chances of successful control or eradication. Integrated weed management programs require long-term planning, knowledge of a weed's biology and ecology and appropriate weed control methods.

Weed control should be coordinated so as to avoid seed setting. i.e. prior to, or during flowering time.

Any section of the plant capable of reproducing (e.g. seeds, fruits, tubers/roots, some shoots) should be bagged, removed from the site and disposed of in your **red lid bin.** Other vegetative matter can be mulched and composted on site or disposed of in your **green lid bin.**

Personal Protective Equipment (PPE) must always be used when handling weeds and herbicides in the garden. Always wash hands after conducting weed control duties or handling registered herbicides. **Basic PPE examples include: hat, gloves, safety glasses, long sleeves / pants, boots sunscreen and insect repellent.**

1. HAND DIG / PULL

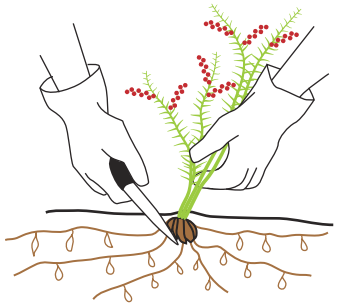
(USING KNIFE/TROWEL)

- rake back leaf litter.
- cut down along side plant.
- grasp stem or leaves at ground level and pull firmly while loosening soil from roots with knife/trowel.
- shake excess soil from roots and bag for removal or place plant on rock/log to die.
- replace leaf litter.

e.g. Inkweed, Thistle.

2. CROWN CUT

(USING KNIFE)



- only the underground growing heart of the plant needs to be removed.
- rake back leaf litter.
- grasp plant at ground level, gathering stems together, insert knife and cut in a circular motion to remove crown.
- replace disturbed soil/leaf litter and gently pat down.

e.g. Ground Asparagus.

3. SKIRTING

(USING SECATEURS AND HERBICIDE)

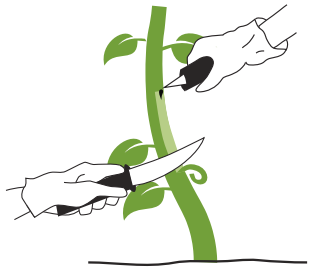
- as low as possible, depending on access, gather and cut all vines around tree.
- apply herbicide IMMEDIATELY (within 10 seconds of cutting) to ground cut stems first, then aerial stems.
- check for reshooting within 6 weeks, retreating where necessary.

e.g. Morning Glory, Moth Vine, Ivy.

Note: NOT suitable for vines with aerial tubers e.g. Madeira Vine.

4. STEM SCRAPE

(USING KNIFE AND HERBICIDE)

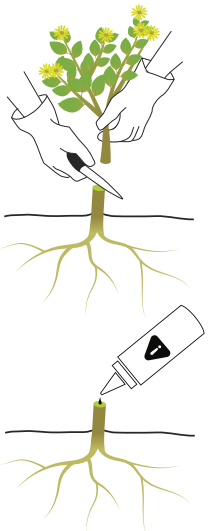


- working close to ground, scrape along the stem of the plant for about 15-30 cm to expose vascular tissue.
- apply herbicide to exposed vascular tissue IMMEDIATELY (within 10 seconds of scraping).
- take care not to ringbark entire stem.
- leave plant insitu until completely dead, and re-treat if necessary.

e.g. Madeira Vine, Ochna, Senna, Morning Glory.

5. CUT AND PAINT

(USING CUTTING TOOL AND HERBICIDE)



- the plant should not have aerial tubers.
- appropriate on woody weeds up to 10cm basal stem diameter.
- cut stem horizontally close to ground, below any branching stems or side shoots.
- apply herbicide to cambium layer IMMEDIATELY within 10 seconds of making cut.

e.g. Bitou Bush, Lantana, Privet.

6. FOLIAR SPRAYING

(KNAPSACKS AND PRESSURE SPRAYERS)

the use of registered herbicide diluted with water at a specific rate.

- most suited for use on certain shrubs, grasses and dense vines.
- foliage should be sprayed to the point of runoff (until every leaf is wet but not dripping).
- do not make up more dilute than required for the job and do not store diluted herbicide as it may breakdown and become inactive.
- always use fresh clean water for mixing not ground or dam water as herbicide may breakdown and become inactive.

e.g. Bitou Bush, Lantana, Privet.

7. BASAL BARK TREATMENT

(KNAPSACKS AND PRESSURE SPRAYERS)

the use of an oil soluable registered herbicide diluted with diesel at a specific rate.

- most suited for use on certain shrub and tree weeds with smooth to finely fissured bark.
- apply the solution for appoximately 300mm up the stem from the base of the plant and around the entire circumfrence of stem to the point of runoff.
- keep solution continually agitated during treatment to ensure mix doesn't split.

e.g. Tobacco tree, camphor laurel, senna, african olive, rattlepod.

Various other control regimes and herbicide information is available at 'NSW Weed Wise' visit https://weeds.dpi.nsw.gov.au/

Visit: Australian Pesticides and Veterinary Medicines Authority **https://apvma.gov.au/** for details of off label permits available for specific species or situations, download the APVMA app to your smart device,

Always read the Label and Safety Data Sheet before using any registered herbicide.

VINES AND SCRAMBLERS

Vines, scramblers or climbing plants can trail or creep along the ground but generally require the support of others plants to grow because their stems, in most cases, lack the central thickening which imparts rigour to trees and shrubs. Their stems are usually supple and can twist and contort in erratic convolutions without affecting the transport of water and nutrients that are essential to their survival.

This category of plants includes some of the most damaging weeds on the Mid North Coast, it is recommended that all species listed be eradicated from gardens and replaced with less invasive species.

It is impossible to estimate the number of species of plants in the world's flora which have adopted the climbing growth habit. Botanists tend to categorise plants according to their floral features rather than growth habits and it is therefore difficult even to arrive at an estimate. Certainly the number is in the tens of thousands, and because climbers tend to be a neglected group of plants, it is almost certain that new weed species await discovery and description.

The main weed species locally are featured on their own pages but below is a list of:-

Other Problematic Vines and Scramblers:

Common Name:	Botanical Name
Aerial Yam:	*Dioscorea bulbifera*
Blackberry:	*Rubus fruticosa agg spp.*
Blue Trumpet Vine:	*Thunbergia grandiflora*
Cape Honeysuckle:	*Tecoma capensis*
Crabs Eye Creeper:	*Abrus precatorius*
Cup and Saucer Vine:	*Cobaea scandens*
Creeping Groundsel:	*Senecio angulatus*
Creeping Gloxinia:	*Lophospermum erubescens*
English Ivy:	*Hedera helix vars*
Flame Vine:	*Pyrostegia venusta*
Mikania:	*Mikania micrantha*
Pie Melon:	*Citrullus lanatus*
Rubber Vine:	*Cryptostegia grandiflora*
Silverleaf desmodium:	*Desmodium uncinatum*
Siratro:	*Macroptilium atropurpureum*
Turkey Rhubarb:	*Rumex sagittatus*

Balloon Vine

Cardiospermum grandiflorum

Seedlings germinate most of the year. Plants spread over ground or climb trees and shrubs. Common in moist gullies along the warm temperate to tropical coast of Qld and NSW.

Family: Sapindaceae

Origin: Tropical America, West Indies and Africa

Habit: Herbaceous perennial climber with stems to more than 10 m long.

Leaves: 6-16 cm long, on a leaf stalk 2-10 cm long, with 3 leaflets each further divided into 3; margins of leaflets irregularly toothed.

Flowers: White, 4 petals, in clusters, stalk of the flower heads end in a pair of tendrils. Flowers for most of the year.

Fruit: Inflated membranous capsule, 6-ribbed, 4-8 cm long, covered with short stiff hairs, each containing 3 blackish, round seeds, about 7 mm wide.

Roots: Shallow and fibrous, fragments re-root readily.

Dispersal: Seeds spread by wind, water birds and contaminated soil machinery including excavators, slashers, vehicles. Spread long distances along water courses.

Control: Hand dig / pull, scrape and paint, skirting, foliar spray.

Manning River, Wingham NSW2430

Black Eyed Susan

Thunbergia alata

Colour variation of flowers is encountered with plants grown from seedlings, including yellow or white, often lacking the dark central blotch. Very fast and erratic growing twiner.

Family: Acanthaceae

Origin: Tropical Africa

Habit: A delicate herbaceous and persistent twining or scrambling vine that will readily re-root from fragments and nodes.

Leaves: Thin-textured, heart-shaped or triangular.

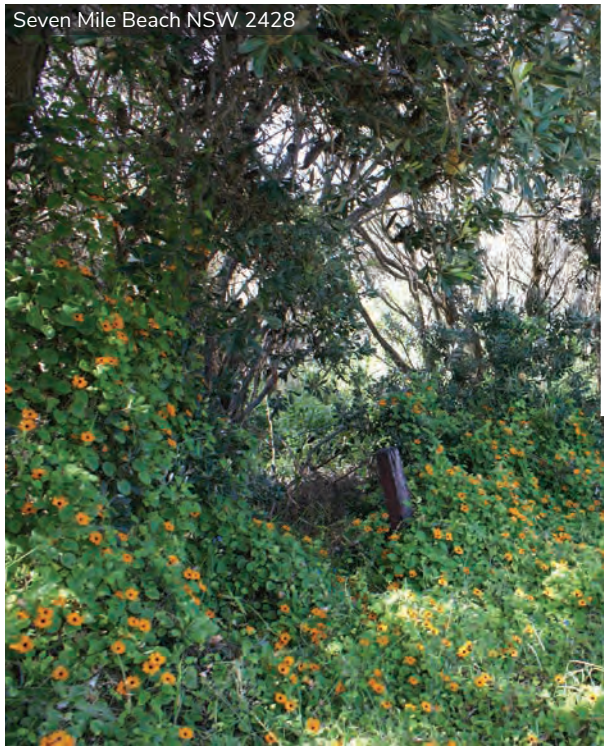
Flowers: Bright orange to yellow some times white with a distinct black centre on a single stalk. Base of flower enclosed in pair of green sepals. Summer-Autumn.

Fruit: The papery sepals remain to cover the beaked capsule containing few seeds.

Roots: Tap and fibrous, will actively seek and block water/septic pipes.

Dispersal: Vegetation and seed will spread by humans, animals, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull, scrape and paint, skirting, foliar spray.



Seven Mile Beach NSW 2428

Brazilian Nightshade

Solanum seaforthianum

Also known as Blue Potato Vine, this plant has become naturalised in rainforests and is widely distributed from N.E. Qld to N.E. NSW.

Family: Solanaceae

Origin: South America

Habit: Perennial shrub or twining climber to 6 m.

Leaves: Green deeply 3-9 lobed, hairless except edges and veins on under surface.

Flowers: Mauve-blue, star-shaped, 2-3 cm across in groups of up to 50 in Spring-Autumn.

Fruit: Green berry up to 1 cm across, ripening to bright red.

Roots: Shallow and fibrous.

Dispersal: Seed is spread by humans, birds, animals, water, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig, scrape and paint, skirting, foliar spray.

Cape Ivy

Delairea odorata

Also known as Senecio *mikanioides*, Cape Ivy is naturalised in coastal parts of NSW and rapidly grows to blanket and smother surrounding vegetation.

Family: Asteraceae

Origin: South Africa

Habit: A climbing and trailing perennial, non-woody vine that smothers vegetation to heights of 10 m. Stems break easily.

Leaves: Ivy or star shaped with 5-7 lobes, fleshy, glossy green above, silvery below, often with a purple tinge.

Flowers: Strongly scented on warm days, yellow and daisy-like in dense clusters lacking ray florets (petals). Autumn-Spring.

Fruit: Small, reddish-brown with a 'parachute' of fine hairs (pappus). A mature plant can produce in excess of 40,000 seeds annually.

Roots: Shallow and fibrous, fragments re-root readily.

Dispersal: Vegetation and seed is spread by humans, wind, water, birds, animals, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig, skirting, foliar spray.

Cape Ivy / Canary Creeper

Senecio tamoides

Also known as climbing cineraria, it is naturalised in coastal parts of NSW and rapidly grows to blanket and smother surrounding vegetation.

Family: Asteraceae

Origin: South Africa

Habit: A climbing and trailing perennial, long, green, smooth stems that smothers vegetation to heights of 10 m.

Leaves: Ivy shaped, palmately lobed or coarsely toothed, 4-7 cm long with 5-7 lobes, fleshy, glossy green.

Flowers: Strongly scented on warm days, yellow and daisy-like in dense clusters, 5-7 petals, 6-7 mm long. Autumn - Winter flowering.

Fruit: Small, reddish-brown with a 'parachute' of fine hairs (pappus). A mature plant can produce in excess of 40,000 seeds annually.

Roots: Shallow and fibrous, fragments re-root readily.

Dispersal: Vegetation and seed is spread by wind, water, animals, humans, contaminated soil and garden refuse dumping.

Control: Hand dig, skirting, foliar spray.

Cats Claw Creeper

Dolichandra unguis-cati

Stems in established stands of Cats Claw Creeper have been recorded as being up to 250 mm in diameter. Diameter growth of cat's claw stems is slow, but the vines are long-lived, nearly as long as the trees that they claim for support.

Family: Bignoniaceae

Origin: Mexico to Uruguay

Habit: Vigorous, blanketing climber in excess of 30 m with distinctive three-pronged claws along the growing portion of the plant. The weight of the vine's mass often collapses the supporting trees branches and may even cause mature trees to fall. Mature stems can become very woody to 20 cm in diameter.

Leaves: Leaflets are dark green and formed in opposite pairs along the vine. New leaves and tips are a showy red/brown colour.

Flowers: Attractive bright yellow forming a bell shape when fully open and only occur on mature plants. Winter-Spring.

Fruit: Long dark brown seed pods are formed which split open when mature exposing numerous hard brown seeds.

Roots: Deep underground tuberous roots are profuse suckering readily.

Dispersal: Seed and tubers spread by wind, or water such as along rivers in floods, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig, scrape and paint, foliar spray.

Dutchmans Pipe / Calico flower

Aristolochia elegans

Flowers are pollinated by flies which are attracted by the unpleasant carrion-like odor produced by the flowers. Toxic to the Richmond birdwing butterfly.

Family: Aristolochiaceae

Origin: South America

Habit: A vigorous perennial climber growing 3 m to 7 m or more in height.

Leaves: Bright green above, paler below with a bluish tinge, broadly heart-shaped or slightly triangular, 3-10 cm long and 3-12 cm wide with an entire margin. The base of each leaf stalk bears an “ear shaped” appendage.

Flowers: Very ornate, solitary, cream in colour, with intricate purplish-brown markings. Heart shaped petals are fused into a bent tube resembling the shape of a “Dutchmans Pipe”. Mainly Summer.

Fruit: Cylindrical capsules 4-6 cm long and 2.5 cm wide bear a short projection at their tips. Capsules open to a papery “upside down parachute” releasing hundreds of winged seeds.

Roots: Shallow and fibrous.

Dispersal: Mostly by seed spread by wind, water, animals, humans, contaminated soil and garden refuse dumping.

Control: Hand dig, skirting, foliar spray.

Hans Hillewaert

United States Botanic Gardens

German Ivy / Natal Ivy

Senecio macroglossus

A popular plant for hanging baskets, German Ivy has escaped cultivation and found its way into shaded areas on the verges of rainforests.

Family: Asteraceae

Origin: South Africa

Habit: Evergreen light or slender, twining herbaceous perennial.

Leaves: Bright green, fleshy, triangular or five-pointed ivy-like.

Flowers: Large, conspicuous pale yellow daisy flowers about 6 cm across and carried singly on long slender stalks are borne just about all year round, but mainly during the summer months.

Fruit: The seeds are small and stick-like with a tuft of greyish-white bristles at one end (pappus). Dandelion-like tufty balls.

Roots: Shallow and fibrous, fragments re-root readily.

Dispersal: Vegetation and seed is spread by wind, water, animals, humans, contaminated soil and garden refuse dumping.

Control: Hand dig, skirting, foliar spray.

Coomba Park NSW 2428

Glory Lily / Flame Lily

Gloriosa superba

This plant is extremely difficult to control. It is becoming a major problem in some forests and dunal systems of the NSW coast where it rapidly colonises after the removal of Bitou Bush.

Family: Colchicaceae

Origin: Africa and Asia

Habit: Glory lily is a perennial herb with climbing stems up to 4 m long. Top growth dies off in winter before re-shooting in the spring.

Leaves: Shiny, green and hairless with 10-20 mm long tendrils at the tips which curl around supporting plants.

Flowers: 45-70 mm wide, yellow, orange and red, borne singly on spreading stalks which arise in leaf forks. Flowers appear to be upside down with the petals pointing upwards, while 40-70 mm long stamens point downwards. Spring–Summer.

Fruit: The seed pod is bright green & shaped like a rugby ball 40-100 mm long and 10-20 mm wide before turning brown and inverting to expose initially orange to red seeds that dry to 4-5 mm diameter brown balls.

Roots: Fibrous initially, becoming a long and fleshy tuber that increases in size with age. Tuber fragments will create new plants.

Dispersal: Seed and tubers, spread by humans, birds, animals, contaminated soil machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig, foliar spray. Report this plant to your local Council Weed Officer.

Bull Ring Forster NSW 2428

Japanese Honeysuckle

Lonicera japonica

A popular garden plant of yesteryear that has become a widespread rampant weed throughout many areas of eastern Australia from Qld to SA. In colder climates it may become deciduous.

Family: Caprifoliaceae

Origin: China & Japan

Habit: A robust climbing or scrambling shrub to 8 m high. Young stems covered with short hairs. Older stems woody and hairless.

Leaves: A robust climbing or scrambling shrub to 8 m high. Young stems covered with short hairs. Older stems woody and hairless.

Flowers: Paired, long and tubular (3-4 cm), very sweetly scented. White, ageing cream to yellow or pale orange. Flowers Autumn-Spring.

Fruit: Globe-shaped berry, 4-10 mm long, glossy black.

Roots: Fibrous initially, becoming a dense, extensive and woody crown with age.

Dispersal: Seed mostly spread by birds, but also humans, contaminated soil machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig, skirting, scrape and paint, foliar spray.

Old Bar NSW 2430

Kudzu

Pueraria lobata

Although kudzu prefers forest regrowth and edge habitats with high sun exposure, the plant can survive in full sun or partial shade and can grow up to 20 m per year.

Family: Fabaceae

Origin: Temperate N.E. and tropical S.E. Asia

Habit: A rapid growing, vigorous, tendril twining perennial vine with thick rope-like, hairy stems up to 30 m long.

Leaves: Large, sparsley hairy, alternately arranged, compound with three lobed or un-lobed leaflets, the top one usually larger. Pale green above and greyish-green below.

Flowers: Purple, blue or pink coloured pea-shaped flowers with a yellow spot are borne in elongated clusters 15-40 cm long during Summer.

Fruit: Long flattened pods 5-12 cm long and about 12 mm wide are densely covered in reddish-brown hairs, and contain 8-12 seeds.

Roots: Thickened storage roots develop into large tubers up to 1.8 m long and 15 cm wide, and travel as deep as 1 metre.

Dispersal: Mainly vegetatively but also by seed spread by water, animals, humans, contaminated soil and garden refuse dumping.

Control: Hand dig, skirting, scrape and paint, foliar spray.

Forest & Kim Starr

Forest & Kim Starr

Madeira Vine

Anredera cordifolia

Madeira Vine is a devastating weed capable of smothering host vegetation in a relatively short period of time. The masses of fleshy leaves become very heavy and can break branches in large trees destroying the upper canopy.

Family: Basellaceae

Origin: South America

Habit: Vigorous, robust fleshy and extensive twining, hairless, perennial climber in excess of 30 m.

Leaves: Fleshy broadly egg or heart shaped, alternately arranged and bright green.

Flowers: Small, fragrant, creamy white coloured and numerous in drooping clusters to 20 cm long. Separate flowers on stalks evenly spaced along a central stem. Spring-Summer.

Fruit: Rarely fruits.

Roots: Fleshy and tuberous. Tubers are capable of sprouting even after being pulverised.

Dispersal: Tubers transported by humans.birds, animals, water, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping, floods. Aerial tubers will be shed from stems if the vine is cut, and remain viable in soil from 5 to 10 years.

Control: Hand dig, scrape and paint, foliar spray. *Never cut and paint.

Taree NSW 2430

Morning Glory

Ipomoea spp. I. indica I. cairica, I. alba, I. purpurea, I. quamoclit

Ipomoeas can readily be seen spreading along road edges as they favour disturbed and open areas. They are capable of totally engulfing host trees in a relatively short period of time.

Family: Convolvulaceae

Origin: South America

Habit: Robust and extensive twining perennial vine to 10 m.

Leaves: I. indica, I. alba, I. purpurea: dark green; variably heart-shaped or 3-lobed, 20-180 mm long. I. cairica: Light green; hairless, 5-7 -lobed, star shaped leaves to 90 mm long. I. quamoclit: pinnatisect; ovate in outline.

Flowers: Variable by species, trumpet/funnel shaped flowers 20-80 mm diameter; coming in shades of purple, blue, mauve, pink, red and white. Spring-Autumn.

Fruit: *I. cairica*: 4-valved capsule containing 4-6 seeds, which have parachute-like attachments. *I. purpurea*: 3-valved capsule; seeds loosely scurfy. Seed rarely set with *I. indica*.

Roots: Fibrous initially, becoming dense, extensive and crown-like with age. Will set root from stem fragments when in contact with the soil.

Dispersal: Seed is spread by humans, wind, water, birds, animals, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig, skirting, scrape and paint, foliar spray.


I. indica


I. indica


I. cairica


I. purpurea


I. alba


I. indica


I. alba


I. cairica


I. purpurea


I. cairica


I. quamoclit


I. quamoclit

Moth Vine

Araujia sericifera

Garden escapee that smothers shrubs and small trees, suppressing their growth. Weed of wasteland and forests adjoining settlement, mainly in coastal higher rainfall areas.

Family: Apocynaceae

Origin: Southern Brazil, Paraguay and Uruguay

Habit: Twining perennial climber reaching up to 6 m on supporting vegetation. Milky latex exuded from damaged stems and leaves.

Leaves: Opposite, oblong to triangular, 3-11 cm long, 1-6 cm wide, dark green above, grey-green below.

Flowers: Fragrant, tubular, 0.8-1.4 cm long, 5-lobed, 5-stamens, white to pale pink in groups of 2-5. Flowers late spring to autumn.

Fruit: Grey-green choko shaped pod, turning brown and woody with age, opening to release numerous black seeds approx 4 mm long each possessing a tuft of white silky hairs that aid its spread by wind.

Roots: Shallow and fibrous.

Dispersal: Seeds spread by wind, water, animals, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden waste dumping.

Control: Hand dig / pull, scrape and paint, skirting, foliar spray.

Mysore Raspberry

Rubus niveus

Better known as **White Blackberry** *Rubus niveus* is an important weed in S.E. Africa, USA, Hawaii, Galapagos, and areas of Australasia including Tasmania. New and emerging species in the MidCoast area.

Family: Rosaceae

Origin: Asia and Malesia

Habit: Arching or climbing shrub to 2 m high. Primocane stems rounded or round-angled whitish tomentose at first, becoming glabrous green to purple later.

Leaves: Deciduous. Pinnately compound. Consisting of 5-9 (less often 11) elliptic to ovate coarsely toothed leaflets, dark-green above densely white felted below.

Flowers: About 1 cm diameter, with five dark pink to red petals. Tends to bloom and fruit throughout the year.

Fruit: Ovoid to oblong, 8-12 mm diameter, covered in short white hairs, initially green, ripening red, maturing black.

Roots: Becoming dense and suckering from underground runners. Plant tips take root upon touching the ground.

Dispersal: Seed mostly spread by birds and animals, but also water, humans, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull seedlings, cut or scrape and paint stems, foliar spray with registered herbicides. Report this plant to your local Council Weed Officer.

Mysore Thorn

Caesalpinia decapetala

Garden escapee that can form impenetrable thickets excluding animals and people.

Family: Fabaceae

Origin: South east Asia

Habit: Scrambling perennial shrub with densely prickled arching canes that form self standing thickets up to 7 m high. Can climb up to 20 m on supporting vegetation.

Leaves: Alternate, bipinnate, and somewhat hairy on both sides, dark green above, paler below.

Flowers: Varying shades of yellow, with five petals (10-15 mm long), five sepals (9-10 mm long), ten stamens (10-16 mm long), and a style (15-20 mm long).

Fruit: Flattened, oblong, hairy, woody pods 6-10 cm long by 25 mm wide. Green turning brown when fully mature, they split open to release 4-9 brown / black seeds 6-10 mm across, persisting for many months and scattering seeds as they break open.

Roots: Shallow and fibrous.

Dispersal: Seeds spread by birds, wind, water and contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull seedlings, cut or scrape and paint, foliar spray. Rootstocks will coppice if the roots are not removed or if the cut stumps are not treated with herbicide. Report this plant to your local Council Weed Officer.

Tahlee NSW 2324

Red Trumpet Vine

Campsis radicans

Very rampant and invasive, it will cling to adjacent trees with small aerial roots, growing up to 10 m into the canopy. Also known as cow itch vine, handling it may cause skin irritation or allergic reaction.

Family: Bignoniaceae

Origin: Southeastern USA

Habit: An extremely aggressive woody climber that will form impenetrable colonies in the wild which can choke out many plants that get in its way.

Leaves: Deciduous. Pinnately compound. Shiny dark green above and dull green below 7-11 elliptical leaflets with serrated margins.

Flowers: Clusters (terminal cymes) of 4-12 orange to scarlet trumpet shaped flowers, mid Summer/early Autumn.

Fruit: Long, bean-like seed pods that dry and split as they mature, scattering hundreds of thin, brown, winged paper-like seeds.

Roots: Becoming dense and suckering profusely from underground runners. Forms aerial root for clinging to structures.

Dispersal: Seed is spread by humans, wind, water, animals, contaminated soil, machinery including excavators, mowers, slashers, vehicles

Control: Hand dig / pull seedlings, cut or scrape and paint stems, foliar spray with registered herbicides.

Passion flower / Passion fruit

Passiflora Spp. P. morifolia, P. subpeltata, P. tarminiana, P. caerulea P. suberosa, P. foetida, P. miniata, P. edulis

Report this new species

Passiflora morifolia has been identified in the MidCoast area. Council is working with MidCoast 2 Tops landcare to raise awareness and stamp it out.

Family: Passifloraceae

Origin: Chiefly tropical South America

Habit: Vigorous climber with tendrils.

Leaves: Varying with species; from 10 mm up to 150 mm long; generally 3-lobed some times ovate; pale green with powdery film and blunt tips to dark green with pointed tips.

Flowers: Passion flowers are very distinctive in shape. They range from 1-5 cm across with colours from plain white to white blotched purple, pinks and reds; 5-10 petals; numerous cream/yellow stamens and a prominent divided stigma. Spring-Summer.

Fruit: Globe or egg shaped drupes, generally pulpy, 15-50 mm long, glossy, yellow, green, red or purple/black.

Roots: Lateral roots form at right angle to stem, break easily when pulled, re-shoot from remnant root stock.

Dispersal: Humans. Fruit mostly spread by birds and animals, but also water, contaminated soil, and garden refuse dumping.

Control: Scrape and paint vines and root system, Foliar spray using a registered herbicide with the addition of a penetrant.


Darawank NSW 2428
P. subpeltata


P. edulis


P. subpeltata

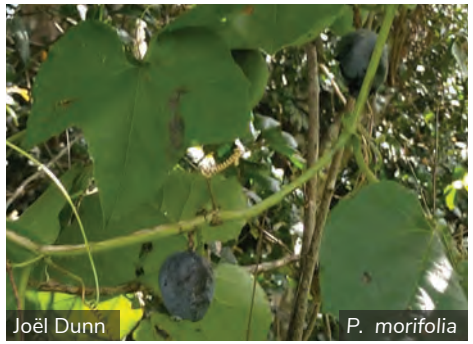

P. caerulea


P. suberosa


Krambach NSW 2429
P. morifolia


Seal Rocks NSW 2423
P. caerulea


P. caerulea


Joël Dunn
P. morifolia

Syngonium ssp.

Syngonium podophyllum

Other species of concern

Syngonium angustatum, *Syngonium neglectum*

Family: Araceae

Origin: Native to Mexico, Central America, parts of the Caribbean and tropical South America

Habit: A popular indoor plant that can turn into a rampant climber that grows over other vegetation.

Leaves: The alternately arranged leaves vary in size, shape and colour depending on their position on the plant. The juvenile leaves are generally heart-shaped or more commonly arrowhead-shaped and have pointed tips and are dark green in colour or with silvery-white veins or centres bounded by green. The intermediate leaves tend to be slightly larger with more developed and more spreading lobes near the base of the leaf blade. The upper leaves are generally dark green without any markings.

Flowers: Flower spikes develop in the upper leaf forks, borne on stalks up to 13 cm long. Each spikes consists of an elongated column that is partially enclosed in a creamy-white to greenish coloured modified leaf that takes on the appearance of a flower.

Fruit: The developing fruit turn red in colour and eventually merge into one larger fruit. This fruit is egg-shaped and turns brownish when fully mature.

Roots: Prefers moist shady conditions and fertile soils in rainforests, closed forests, open woodlands, waterways and riparian areas, and disturbed sites.

Dispersal: Generally spread to new areas by deliberate cultivation. also dispersed by dumped garden waste dumping. Once established, a plant will spread outwards, forming a colony.

Control: Stem scrape, cut/stump and foliar spray.

Nabiac NSW 2312

GROUND COVERS

These herbaceous, slightly woody or strap like plants may seem insignificant in reserves and bushland areas, but they displace native ground covers and thus reduce the biodiversity of natural areas, which alters the whole ecology of that community.

Many of these plants are still found for sale in nurseries and local markets. Like all categories of plants in this booklet, active management is a key issue which includes regular pruning to maintain plant health and vigour and the constant removal of spent flowers to prevent seed set.

In some ecological communities, lawn grasses such as Kikuyu, Buffalo Grass and Paspalum can be damaging and problematic e.g. Themeda grass headlands, Coastal saltmarsh (see Grasses section).

The main weed species locally are featured on their own pages but below is a list of:-

Other Problematic Ground Covers:

Common Name:	Botanical Name
Beach Daisy:	*Arctotheca populifolia*
Common Tansy:	*Tanacetum vulgare*
Coreopsis:	*Coreopsis lanceolata*
Creeping cinderella weed:	*Calyptocarpus vialis*
Crucifix Orchid:	*Epidendrum radicans*
Evening Primrose:	*Oenothera* spp.
Horehound:	*Marrubium vulgare*
Horsetail's:	*Equisetum* spp.
Fireweed:	*Senecio madagascariensis*
Japanese knotweed:	*Reynoutria japonica*
Kosters' Curse:	*Clidemia hirta*
Mist Flower:	*Ageratina riparia*
Mouse-ear Hawkweed:	*Hieracium pilosella*
Obedient Plant:	*Physostegia virginiana*
Opium Poppy:	*Papaver somniferum* (Prohibited plant)
Orange Hawkweed:	*Hieracium aurantiacum*

Common Name:	Botanical Name
Ox-eye Daisy:	*Leucanthemum vulgare*
Paterson's Curse/ Bugloss':	*Echium* spp.
Pennywort:	*Hydrocotyle bonariensis*
Polka Dot Plant:	*Hypoestes phyllostachya*
Scarlet Sage:	*Salvia coccinea*
St Johns Wort:	*Hypericum perforatum*
Thistles:	*Carduus* spp; *Carthamus* spp; *Centaurea* spp; *Cirsium* spp; *Cynara* spp; *Onopordum* spp; *Picnomon* spp; *Silybum* spp; *Scolymus* spp; *Sonchus* spp; *Rhaponticum* spp.
Veined Verbena:	*Verbena* spp. (exotics)
Witchweed:	*Striga* spp.(except the native *S. parviflora*)

Blue heliotrope

Heliotropium amplexicaule

Blue heliotrope contains pyrrolizidine alkaloids. It competes with desirable pastures and causes toxicity to stock.

Known to occur around operational and historic Bowling Clubs

Family: Boraginaceae

Origin: South America

Habit: A prostrate perennial, 15-30 cm tall, with very hairy, creeping, branched stems emerging from a woody rootstock.

Leaves: Dull green above and paler below, simple, alternate, sessile, oblanceolate to lanceolate 20-80 mm long and 3-20 mm wide with prominent veins and a wavy margin.

Flowers: Small tubular flowers, 4-6 mm long and 3-6 mm wide, arranged in two rows along one side of a coiled spike that straightens with age. Purple, lilac, blue or pink in colour and have a distinctive yellow throat.

Fruit: Two small rough-surfaced nutlets which separate from each other at maturity.

Roots: Combination of fibrous and a deep central taproot.

Dispersal: Seed and vegetation spread by water, humans, contaminated fodder, hay, soil, earth moving equipment, mowers, slashers, vehicles and garden refuse dumping.

Control: Hard to control. Hand dig / pull seedlings. Root fragments can regrow. Foliar spray with registered herbicides.

Hawks Nest NSW 2324

Caltrop / Cat-head

Tribulus terrestris

The spines of the burrs point upward, where they stick into feet and fur of animals. This causes damage to domesticated livestock and degrades wool.

Family: Zygophyllaceae

Origin: Mediterranean region, Sthn Europe, Sthn Asia and Africa,

Habit: Branched stems radiate from the crown from a diameter of 10 cm to over 1 m. Usually prostrate, they form flat patches, although may grow taller when shaded.

Leaves: Compound, pinnate and densely hairy. Leaflets are opposite and up to 3.2 mm long.

Flowers: Solitary, lemon-yellow, 4-10 mm wide, with 5-petals, 5 sepals, and 10 stamens, Spring to Autumn.

Fruit: Green woody fruits turn brown and fall apart into 5 burrs. Each burr bears 2-4 seeds and 2-4 sharp spines, 10 mm long and 4-6 mm wide.

Roots: Fine fibrous rootlets emerge from the taproot to take advantage of minimal soil moisture. Can survive in very arid conditions.

Dispersal: Seed and vegetation spread by water, humans, contaminated fodder, hay, soil, earth moving equipment, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull all plants. Foliar spray prior to fruiting.

Forest & Kim Starr

Forest & Kim Starr

Tuncurry NSW 2428

Chinese Violet

Asystasia gangetica ssp. micrantha

Flower production can be as soon as 40 days after germination, with seed development after 57 days and the production of viable seed in as little as 72 days.

This species has recently been identified at Pacific Palms and One mile beach in the MidCoast area.

Family: Acanthaceae

Origin: Africa

Habit: A slightly hairy herbaceous mat-forming perennial creeper usually growing to less than 0.5 m tall. It can sprawl over supporting vegetation to a height of 1 m or more.

Leaves: Bright green above paler below, simple, ovate, 2.5-8 cm long & 1.5-4 cm wide slightly hairy, arranged in opposite pairs along the stems.

Flowers: Tubular 1.8-3.5 cm long and about 3 cm across, borne in clusters. Mostly white with the bottom petal having purple blotches in two parallel lines on its inside. Year round, but mainly during warm and wet conditions.

Fruit: Club-shaped, explosive capsule which starts out green, dries brown and contain four flattened seeds.

Roots: Fibrous. Stems root at the nodes when they come into contact with soil.

Dispersal: Seed and fragments spread by humans, contaminated soil machinery, mowers, vehicles, wind, water, animals,and garden refuse dumping

Control: Report this plant to your local Council Weed Officer.


Jordan Skinner


One Mile Beach, Forster NSW 2428


Jordan Skinner

Gazania

Gazania spp.

Gazania's have become naturalised on coastal dunes, parks and along roadsides from sthn Sydney to the Mid north coast, the Eyre Peninsula and Mt Lofty region of Sth Australia and in the Moreton region of S.E. Queensland.

Family: Asteraceae

Origin: Mainly South Africa

Habit: Clumping, low-growing perennial herb to 15 cm high, that withstands salt-laden winds and grows well in sandy soils.

Leaves: Elliptic to narrow-oblanceolate, irregularly pinnatisect, dark green above white hairy underneath.

Flowers: Brightly coloured long stemmed daisy-like flowers to 8 cm wide, in red, bronze, yellow and orange tones. Spring to Autumn.

Fruit: Achenes. 4 mm long; pappus scales lanceolate 2-3 mm long, with hairs covering achene.

Roots: Fibrous root system tolerant of a wide range of soil types from sand to clay preferring dryer to free draining conditions.

Dispersal: Seed and fragments spread by wind, water, animals, humans, contaminated soil, machinery including excavators, mowers, vehicles and garden refuse dumping

Control: Hand dig / pull, foliar spray.


The Tanks Forster NSW 2428

Greater / Blue Periwinkle

Vinca major

Garden escapee. Mats of this species smother other ground vegetation and prevent growth of shrubs and trees. Grows best in fertile soil and does well in shade.

Family: Apocynaceae

Origin: Central and southern Europe and northern Africa

Habit: Spreading perennial herb to 50 cm high with stems that root at nodes and sometimes at tips.

Leaves: Opposite, ovate, 1.5-9 cm long, 1.5-4.5 cm wide, glossy green above, paler below; on leaf stalk 0.5-1.5 cm long.

Flowers: Violet-blue to mauve, 3-6 cm wide, tubular with 5 spreading lobes 1.3-2.5 cm long, stamens attached to inside of tube and within tube. Flowers mostly late winter to late summer.

Fruit: Produced in pairs joined at the base, membranous, cylindrical 3.5-5 cm long, about 0.4 cm wide. Seeds flat, hairless, 7-8 mm long, 1-10 per fruit.

Roots: Fibrous. Stems root at nodes and sometimes at tips.

Dispersal: Seed is apparently rarely produced in Australia. Mainly spread by humans via garden refuse dumping.

Control: Hand dig, bagging all plant parts and removing from site. Foliar spray.

Barnard River NSW 2422

Lippia

Phyla canescens, P. nodiflora

Introduced as a lawn species and once used to stabilise soil on banks of irrigation canals and around weirs. Overruns native vegetation, and is capable of suppressing the growth of neighbouring plants.

Family: Verbenaceae

Origin: Americas from California to Argentina and Chile

Habit: Hardy, mat forming, perennial herb with stems that root at nodes.

Leaves: Ovate, with blunt short teeth; 0.5-3 cm long, 2-10 mm wide, without hairs or with short dense hairs; leaf stalk absent or short.

Flowers: Inflorescence a dense short cylindrical to globe-shaped spike of tubular flowers, on a stalk which is 1-6.5 cm long and usually much longer than leaves at the stalk base; petals usually lilac or pink. Flower tubes 2-3 mm long. Spring to late autumn.

Fruit: Ellipsoid to globose, 1.5-2 mm long.

Roots: Dense and mat forming.

Dispersal: Seed and fragments spread by humans, fodder,hay, wind, water, animals, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Foliar spray, pasture improvement techniques.

Painted Spurge

Euphorbia cyathophora

Painted spurge prefers sandy soils, particularly in disturbed sites. It is of most concern as a weed of hind-dune areas on beaches and is also relatively common in coastal and sub-coastal riparian zones.

Family: Euphorbiaceae

Origin: Tropical North America, the Caribbean and South America

Habit: Annual herb to 70 cm high with main stems erect, often with lateral branches. Stems and leaves contain a milky sap.

Leaves: Opposite at base of plant, alternate up the stem, often fiddle-shaped. Uppermost leaves usually pinkish-red towards the base.

Flowers: Inconspicuous 'flowers' are actually tiny cup-like structures each containing several tiny male flowers and one yellow female flower. Most of the year.

Fruit: Three-lobed capsule, 3-4 mm long and 5-6 mm wide with three inner compartments, each containing a single seed. Seeds are egg-shaped 2-3 mm long and 1.5 mm wide.

Roots: Fibrous root system.

Dispersal: Seed capsules open explosively when mature, expelling the seeds short distances. Seed is spread by spread by wind, water, animals, humans, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull bagging all plant parts and removing from site, Foliar spray.

Sea Holly

Eryngium maritimum

Sea holly cannot grow in the shade, so shading may be a control strategy. In Elizabethan times in England, sea holly roots were believed to be a powerful aphrodisiac.

Family: Apiaceae

Origin: Europe

Habit: Robust perennial herb with spiny 'holly-like' leaves to 50 cm high.

Leaves: Grey, basal leaves circular to broad-ovate, up to 10 cm long and 15 cm wide, deeply 3-5-lobed and coarsely spinose-toothed, with stout petioles to 15 cm long; stem leaves smaller, and usually sessile.

Flowers: Grey and pale mauve, globose, burr-shaped heads 13-22 mm long, 11-20 mm diameter bearing a sheath of spinose-toothed leaves. December to May.

Fruit: Burr-like, 4.5- 6 mm long, densely covered with acutely pointed scales and crowned by the persistent sepals.

Roots: Very long, deeply rooted and sweetly scented.

Dispersal: Seed and root fragments. spread by wind, water, ocean currents, birds, animals, humans, contaminated soil, machinery including excavators, vehicles and garden refuse dumping.

Control: Hand dig / pull making sure to remove all roots, shading, foliar spray including penetrant. Report this plant to your local Council Weed Officer.

Jimmy's Beach NSW 2324

Sea Spurge

Euphorbia paralias

The MidCoast area on mainland New South Wales, and Lord Howe Island are thought to be the northern most extent of sea spurge in NSW.

Family: Euphorbiaceae

Origin: W. & S. Europe, Canary Islands, N. Africa and W. Asia

Habit: Glaucous perennial herb to 70 cm high, with multiple stems branching from a woody base. Stems are somewhat fleshy, contain a milky sap, Fertile stems are divide into branches near their tips.

Leaves: Greyish-green, stalkless leaves, 5-30 mm long, 2-15 mm wide are crowded along the stems.

Flowers: Inconspicuous 'flowers' are actually tiny cup-like structures each containing several tiny male flowers and one yellowish-green female flower. Spring to early winter.

Fruit: Capsule, 3-5 mm long and 4.5-6 mm wide, containing three seeds. Seeds are egg-shaped 2.5-3.5 mm long.

Roots: Fibrous root system.

Dispersal: Seed is spread by water, humans, vehicles, contaminated soil (beach grooming equipment, sand dredging etc). Seed capsules open explosively when mature, expelling the seeds short distances. Seeds are also buoyant in sea water, and can be spread very large distances by ocean currents.

Control: Hand dig / pull bagging all plant parts and removing from site, Foliar spray. Report this plant to your local Council Weed Officer.


Yacaaba Peninsula 2324

Seaside Daisy / Bony tip fleabane

Erigeron karvinskianus

This species is regarded as an environmental weed in N.S.W., Vic, Tas and S.A. and as a "sleeper weed " in other parts of Australia. It is highly tolerant of poor, dry soils and grows in a wide range of conditions.

Family: Asteraceae

Origin: South Mexico to Venezuela

Habit: An aggressive spreading perennial herb to about 50 cm high. Grows vigorously smothering low native ground covers. Highly tolerant of poor dry soils and grows in a wide range of conditions. The plant is able to tolerate high salinity and drought.

Leaves: Simple, evergreen, elliptical to oval, pubescent on both sides, and reach 32 mm long by 13 mm wide.

Flowers: Small daisy flowers 1-2 cm across are borne all year round. Each flower has a yellow centre, a corolla that is 5-lobed with white petals, which become pink and finally purple with age.

Fruit: Dandilion-like tufts; 1 mm long hard dry seed (achene) attached to a pappus of fine whitish hairs, 2 mm long.

Roots: Fibrous, shallow; rooting at the nodes.

Dispersal: Seed spread by humans, wind, water, and contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping. Plants will spread vegetatively by cuttings rooting at the nodes.

Control: Hand dig / pull bagging all plant parts and removing from site, Foliar spray.

Singapore Daisy

Sphagneticola trilobata

Introduced as an ornamental. Deliberately planted as a roadside and railway embankment stabiliser in Queensland, now spreading in coastal areas of New South Wales. Also naturalised in Florida, Malaysia and on Pacific Islands.

Family: Asteraceae

Origin: Mexico to Argentina

Habit: Dense mat-forming perennial herb to 70 cm high, with spreading stems to 2 m or more long that root at nodes.

Leaves: Simple, dark green above, paler below, 3-11 cm long, 2.5-8 cm wide, with white hairs and toothed margins, sometimes trilobed.

Flowers: Solitary in leaf axils with yellow disc and ray florets; to 3.5 cm wide on stalks 3-14 cm long . Flower heads with 4-14 petals 6-15 mm long, inner (disc) florets tubular. Flowers spring to autumn.

Fruit: Seeds 4-5 mm long, tuberculate and topped with Dandilion-like tufts.

Roots: Fibrous, shallow; rooting at the nodes.

Dispersal: Seed and fragments spread by humans wind, water, contaminated soil, machinery including excavators, mowers, slashers, wehicles and garden refuse dumping.

Control: Hand dig / pull bagging all plant parts and removing from site, Foliar spray.

Pacific Palms 2428

Trad / Wandering Spiderwort

Tradescantia fluminensis

This shade loving, weak rooted herb is a common cause of **contact allergies in dogs**.
Many other forms of Tradescantia are well known garden plants.

Similar Native Species: *Commelina cyanea* (photo bottom R). This native ground cover has hairy leaf sheaths, blue flowers and a strong primary root system.

Family: Commelinaceae

Origin: South America

Habit: Weak, perennial, creeping succulent herb, rooting from distinct nodes. Grows vigorously, layering and smothering low native ground covers. Shade tolerant and moisture loving.

Leaves: Simple, alternate, ovate leaves that are glossy and dark green, to 6cm long. Slightly fleshy.

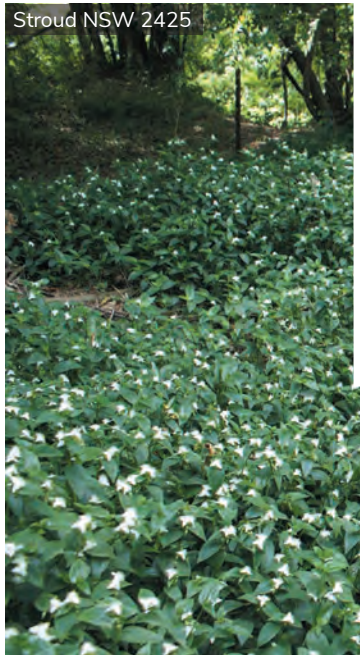
Flowers: Small (1-2 cm) white flowers, with three petals and six hairy stamens. Spring-Summer.

Fruit: Papery capsule, seed not viable in Australia.

Roots: Stolons form underground, with weak, shallow roots forming at nodes.

Dispersal: Main method of reproduction is vegetative where by stem fragments re-root. Stem fragments spread by water, and contaminated soil (green waste dumping, earth moving etc). Common in watercourses.

Control: Hand dig / pull, bagging all plant parts and removing from site. Foliar spray.



Stroud NSW 2425

Tradescantia zebrina

Tradescantia albiflora

Commelina cyanea

BULBOUS AND SUCCULENT PLANTS

These plants are extremely hardy due to their above ground and below ground storage structures, which are modified leaves, stems and roots.

In this group of plants we have included all of the Asparagus species. These plants are prolific, hardy (drought-resistant), shade tolerant and highly invasive. They have extensive underground rhizomes that form thick mats capable of reducing water penetration into soil; vigorous vegetative structures that are capable of smothering native vegetation and produce copious amounts of berries (red or black) that are readily consumed and spread by animals and birds. They are also spread by green waste dumping as rhizomes are capable of surviving for long periods of time out of the soil.

The main weed species locally are featured on their own pages but below is a list of:-

Bridal Creeper fact: First recorded in Australia in 1857 in a nursery catalogue. By the 1870s bridal creeper was a common garden plant; its flowers were used in floral arrangements, particularly in wedding bouquets. Within 50 years of introduction, bridal creeper had become naturalised in many areas across most of southern Australia and has earned its status as a Weed of National Significance.

Other Problematic Bulbous & Succulent Plants:

Common Name:	Botanical Name
Aloes:	*Aloe arborescens, . A. ciliaris, A. maculata.*
Cabbage Tree:	*Cordyline australis*
Cactus / Prickly Pears:	*Opuntia aurantiaca, O elata, O. elatior, O.microdasys, O. humifusa, O. monacantha, O. robusta, O. schickendantzii, O. stricta, O. tomentosa*
Cactus / Harrisia:	*Harrisia martinii.*
Eves needles / cane cactus	*Austrocylindropuntia subulata, A. cylindrica.*
Cactus/Prickly Pears:	*Cylindropuntia spp.*
Century Plant:	*Agave americana,*
Freesia:	*Freesia hybrida*
Gladiolus:	*Gladiolus gueinzii, G undulatus*
Macho Fern:	*Nephrolepis biserrata*
Mother-in-law's Tongue:	*Dracaena trifasciata*
Naked Lady:	*Amaryllis belladonna*
Onion grass:	*Romulea rosea*
Soursob/Shamrock/Wood Sorrel:	*Oxalis spp.*
Various Succulent's:	*Sedum, Kalanchoe, Crassula , Mesmbryanthemum*

Agapanthus

Agapanthus spp.

Family: Alliaceae

Origin: Africa

Habit: An erect fleshy, clumping, perennial lily with long strappy leaves.

Leaves: Long (up to 700 mm), strap-like, glossy bright green, fleshy.

Flowers: Small (30 mm) trumpet shaped blue or white flowers that form large spherical clusters (umbels) at the end of long (1200 mm) smooth tubular stalks. Very showy floral display in Summer.

Fruit: Three-sided leathery green capsules form in clusters at the end of stalks, drying brown and papery when mature. Contain numerous winged, small black seeds.

Roots: Shallow, fleshy, densely matted and quite robust.

Dispersal: Seed and tubers spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

Control: Hand dig / pull, bagging all plant parts and removing from site. Foliar spray, cut and paint.

This is a popular garden plant that needs active management in all gardens. This may be as simple as **actively removing spent flower stalks prior to seed set**, or as comprehensive as complete removal from gardens.

One of the most widely planted ornamental landscape plants, *Agapanthus* have invaded natural areas including the Blue Mountains world heritage area.

Arum Lily

Zantedeschia aethiopica

Used extensively in floral arrangements all *Zantedeschia* spp. are highly toxic. They are known to have caused the deaths of cattle, cats and children. All parts of the plant are toxic, and produce irritation and swelling of the mouth and throat, acute vomiting and diarrhoea.

Family: Araceae

Origin: South Africa

Habit: Erect, tuberous, evergreen perennial herb to 1.5 m high.

Leaves: Arrowhead shaped, dark green leaves to 45 cm long and 20 cm wide borne at the ends of stout, smooth, succulent green stems to 75 cm long and winged at the base.

Flowers: Pale yellow spike to 9 cm long surrounded by a pure white funnel shaped spathe to 25 cm coming to a point. Winter-Summer.

Fruit: Berry, green or yellow maturing to orange 5-10 mm long containing about 4 yellow-brown seeds.

Roots: Fleshy tuberous rhizome.

Dispersal: Rhizomes, cormlets and Seed is spread by birds, animals, water, humans, contaminated soil (earth moving equipment) and garden refuse dumping.

Control: Hand dig / pull, bagging all plant parts and removing from site. Foliar spray, cut and paint.

Girvan NSW 2324

Asparagus - Bridal Creeper

Asparagus asparagoides

Bridal creeper is widespread in Western Australia, South Australia and Victoria. It is also spreading in New South Wales and Tasmania. It has the potential to spread further and increase its density in all southern states.

Similar Native Species: Wombat Berry aka ***Eustrephus latifolius***

Family: Asparagaceae

Origin: South Africa

Habit: Wiry twinning climber to 3 m in length and branch extensively. Stems emerge annually in autumn from a mat, 0-10 cm deep.

Leaves: Bright green with alternate, flattened, shiny, stems (leaf-like) that are pointed ovate shape and have parallel venation, leaves 4-30 mm wide and 10-70 mm long which occur along the length of wiry green stems.

Flowers: White, 6-petalled flowers, 5-8 mm in diameter, appear in early Spring.

Fruit: Pea-sized green berries turning pink then red/burgundy in late spring-early summer. Berries contain 1-9 seeds that are black when mature.

Roots: Branching rhizomes that bear numerous fleshy tubers.

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

Control: Difficult to control - Foliar spray, crowning of mature plants. Ensure crowns are removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings. – In some areas – Biological control may be an effective integrated management tool.

Wallis Lake NSW

Asparagus - Bridal Veil

Asparagus declinatus

Most populations are located in the coastal areas of south-eastern South Australia, but it is also naturalised in the coastal districts of south-western Western Australia and in western Victoria.

Family: Asparagaceae

Origin: South Africa

Habit: Highly invasive, herbaceous perennial. Sprawling ground cover or semi-climber up to 3 m that forms dense mats. Above ground stems dieback annually during summer. Soft and thornless.

Leaves: Soft, greyish or bluish-green needle-like cladodes up to 20 mm long and 0.5-1.5 mm wide form in groups of three along stem segments.

Flowers: White sometimes with greenish or brownish markings. Borne in pairs or solitary, 5-8 mm across. Mainly during winter.

Fruit: Round or egg-shaped berry, 8-15 mm long and around 7 mm wide, turning from green to bluish-grey or white with age. Each berry generally contains 5-8 but sometimes up to 14 seeds.

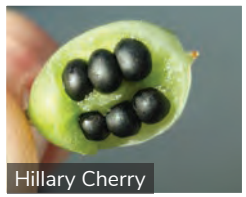
Roots: Extensive, perennial, underground rhizomes and tubers.

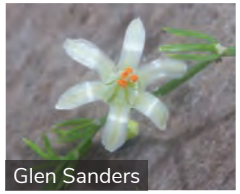
Dispersal: Seed and rhizomes spread by water, animals, birds, humans, contaminated soil and garden refuse dumping

Control: Difficult to control - Foliar spray, dig or crown out mature plants. Ensure that rhizomes and tubers are removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings.
Report this plant to your local Council Weed Officer.


Hillary Cherry


Shauna Potter


Hillary Cherry


Glen Sanders

Asparagus - Broom

Asparagus virgatus

One of many Asparagus spp. used for cut foliage

Old world garden plant. Mainly found in riparian areas and near forest margins, or in disturbed sites near human habitation; can germinate in conditions from full sun to rainforest with >80% canopy closure.

Family: Asparagaceae

Origin: Eastern and southern Africa

Habit: Erect perennial herb or shrub with stiff stems, 0.4-0.8 m high; can attain very large and continuous infestations.

Leaves: Needle-like cladodes, 3-6 in each axil, cylindrical, 3-15 mm long 0.5-1 mm wide.

Flowers: Solitary, greenish white, stalks 7-12 mm long, petals 3-4 mm long mainly spring-summer.

Fruit: Orange berry round - egg shaped, 4-6 mm diameter containing 1 seed. Fruits most of year.

Roots: Fibrous, forming an extensive rhizomatous root mass.

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

Control: Difficult to control - Crowning, Remove crown and rhizomes off site. Follow-up - hand pull all emerging seedlings. Foliar spray, .
Report this plant to your local Council Weed Officer.


Bulahdelah NSW 2423

Asparagus - Climbing

Asparagus africanus

Climbing asparagus has only become naturalised in the last 30 years or so, and is still spreading. It scrambles over other vegetation and climbs up to 12 m into the canopies of taller trees.

Family: Asparagaceae

Origin: Eastern and southern Africa

Habit: Perennial climber or scrambling shrub with woody stems 8-12 m long. Spines on older stems to 10 mm long.

Leaves: Needle-like Cladodes, 7-12 in each axil, cylindrical, 8-15 mm long, 0.5 mm wide produced in a clusters. Branches and cladodes spirally arranged.

Flowers: White, produced in small clusters, stalks 5-10 mm long, petals 3-4 mm long in mainly spring.

Fruit: Green berry turning orange when ripe, round, 5-6 mm diameter containing 1 seed. Fruits may be present most of year.

Roots: Central crown, with rhizomes and fleshy roots (no distinct tubers).

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping.

Control: Difficult to control - Cut & paint, basal bark, foliar spray, crowning. Ensure that the crown is removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings.
Report this plant to your local Council Weed Officer.

Asparagus - Fern

Asparagus scandens

Fern asparagus is thought to have a much greater potential range than it currently inhabits. It could seriously impact on Australia's biodiversity in future years if it is not managed correctly.

Family: Asparagaceae

Origin: South Africa

Habit: Perennial climber with thornless, wiry scrambling stems to 2 m long. Stems branch in one flat plane.

Leaves: Bright green, flattened leaf-like cladodes in clusters of 3 of unequal length, 5-15 mm long, 0.5-1 mm wide, with a distinct midrib, tapering at the base.

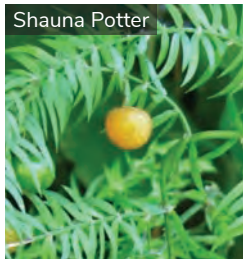
Flowers: Small, white to pale pink, bell shaped solitary flowers or in clusters of 2-3 produced in winter and early spring.

Fruit: Orange-red berry round to egg shaped, 5-7 mm diameter containing 1 seed. Fruits until summer.

Roots: Small central crown with fibrous roots andslender tubers

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

Control: Difficult to control - Cut & paint, foliar spray, crowning mature plants. Ensure that the crown is removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings.
Report this plant to your local Council Weed Officer.


Shauna Potter


Sheldon Navie


Sheldon Navie


Sheldon Navie

Bulbous and succulent plants

Asparagus - Ground

Asparagus aethiopicus

A very popular pot plant because of its ability to withstand low light and neglect. Ground asparagus is naturalised in sand dunes and rainforests infesting Thousands of hectares on the NSW coast.

Family: Asparagaceae

Origin: South Africa

Habit: Highly invasive, herbaceous perennial. Sprawling ground cover with short sharp spines and branched stems up to 2 m. A tough, woody crown is formed at base of stems. Dense mats smother low native vegetation and suppress natural regeneration.

Leaves: Bright green, flattened leaf-like cladodes up to 20 mm long, with a distinct midrib and abrupt point. Single or in clusters of 2-5.

Flowers: Small, white to pale pink, bell shaped flowers in clusters of 4-8 produced during Summer.

Fruit: Pale green berries that ripen to red in late winter early spring. Each berry usually has 1 seed, but can contain up to 3 rarely 4.

Roots: Central crown with a thick mat of fibrous roots, rhizomes and fleshy tubers extending from the centre.

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

Control: Difficult to control - Cut & paint, foliar spray, crowning mature plants. Ensure that the crown is removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings.

Second Head NSW 2428 Steve Howard

Asparagus - Pompom

Asparagus macowanii

This species is sometimes confused with A. *retrofractus*, but they are easily separated (See differences below

Family: Asparagaceae

Origin: South eastern Africa

Habit: Shrubby perennial with smooth erect stems, 1-2.5 m tall, bearing short recurved spines on lower part of stems only.

Leaves: Cladodes, 8-15 mm long, <0.5 mm wide, clustered in each axil (clusters are densely packed & globose especially near the ends of the branches).

Flowers: Small, white, more or less in dense clusters appearing on branches before the cladodes have fully developed).

Fruit: Dark purplish to black berry, round to egg shaped, 7-10 mm diameter usually containing 1-2 seeds.

Roots: Central underground crown, with fibrous or semi-succulent roots.

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

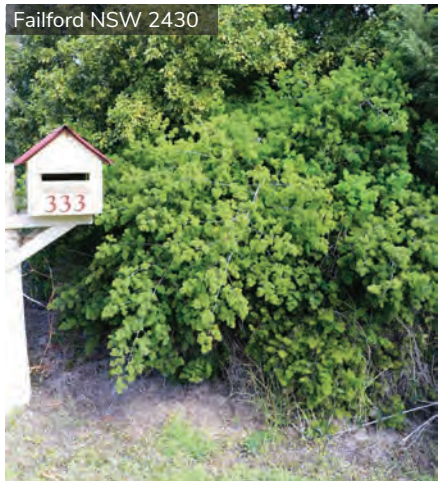
Control: Difficult to control - crowning, ensure that the crown is removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings. Cut & paint, basal bark, foliar spray.

Asparagus macowanii

- densely clustered cladodes in 'pompoms'.
- straight smooth stems.
- Purplish to black fruits.
- erect stems with fewer & smaller spines.

Asparagus retrofractus

- sparsely clustered cladodes.
- zigzaged & ribbed stems.
- orange-red fruits.
- longer more scrambling stems & numerous obvious spines.



Failford NSW 2430

Sheldon Navie

Asparagus - Sicklethorn

Asparagus falcatus

Recorded as naturalised in Sydney, Wyong, Lake Cathie and Port Macquarie in NSW, growing in Littoral Rainforest, Wet Sclerophyll, Swamp Oak and Subtropical Rainforest ecological community types.

Family: Asparagaceae

Origin: Eastern and southern Africa, the Arabian Peninsula, India and Sri Lanka

Habit: Robust climber with woody perennial stems to 5-7 m long, with stout hooked spines to 3 cm long;

Leaves: Cladodes, 30-90 mm long, 3-7 mm wide, linear, most are slightly sickle-shaped.

Flowers: Small, white, fragrant, numerous arranged in branched cluster. Spring - summer.

Fruit: Reddish, round berry 7-10 mm wide, contain 1-3 seeds. Mature in winter.

Roots: Central underground crown, with fibrous roots to swollen tubers that resemble sweet potatoes.

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

Control: Difficult to control - crowning, ensure that the crown is removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings. Cut & paint, basal bark, foliar spray.
Report this plant to your local Council Weed Officer.


Sheldon Navie


Sheldon Navie


Sheldon Navie


Sheldon Navie

Asparagus fern - Climbing

Asparagus plumosus

A very popular indoor plant because of its ability to withstand low light and neglect, this plant is relatively widespread and naturalised in sheltered sites and rainforests infesting many hectares on the NSW coast.

Family: Asparagaceae

Origin: South Africa

Habit: Tough, perennial, wiry, twining climbing vine with occasional spines and fine, feathery fern like foliage.

Leaves: Fine, feathery, leaf-like cladodes arranged in horizontal sprays.

Flowers: Flowers are small, greenish-white and arranged at the tips of branches in Summer.

Fruit: Bluish-green berries to 4-5 mm across that turn black when ripe and contain 1-3 seeds. Autumn.

Roots: A woody crown with rhizomes at base of stems, with a fleshy root mass radiating out from the crown. (No distinct tubers).

Dispersal: Seed and rhizomes spread by birds, animals, water, humans, contaminated soil and garden refuse dumping

Control: Difficult to control - Cut & paint, basal bark, foliar spray, crowning. Ensure that the crown is removed off site. Remove and bag berries. Follow-up - hand pull all emerging seedlings.

Canna Lily / Indian Shot

Canna indica
Canna x generalis

A very widely planted species that prefers wet boggy sites. Commonly used in septic tank absorption trenches. Garden refuse dumping and deliberate planting in reserves and wetland areas is the main problem.

Family: Cannaceae

Origin: Tropical and South America

Habit: Erect, herbaceous perennial to 2 m high with No true stems. Stems are a collection of tightly furled leaf bases.

Leaves: Dark green to multi coloured and striped, large (60 x 25 cm), arranged alternately on stems.

Flowers: Tubular flowers (yellows oranges, reds and pinks) formed in asymmetrical clusters. Spring-Autumn.

Fruit: Black, globular seeds 5-7 mm long borne in capsule, and spread by birds.

Roots: Extensive, fleshy rhizome formed underground.

Dispersal: Seed and rhizomes spread by water, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull, bagging all plant parts and removing from site. Foliar spray, cut and paint.

Elephants Ears / Taro

Colocasia esculenta

Taro is a staple food source of the Pacific Islands and is also very popular throughout many parts of Asia. The tuber can substitute potato in almost any dish, baked, boiled or made into chips.

Family: Araceae

Origin: S.E. Asia, Hawaii, and the Pacific Islands

Habit: Erect, rhizomatous tuberous, evergreen perennial herb to 1.5 m high.

Leaves: Heart shaped, dark green leaves to 60cm long prominently veined. Stem & leaf colour varies depending on variety of plant.

Flowers: Pale Yellow spike enclosed by a greenish yellow hood like spathe. Flowers Winter-Summer.

Fruit: Small berry, green or yellow maturing to orange 5-10 mm long containing about 4 yellow-brown seeds.

Roots: Fleshy tuberous rhizome.

Dispersal: Roots, tubers and seed is spread by humans, water, contaminated soil machinery including excavators, vehicles and garden refuse dumping.

Control: Hand dig / pull, bagging all plant parts and removing from site. Foliar spray, cut and paint.

Fishbone Fern

Nephrolepis cordifolia

Family: Davalliaceae

Origin: North Eastern Australia

Habit: Terrestrial fern that forms dense clumps of upright, arching fronds that resemble fish bones with erect rhizome and slender stolons.

Leaves: Compound fronds with opposite or alternate leaflets, often over lapping at base, to 1 m. Leaflets to 6 cm long.

Flowers: Nil.

Fruit: Spores carried in round, brown clusters (sori) that form in two rows on underside of frond.

Roots: Erect, branching rhizomes above or below ground level, with wiry stolons bearing rounded, hairy tubers.

Dispersal: Spores carried by water, wind and contaminated soil (tyres, earth works, people's shoes, green waste dumping). Problematic in any damp, shady areas, where it will completely dominate ground cover layer.

Control: Hand dig / pull, bagging all plant parts and removing from site. Foliar spray.

Once a popular basket and rockery plant due to its ability to withstand low light and neglect. A local native on the far north coast of NSW and Lord Howe Island, this plant has become weedy from Sydney to the mid north coast of NSW.

Similar local native species: Rasp Fern *Doodia aspera* & Sickle Fern *Pellaea falcata*.

Formosa Lily

Lilium formosanum

Family: Liliaceae

Origin: Asia (Taiwan)

Habit: Deciduous perennial herb with annual flowering stalks 1-2 m long.

Leaves: Mid to dark green, elongated, linear, sessile leaves are arranged spirally or whirled along the stems.

Flowers: Large trumpet shaped highly fragrant flowers, pure white on the inside, pink or purple/brown stripes on the outside bearing prominent yellow anthers. Summer.

Fruit: Copious papery winged seeds borne in a large capsule.

Roots: Underground bulb with numerous fleshy scales (resembling garlic).

Dispersal: Seeds, bulbs and bulb scales spread by humans, water, wind, contaminated soil machinery including excavators, mowers, slashers, etc car tyres etc) and garden refuse dumping.

Control: New treatment information suggests that, repeatedly snapping the stem just below ground level between the roots and the bulb during flowering (leaving the bulb undisturbed in the ground), can exaust the plants reserves within two years. Follow-up treatments are required. Bag and remove seed capsules from the site wherever possible.

Also known as Taiwan Lily, this plant is rapidly becoming a naturalised weed in many states of Australia infesting roadsides, disturbed areas, wastelands and even bushland.

Kahili ginger (Ginger Lily)

Hedychium garderianum

Naturalised in the coastal districts of eastern Australia. Naturalised overseas in southern Africa, La Réunion, New Zealand, the Caribbean and Hawaii.

Family: Zingiberaceae

Origin: Himilayas in India, Nepal and Bhutan

Habit: Perennial herb to 2.5m with upright short-lived stems. It forms large dense stands, with rhizomes that can be 1 m deep. These stands can smother native understorey species, prevent the establishment of shrubs and trees and strongly modify native animal habitat.

Leaves: Leaves are dark green, alternately arranged, up to 45cm long by 15cm wide with a membranous ligule 1.5 – 3 cm long.

Flowers: Flowerheads are large (15 – 45 cm long), many flowered, spike like clusters at stem tips. Flowers are perfumed, pale to bright yellow and have a single long red stamen. Flowering occurs usually summer to autumn, but can all year in right conditions

Fruit: Fruit are 3-valved, thin-walled capsules and the inside of the valves are orange. Seeds are bright red, fleshy and about 1.8cm long

Roots: Rhizomes

Dispersal: Mostly dispersed by seed, spread mainly by birds. Can spread vegetatively by rhizomes or pieces of rhizomes, or dumping of garden waste

Control: Complete removal of rhizomes, removing flowerheads. Check APVMA information.

Forest and Kim Starr

J. J. Harrison

Montbretia

Crocosmia x crocosmiiflora

This pretty bulb invades bushland, roadsides streams banks and even gardens. They tolerate full sun, moist areas, frost, shady and windy conditions. Takes over and displaces indigenous grasses and ground covers.

Family: Iridaceae

Origin: South Africa

Habit: Erect deciduous perennial herb to 0.9 m.

Leaves: Basal linear strap like flat leaves around 30-80 cm long and 1-2 cm wide die down in autumn after producing its seeds, and reappear in Spring.

Flowers: Orange yellow tubular flowers are formed solitary in spike inflorescences on short wispy unbranched stems during Summer.

Fruit: Produces large amounts of seed.

Roots: Globular corms live and produce plants for two years or more, and new corms are formed annually, Long rhizomes are also produced, each of which grows into a new plant.

Dispersal: Roots, rhizomes, corms and seed spread by humans, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Difficult. Hand dig, ensuring all corms are removed. Extensive follow-up required. Foliar spray using a registered herbicide with the addition of a penetrant when flowering.

Mother of Millions

Bryophyllum delagoense,
B. x houghtonii, B. pinnatum.
B. daigremontiana, B. proliferum

Often confused with the Australian native Christmas Bells, this mat forming plant will grow under the poorest of conditions in areas such as a crack in a rock, gravel on the side of a road or on cliff faces, sand dunes and pastures.

Family: Crassulaceae

Origin: Madagascar, South Africa

Habit: Erect, smooth fleshy succulent stems to 2 m, with green-pink grey stems.

Leaves: Leaves vary depending on the species, but all are succulent either cylindrical or boat shaped and have many small teeth on the leaf tip or margins that produce new plantlets (vegetative reproduction).

Flowers: Produced in a cluster at the tip of long stems. Flowers are drooping, bell-shaped, orange-red to scarlet, 4-lobed to 2-3 cm long. Flowers mainly Winter-Spring.

Fruit: Dry capsule, producing hundreds of tiny black seeds. Prolific seeder.

Roots: Weak fibrous roots form from all vegetative parts.

Dispersal: Main method of reproduction is vegetative where by stem fragments re-root. Human activities such as mowing/slashing and green waste dumping are the common method of vegetative spread. Seeds are spread by water and contaminated soil.

Control: Difficult. Hand dig / pull, bagging all plant parts and removing from site. Foliar spray.


B. delagoense


B. x houghtonii


Pebbly Beach, Forster 2428

Parrot Lily / Christmas Lily

Alstroemeria psittacina
A. pulchella

This species is becoming widely naturalised in the coastal districts of southern and eastern Australia. Also naturalised on Lord Howe Island.

Family: Alstroemeriaceae

Origin: South America

Habit: An erect, long stemmed perennial lily to 1 m high, with sprays of red and green spotted flowers from clusters of tubers.

Leaves: Pale green, alternate, spoon-shaped, 3-10 cm long, 10-35 mm wide with a long, narrow, base, a rounded tip and entire margin, twisted on the petioles so that the undersides face up Petiole 1-6 cm long.

Flowers: Solitary or borne in umbels. Perianth red and green, spotted black. Summer flowering.

Fruit: Globe shaped, three valved capsule with prominent ribs, 10-15 mm diameter. Reddish brown seeds 2.5-3 mm diameter.

Roots: Fibrous roots forming rhizomes and tubers.

Dispersal: Rhizomes, tubers and seed are spread by water, humans, contaminated soil and garden refuse dumping. Possibly also spread by animals and birds.

Control: Difficult. Hand dig / pull, bagging all plant parts and removing from site, cut and paint, foliar spray with herbicide and penetrant.

Spanish Bayonet

Yucca aloifolia
Yucca spp.

Commonly cultivated, this garden escapee is found on roadsides and sand dunes of the Mid North Coast. Very difficult to control due to spiny nature of plant creating impenetrable thickets.

Family: Asparagaceae

Origin: North & Central America and the West Indies

Habit: Evergreen, herbaceous, slow growing perennial shrub or small tree, forming large spiny rosettes of leaves. Often freely branched.

Leaves: Depending on species. Green-bluish grey fleshy, linear to narrow-lanceolate, 0.3-1 m long, 2-5 cm wide, apex acute with terminal spine 10-20 mm long, margins finely toothed, surfaces glabrous.

Flowers: Creamy white, multi flowered panicle 1-3 m long.

Fruit: Oblong purplish capsule, 6-8 cm long, indehiscent (doesn't open on its own accord at maturity); seeds black.

Roots: Large, dense and fleshy.

Dispersal: Seed and vegetative reproduction where stem segments and leaf rosettes take root. Spread by humans, contaminated soil, machinery including excavators and garden refuse dumping.

Control: Hand or mechanical removal, cut and paint, drilling, foliar spray. All plant parts should be removed from site.

Wild Watsonia

Watsonia meriana 'bulbillifera'

Once widely, planted as an ornamental. Major environmental weed of disturbed bushland and roadsides, particularly near water. Serious weed in W.A., S.A., Vic and N.S.W.

Family: Iridaceae

Origin: South Africa

Habit: Erect perennial herb to 2 m.

Leaves: Basal linear/Sword-shaped leaves up to 0.6 m long with distinct midrib are arranged in a fan-like formation. Above ground parts die back to underground corm each autumn.

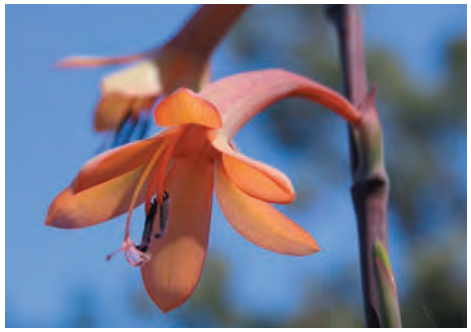
Flowers: Curved trumpet shaped salmon pink to Orange red flowers formed solitary in spike inflorescences on tall reddish unbranched stems. Spring-Summer.

Fruit: No seed set, but small bulbils are produced in clusters of up to 16 along the stem below the flowers.

Roots: Globular corm. 1-3 new corms produced each growing season.

Dispersal: Roots, bulbils and corms spread by water, humans, contaminated soil machinery including excavators, mowers, slashers, etc, and garden refuse dumping.

Control: Difficult. Hand dig / pull, ensuring all corms are removed. Extensive follow-up required. Remove and bag all bulbils. Foliar sprays available.



GRASSES

The Grasses are commonly overlooked, however, exotic grass species have invaded reserves and bushland in the Mid North Coast region where they are aggressively displacing the native ground covers. Grasses are the most successful and widespread group of plants known to humans.

Although many of these species are desirable pasture and turf grasses in home lawns, parks and playing fields, they are also problematic bushland and garden weeds because they are capable of setting copious volumes of viable seed within a short time after germination. While many of these species only invade disturbed areas with adequate light levels, some of these species are also shade tolerant, and thus can invade intact bushland areas.

The main weed species locally are featured on their own pages but below is a list of:-

Other Problematic Grasses:

Common Name:	Botanical Name
African Feather Grass:	*Cenchrus macrourus*
African Love Grass:	*Eragrostis curvula*
Bahia Grass:	*Paspalum notatum*
Broadleaf Paspalum:	*Paspalum mandiocanum*
Buffalo Grass:	*Stenotaphrum secundatum*
Chilean Needle Grass:	*Nassella neesiana*
Columbus Grass:	*Sorghum almum*
Common Couch:	*Cynodon dactylon*
Parramatta Grass:	*Sporobolus africanus*
Coolatai Grass:	*Hyparrhenia hirta*
Fine Bristled Burr Grass:	*Cenchrus brownii*
Giant Pigeon Grass:	*Setaria verticillata*
Giant Parramatta Grass:	*Sporobolus fertilis*
Giant Paspalum:	*Paspalum urvillei*
Giant Rats Tail Grass:	*Sporobolus pyramidalis*
Grader Grass:	*Themeda quadrivalvis*
Johnson Grass:	*Sorghum halepense*
Kikuyu:	*Cenchrus clandestinus*
Large Quaking Grass:	*Briza maxima*
Mossman River Grass:	*Cenchrus echinatus*
Olive Hymenachne:	*Hymenachne amplexicaulis*
Red Natal Grass:	*Melinis repens*
Rhodes Grass:	*Chloris gayana*
Slender Pigeon Grass:	*Setaria parviflora*
Spiny Burr Grass:	*Cenchrus longispinus*
Spiny Burr Grass:	*Cenchrus spinifex*
Serrated Tussock	*Nassella trichotoma*
Thatch Grass:	*Hyparrhenia rufa*
Whiskey Grass:	*Andropogon virginicus*

Bamboo - Rhizomatous

Phyllostachys spp.

Widely cultivated as a garden ornamental or for privacy. Rhizomatous bamboos almost invariably escape cultvation and invade natural areas or impact on others and owners.

Stems of *Phyllostachys* spp. have a prominent groove, called a sulcus, that runs along the length of each segment. This feature makes them one of the most easily identifiable genera of bamboo.

Family: Poaceae

Origin: China

Habit: A long-lived bamboo with erect stems usually growing 2-8 m tall, but occasionally higher. Often forms dense stands from creeping underground rhizomes that form suckers emerging into new canes.

Leaves: Stem leaves lanceolate to narrow-lanceolate, bent downward, sometimes wrinkled, quickly dying away. Foliage leaf blades lanceolate, usually 5-15 cm long, 6-22 mm wide, covered with dense soft-hairs or almost hairless.

Flowers: Rarely produced in Australia.

Fruit: Seeds rarely produced in Australia.

Roots: Robust, creeping above and below ground rhizomes.

Dispersal: Mainly by rhizome creep from deliberate plantings, contaminated soil and garden refuse dumping. Rarely if ever grows from seed.

Control: Cut and paint individual stems or foliar spray using a registered herbicide.

Visit Mid Coast Council website and look for Containing and Controlling Bamboo on the weed page.

Phyllostachys aurea

Fountain Grass
Swamp Foxtail Grass

Cenchrus setaceus
Cenchrus purpurascens

Family: Poaceae

Origin: Africa, Eastern Australia

Habit: Tufted or clump-forming perennial grass to 1 m.

Leaves: Thin leathery, arching leaves to 80 cm long, with prominent veins.

Flowers: Inflorescence spike-like and feathery, purplish, at the end of long canes. Flowering time: Summer-Winter. P. setaceum -seed heads to 30 cm long, P. alopecuroides, seed heads to 8 cm long.

Seed: Both species strongly self-seed. Some new varieties are claimed to have low seed viability.

Roots: Fibrous and shallow.

Dispersal: Seed spread by water, wind, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: In bushland situations: Hand dig (bag seed heads), foliar spray.

In the garden: cut flower heads before seeding, bag and dispose of by deep burial at a waste management centre.

A very popular landscape grass, it is now an offence to sell, propagate or knowingly distribute *Cenchrus setaceus*.

Used extensively in the Landscaping industry, for its eye-catching seed heads.

Banned in NZ. Purple Fountain Grass, is considered to be less weedy and able to be sold if labeled correctly as *Cenchrus advena 'Rubrum'*

Giant Reed

Arundo donax

Family: Poaceae

Origin: Asia and the Mediterranean region

Habit: Long-lived perennial grass growing in dense clumps up to 8 m in height. Giant Reed can grow up to 10cm a day.

Leaves: Large, elongated, alternate, lance-shaped with a pointed tip, 5-100 cm long, 1-8 cm wide.

Flowers: Feathery plumes 40 to 60 cm long are often seedless or rarely fertile. Late spring through to early winter.

Fruit: The feathery plumes break apart at maturity leaving small oblong grains 1-2 mm long enclosed in papery bracts. Grains are rarely fertile.

Roots: Robust rhizomes and fiberous roots.

Dispersal: Seed sand rhizomes spread by water, and garden refuse dumping. Reproduces mainly by creeping rhizomes and rhizome fragments. Can repoduce by seed.

Control: Hand dig / pull juvenile plants, foliar spray adult plants.
Report this plant to your local Council Weed Officer.

Giant reed has become a weed in many countries, earning a place on the IUCN, (International Union for Conservation of Nature) list of 100 of the world's most invasive species. Giant reed invades both disturbed and natural areas, even those in good ecological condition.

Giant reed often grows in wetlands or near waterways and seriously depletes water supplies, imbibing as much as 2,000 litres of water per standing metre of growth.

Karuah river, Monkerai NSW 2415

Liriope / Lily Turf

Liriope spp. especially L. spicata

Family: Asparagaceae

Origin: East Asia

Habit: Clump forming and spreading, grass like perennial lily.

Leaves: Glossy dark green, narrow strap like, dense linear foliage from 20-50 cm long and then recurves toward the ground to form rounded clumps.

Flowers: Spikes of small purple, violet or white flowers rise from the center of clumps.

Fruit: Black, pea sized berries, each containing one seed.

Roots: Dense, fibrous root mass. Some species develop fleshy tubers.

Dispersal: Seed spread by water, birds and humans via contaminated soil and garden refuse dumping. Spread locally by seed falling from plant and rhizomes.

Control: In bushland situations: Hand dig (bag seed heads), foliar spray.

Active management is necessary in all garden situations to prevent this plant from degrading bushland and riparian areas.

A very popular garden plant that is used extensively in landscaping for its hardiness in extreme conditions.

In the garden; cut flower heads before seeding, bag and dispose of in your red lid bin.

Mexican Feather Grass

Nassella tenuissima

Family: Poaceae

Origin: South America

Habit: Drooping perennial tussock forming grass which grows in dense clumps up to 0.8 m in height.

Leaves: Leaf blades to 0.5 mm wide, tightly rolled and with small serrations that can be felt when fingers are moved downward along the blade. Distinguished by hairless nodes, some usually visible; ligule membranous and hairless, to 2.5 mm long.

Flowers: Seedhead: Young seedheads held among the leaves; mature seedhead to 25 cm long; glumes purplish in the lower half to 1 cm long; callus bearded. Flowers summer.

Seed: Lemma to 3 mm long, awn narrow, straight or obscurely twice bent, 4.5–9 cm long; attached centrally to the top of the lemma.

Roots: Fibrous clump.

Dispersal: Seed spread by water, animals, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles and as an ornamental.

Control: Hand dig / pull, bag all seed heads. Foliar spray.
Report this plant to your local Council Weed Officer.

This grass is a weed in its native range. If it naturalises in Australia it potentially has a wider range than Serrated Tussock. Mexican Feather Grass escaped from cultivation in New Zealand and has become a weed that is continuing to spread.

Initially mislabelled and sold as an ornamental in Australia under the names Elegant Spear Grass, Pony Tail and Angel's Hair. Mexican Feather Grass is not known to be naturalised in Australia to date.

Palm Grass

Setaria palmifolia

Palm grass prefers damp shady sites and is a weed of urban bushland, closed forests, forest margins, riparian areas, roadsides, gardens, disturbed sites and waste areas.

Family: Poaceae

Origin: China, southern Japan, Taiwan, India and south-eastern Asia

Habit: Large, tufted, long-lived grass to 1.5 m tall.

Leaves: Large, linear-elliptical palm-like leaf blades with a pleated appearance, 27-90 cm long, 3-12 cm wide.

Flowers: Spikes are arranged in large branched drooping or erect clusters (panicles) 20-50 cm long, 2-10 cm wide.

Fruit: Grain-like, pale brown, flattened oval seeds 2 mm long, and remain enclosed within the flower spikes.

Roots: Fibrous clump.

Dispersal: Reproduces only by seed spread by water, birds, humans, contaminated soil and garden refuse dumping.

Control: Hand dig / pull, bag all seed heads. Foliar spray.

Pampas Grass

Cortaderia jubata
Cortaderia selloana

A very popular garden plant in the 1960s and '70s, Pampas Grass is an eradication species for the Hunter Region.

Family: Poaceae

Origin: South America and New Zealand

Habit: Large, long lived perennial tussock forming ornamental grass to 4.5 m tall.

Leaves: Light green, up to 2 m long and finely tapering with prominent midrib and sharp edges that will cut the skin. A rim of hairs (to 3 mm long) at leaf base (ligule).

Flowers: Large feathery heads on stems to 3 m tall. White-biege (*C. selloana*), or pink-mauve (*C. jubata*). Up to 50 plumes formed on one mature plant. Both single sex and bisexual plants exist. Summer-Winter.

Seed: Small (2 mm), short-lived, up to 100,000 seeds set per plume.

Roots: Strong fibrous root with rhizomes capable of re-shooting.

Dispersal: Seed spread by water, wind, humans, contaminated soil machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Crowning, slash and hand dig with mattock, foliar spray. Bag all seed heads. Report this plant to your local Council Weed Officer.


Cortaderia selloana


Cortaderia selloana

Wild Iris

Dietes bicolor
D. grandiflora,
D. iridoides

Dietes robinsoniana aka Lord Howe Wedding Lily is endemic to Lord Howe Island

These strap leaf plants could easily be replaced with the Australian native Mat Rush (*Lomandra longifolia*) or the Blue Flax Lily (*Dianella caerulea*)

These plants need active management in all gardens. This may be as simple as actively removing spent flower stalks prior to seed set, or as comprehensive as complete removal from gardens.

Family: Iridaceae

Origin: South Africa

Habit: Perennial rhizomatous clumps of erect sword-shaped leaves. The adult plant is approximately 1 m wide and 1 m tall.

Leaves: Leathery, sword shaped, strappy leaves 1-2 cm wide to 60 cm long; arranged in flat fans.

Flowers: Short-lived, iris-like flowers that are either white, yellow and mauve or yellow with brown spots produced Spring-Summer.

Fruit: Green, three-celled capsule containing numerous hard angular seeds 1-2 mm in diameter.

Roots: Rhizomatous and fibrous, will re-shoot from any rootstock left in soil.

Dispersal: Seed is spread by water, humans, contaminated soil and garden refuse dumping.

Control: Hand dig / pull, foliar spray.

Main photo: *Dietes bicolor*
Inset: *Dietes iridioides*.

SHRUBS

Shrubs are woody plants that form single or more commonly multi-stemmed bushes. They can range in size from 0.5 m-3 m and are quite often thorny plants that can form impenetrable thickets and/or have colourful, succulent berries that become bird and animal "lollies". Some shrubs form scramblers that, with the support of larger trees can grow taller (e.g. Lantana, Bitou Bush).

Most of the shrub weeds are escaped garden plants and the main problem arises from the irresponsible dumping of garden waste in bushland and reserves or inadequate garden maintenance allowing plants to seed and spread to nearby areas via wind and water or in the droppings of fauna that have eaten them. Escaped invasive garden plants are the biggest source of agricultural and environmental weeds, and just one escaped invasive garden plant - Lantana - now degrades over 4 million hectares of Australia's environment.

The main weed species locally are featured on their own pages but below is a list of:-

Lantana fact: First record of *Lantana camara* in Australia was in 1841 in the old Adelaide Botanic Gardens. It was first recorded in cultivation in NSW in 1843 near Sydney. The species quickly spread northward and was recorded as naturalised in the 1850's, in Brisbane in 1861, and in the Hastings and Clarence catchments of NSW in the late 1860's. In 1895 it was listed as one of the ten worst weeds in NSW and currently it has earned its Status as a Weed of National Significance, one of the twenty worst weeds in Australia.

Other Problematic Shrubs:

Common Name:	Botanical Name
Butterfly Bush:	*Buddleja davidii / Buddleja madagascariensis*
Castor Oil Plant:	*Ricinus communis*
Crofton Weed:	*Ageratina adenophora*
Elderberry:	*Sambucus nigra*
Gorse:	*Ulex europaeus*
Hawthorn:	*Crataegus monogyna.*
Mimosa:	*Mimosa pigra*
Mimosa Bush:	*Vachellia farnesiana*
Narrow-leaved Cotton Bush:	*Gomphocarpus fruticosus*
Oleander:	*Nerium oleander* (single flowering species)
Spanish Heath:	*Erica lusitanica*

Bitou Bush[1] / Boneseed[2]

Chrysanthemoides monilifera ssp. *rotundata*[1]
Chrysanthemoides monilifera ssp. *monilifera*[2]

Planted in eastern Australia between 1946-1968 to stabilise dunes after sand mining. It survives a wide range of habitats, from exposed coastal dunes to shaded forests.

Family: Asteraceae

Origin: South Africa

Habit: A sprawling woody evergreen shrubs to 2-3 m (will grow much higher if supported by taller vegetation).

Leaves: Simple, alternate, practically hairless except for a cottony down on young leaves. Bitou Bush[1]: obovate to broad-obovate or broad-elliptic 3-8 cm long and 1.5-5 cm wide, usually smooth edged or irregularly toothed. Boneseed[2]: obovate to elliptic tapering at the base 2-9 cm long and 1.5-5 cm wide very coarsely toothed and have pointed tips.

Flowers: Bright lemon yellow daisy like flower 2.5-3 cm in diameter, clustered at the ends of branches for much of the year. Main flowering period Autumn. Bitou Bush[1]: 5-13 petals. Boneseed[2]: 4-8 petals.

Fruit: Fleshy green berries 5-7 mm in diameter that turn black on ripening. The berries are produced in clusters formed at the ends of branches. Each berry contains one seed. Bitou Bush[1]: obovoid to ellipsoid, black seed. Boneseed[2]: globose to subglobose, white seed.

Roots: Generally shallow in young plants, becoming extensive with age. On dunes, roots become deep due to constant sand accruement.

Dispersal: Seed spread by birds, animals (foxes, rats), water, humans, contaminated, soil machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants, cut and paint, foliar spray adult plants.


Elizabeth Beach NSW 2428 Bitou Bush


Boneseed
Bitou


Bitou Bush

Broom Milkwort

Polygala virgata

Broom milkwort has long escaped cultivation as a garden ornamental and become naturalised on roadsides, disturbed sites, in coastal dunes, wetlands and open woodlands.

Family: Polygalaceae

Origin: Southern Africa

Habit: Erect slender shrub, usually 1-3 m high, lower branches and stem often leafless with knobbly scars from fallen leaves.

Leaves: Leaves linear or oblanceolate to narrow-elliptic, usually 10-50 mm long, 1-5 mm wide, sparsely hairy.

Flowers: Pea shaped 12-15 mm long often forming terminal panicles 4-12 cm long. Purple to pale lilac. Keel shorter than lateral petals, crested with 2 finely branched appendages 4-5 mm long.

Fruit: Capsule oblique-obovate, around 10 mm long.

Roots: Minor tap and lateral root system.

Dispersal: Seed spread by water, animals (mainly birds), ants, wind, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull, cut and paint, scrape and paint, foliar spray.

Californian Geranium / Velvet Groundsel

Roldana petasitis

Cultivated as an ornamental, occasionally naturalised in S.E. Qld, coastal districts of northern and central NSW and Southern Vic. Also naturalised on Lord Howe Island and in New Zealand.

Family: Asteraceae

Origin: Southern Mexico and Central America

Habit: Shrub or perennial herb 1.5-2 m high, softly hairy.

Leaves: Circular to broad-ovate, 10-20 cm long and wide, margins palmately lobed with 9-13 lobes.

Flowers: Yellow; multi-headed hairy corymbs; 4-6 petals 8-10 mm long. Winter flowering.

Fruit: Seeds brown to black, 2.5-4 mm long, each possessing a (pappus)tuft of white silky hairs that aid its spread by wind.

Roots: Generally shallow and fibrous with a tap root.

Dispersal: Seed spread by humans, wind, water, animals, contaminated soil, machinery including excavators, vehicles. Seeds may be blown long distances.

Control: Hand dig / pull, cut and paint, foliar spray.

Canadian Goldenrod

Solidago altissima ssp altissima

Garden escapee widely naturalised in southern and eastern Australia on roadsides, wasteland and disturbed areas.

Family: Asteraceae

Origin: Eastern Canada and eastern USA

Habit: Stoloniferous, shrub with a hairy or rough texture, 0.8-2 m high. Stems are unbranched below inflorescences.

Leaves: Sessile, alternate, narrow, lance-shaped, tapered at both ends 2-12 cm long, 4-20 mm wide, margins entire to toothed, upper surface densely rough, lower surface hairy or rough.

Flowers: Dense, elongated, pyramid-shaped clusters, 5–25 cm long, Each flower head consists of 9 to 17 yellow ray flowers surrounding fewer than 10 yellow disk flowers.

Fruit: Seeds orange, 0.8-2 mm long, each possessing a (pappus)tuft of white silky hairs that aid its spread by wind.

Roots: Extensive, very deep and fibrous with 50-125 mm long rhizomes emerging at the base of stems. Rhizomes are often reddish.

Dispersal: Seed spread by water, wind, animals, humans, contaminated soil, machinery including excavators, mowers, slashers, vehicles. Seeds may be blown long distances along linear roadways.

Control: Hand dig / pull juvenile plants, cut and paint, foliar spray adult plants.

Cassias - Winter Senna[1], Popcorn Senna[2], Smooth Senna[3]

Senna pendula var. glabrata[1];
S. didymobotrya[2];
S. septemtrionalis[3]

A similar species, *Senna acclinis* is a threatened native plant on the Mid North Coast of NSW.

Family: Fabaceae

Origin: South America[1]; Africa[2]; Mexico[3]

Dispersal: Seed spread by humans, birds, animals (foxes, rats), contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants, cut and paint, scrape and paint, basal bark or foliar spray adult plants.

Winter Senna[1]: Medium sized at 2-4 m tall.

Leaves: Compound, 3-6 pairs of obovate leaflets with rounded tips, 20-50 mm long; 10-20 mm wide with prominent yellowish coloured margins.

Flowers: Bright yellow, to 3 cm borne in abundance in loose clusters.

Seed pods: Relatively straight, hairless and almost cylindrical, occasionally with one or more constrictions, 10-20 cm long; 8-12 mm diameter.

Popcorn Senna[2]: Medium sized at 2-3 m tall.

Leaves: Compound with 7-15 pairs of oblongish, opposite leaflets, pubescent underneath, 15-60 mm long; 6-20 mm wide.

Flowers: Bright yellow with dark persistent upper bracts, borne in erect, spike-like clusters 10-40 cm long carried well above the leaves.

Seed pods: oblong, flat, 7-10 cm long, 15-20 mm wide, glabrescent depressed between the seeds.

Smooth Senna[3]: Medium sized at 1-3 m tall.

Leaves: Compound, 3-5 pairs of ovate, opposite leaflets with pointed tips, 45-70 mm long; 15-35 mm wide.

Flowers: Bright yellow, to 3 cm borne in loose elongated clusters.

Seed pods: Straight, hairless and almost cylindrical 7-8 cm long 10-15 mm diameter.


S. pendula var. glabrata


S. pendula var. glabrata


S. didymobotrya


S. didymobotrya


S. pendula var. glabrata


S. septemtrionalis


S. septemtrionalis

Coral Berry

Ardisia crenata

A common indoor plant due to it low light requirements, Ardisia has escaped cultivation and is recorded as being weedy from the Mullumbimby area to Sydney.

Family: Primulaceae

Origin: NE India, China to Japan

Habit: Evergreen, compact shrub 1-2 m high with a bushy head.

Leaves: Dark glossy green above, paler and dull below, elliptic to slightly oblanceolate, 5-12 cm long, 1.5-3.5 cm wide; margins serrated and crinkled.

Flowers: Inflorescence is a many-flowered, umbel. Flowers rather inconspicuous, white and starry, petals 4 mm long. Summer - Autumn.

Fruit: Scarlet red globose berry, 5-8 mm diam. Long lasting usually persisting through Winter.

Roots: Shallow and fibrous.

Dispersal: Seed spread by birds, animals (foxes, rats), water, humans, contaminated soil, machinery including excavators, vehicles and garden refuse dumping.

Control: Hand dig / pull, scrape and paint, foliar spray.

Coral Creeper

Barleria repens

New and emerging species in the Hunter Region. Coral creeper needs to be removed from public and private gardens.

Family: Acanthaceae

Origin: Africa.

Habit: A scrambling herb usually less than 70 cm tall but recorded at up to 2m in height within natural areas. A weed of urban bushland and disturbed forests, with potential to colonise and dominate riparian vegetation, roadsides, and disturbed areas.

Leaves: The shiny, dark green, opposite leaves have entire margins The younger stems are green and sparsely hairy, that become more woody with age. These stems tend to produce roots where they touch the ground, enabling this plant to spread quite quickly.

Flowers: The showy tubular flowers have five spreading lobes and are mostly produced in late summer and autumn (i.e. from February to April). These flowers are borne in the leaf forks and have two large green leafy bracts at their bases.

Fruit: The fruit is a small club-shaped capsule that splits open when mature

Roots: *Barleria repens* (Coral Creeper) has the potential to cause environmental damage by colonising riparian zones and forming dense thickets that displace native vegetation and prevent movement of animals.

Dispersal: Reproduces by seed and vegetatively through rooting stems. Its seeds may be propelled up to a few metres from the parent plant through a mechanims of explosive release from their fruit. They may be further dispersed by water, animals and in mud. Propagules are commonly spread from gardens into bushland via dumped garden waste and through roadside slashing.

Control: Cut/stump, foliar spray, stem scrape.
Report this plant to your local Council Weed Officer.

Cotoneaster

C. franchetii, C. glaucophyllus, C. pannosus, C. horizontalis

At least nine species of Cotoneaster have naturalised in Australia. There are numerous native alternatives available which will attract birds to the garden.

Family: Rosaceae

Origin: China, Asia

Habit: Evergreen shrub or small tree to 4 m high usually with arching branches.

Leaves: Varying with species but, usually elliptic to ovate 1.5-4 cm wide, green above paler or silvery below. Young growth often woolly.

Flowers: White clusters. Each flower about 8 mm wide, 5-petalled. Flower stalk densely hairy. Spring and summer.

Fruit: Red fleshy fruit (pome) 6-10 mm long, almost globe-shaped. Containing 2 yellowish, flattened seeds.

Roots: Substantial woody tap and lateral root system.

Dispersal: Seed spread by humans, birds, animals, water, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping. The main problem is that people plant Cotoneaster to attract birds to the garden.

Control: Hand dig / pull juvenile plants. Cut and paint or scrape and paint mature plants.


C. franchetii


C. pannosus


C. glaucophyllus

Firethorn

Pyracantha coccinea, P. angustifolia, P. foruneana, P. crenulata, P. rogersiana.

Firethorn seeds need to be chilled (stratified) before they will germinate so they may become more of a problem in cooler climate areas such as Bulahdelah to Gloucester.

Family: Rosaceae

Origin: Southern Europe to Western Asia

Habit: Scrappy, large, evergreen shrub 3-6 m high and 3.5 m wide armed with sharp thorns at the ends of the arching branches.

Leaves: Varying with species but usually dark, glossy green, ovate to lance shaped to 3.5 cm long sometimes with a toothed margin.

Flowers: Clusters of small white flowers appear as corymbs up to 5 cm across in spring in masses.

Fruit: Varying with species. Green, round flattened berries 0.6 cm in diameter ripen to shades of red, orange, or yellow in Autumn/Winter.

Roots: Substantial woody tap and lateral root system.

Dispersal: Seed spread by birds, humans, animals water, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping. The main problem is that people plant Firethorn to attract birds to the garden.

Control: Hand dig / pull juvenile plants. Cut and paint or scrape and paint mature plants.


P. angustifolia


P. angustifolia

Giant Devils Fig

Solanum chrysotrichum

Mainly found in the coastal districts of eastern Australia from the far north coast of NSW to S.E. Qld.

Family: Solanaceae

Origin: Mexico and Central America

Habit: upright and spreading shrub or small tree 1.5-4 m high with prickly stems and leaves.

Leaves: Very large, 9-35 cm long; 5.5-30 cm wide, usually bearing 7-13 deep lobes. Densely hairy underneath the mid-veins sometimes have some small prickles 2-6 mm long. Prickles are absent from the upper surfaces of adult leaves, but may be present on the leaves of younger plants.

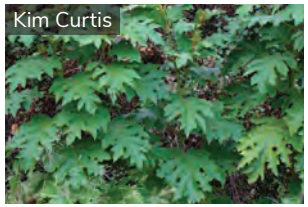
Flowers: Star-shaped, white 3-4.5 cm across, arranged in branched clusters containing up to 50 or more flowers. Autumn - spring.

Fruit: Globular berry 10-15 mm diam., turn from green to yellow or orange-yellow as they mature.

Roots: Substantial tap root that gives rise to many laterals. Will re-shoot from any root stock left in ground.

Dispersal: Seed spread by humans, animals (possums, bats & birds), water, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut and paint, scrape and paint, basal bark or foliar spray. Report this plant to your local Council Weed Officer.


Kim Curtis


Kim Curtis


Kim Curtis

Groundsel bush

Baccharis halimifolia

Groundsel Bush is currently under an eradication program in the Hunter Region. Contact Council to discuss how you can discharge your biosecurity duty.

Family: Asteraceae

Origin: Eastern USA

Habit: An upright and bushy shrub or small tree with many upward growing branches. It usually grows 1-3 m tall, but occasionally reaches up to 7 m in height.

Leaves: The alternately arranged leaves are 2.5v-7 cm long and 1-4 cm wide, loosely diamond shaped to egg-shaped in outline (i.e. ovate) and have coarsely toothed margins.

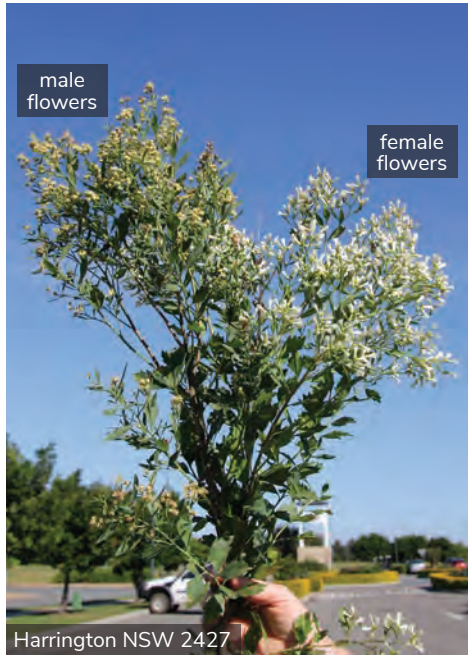
Flowers: Male and female flower-heads are borne on separate plants. The male flower-heads are cream to yellowish, while the female flower-heads are white and have a fluffy appearance.

Fruit: Seeds are 1.1-1.7 mm long, have 8-10 lengthwise ribs and are topped with a silky tuft of long white hairs 6-12 mm long. They are straw-coloured to brown in colour and hairless.

Dispersal: This plant spreads vegetatively from fragmented rhizomes.

Control: For information on the management of this species see the following resources: NSW WeedWise and https://hunter.lls.nsw.gov.au/__data/assets/pdf_file/0005/1142726/Groundsel-Bushel.pdf
Report this plant to your local Council Weed Officer.


Johns River NSW 2443



Harrington NSW 2427

Indian Hawthorn

Rhaphiolepis indica
R. umbellata

A commonly cultivated garden plant especially in coastal areas due to its ability to tolerate drought conditions and salt laden winds. Less weedy or sterile cultivars may be available.

Family: Rosaceae

Origin: Asia, especially India and southern China

Habit: Drought hardy, salt tolerant evergreen, low growing, spreading shrub to 1-1.5 m high.

Leaves: Dark green on top, paler below; thick, leathery, serrated, ovate to elliptic or obovate, 3-7 cm long, 5-30 mm wide, pubescent or hairy at first, sharply toothed.

Flowers: Panicle of star shaped flowers 10 mm diam. Petals are white or pink, with five petals, and may be lightly fragrant.

Fruit: Blue-black pome fruits each containing 1 or 2 seeds.

Roots: Extensive lateral, woody and relatively deep.

Dispersal: Seed spread by birds, animals, humans, contaminated soil, machinery including excavators, vehicles and garden refuse dumping.

Control: Hand dig / pull, cut and paint, foliar spray.

Lantana

Lantana camara (common)
L. montevidensis (Spreading)

Garden varieties while 'sterile', may cross pollinate wild varieties and alter the gene pool hampering biological control efforts.

Family: Verbenaceae

Origin: South America

Habit: An evergreen, prickly, square stemmed, scrambling woody thicket forming shrub 2-4 m high. Will climb to 10 m if supported.

Leaves: Pale to mid green, ovate, arranged in opposite pairs, roughly hairy, finely toothed margins and highly scented.

Flowers: Rounded heads to 3 cm wide of numerous small tube-shaped flowers of various colours including pink, red, yellow, orange and white produced all year. Common Lantana-usually multi coloured combinations; Spreading Lantana-usually solid colours.

Fruit: Clusters of succulent green berries ripening black to 5 mm wide, each containing one seed.

Roots: Extensive lateral, woody and relatively shallow. Will re-shoot from any root stock left in the ground.

Dispersal: Vegetation & seed spread by birds, water, animals, humans, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut and paint, foliar spray, basal bark.

Mickey Mouse Plant

Ochna serrulata

Ochna has naturalised in bushland throughout the Mid North Coast, as the copious supply of seeds from suburban gardens is readily available to foraging birds.

Family: Ochnaceae

Origin: South Africa

Habit: A dense evergreen shrub 2-4 m high with rough stems. Bark has numerous lenticels (corky spots) protruding outwardly.

Leaves: Alternately arranged oblong to lanceolate leaves to 6 cm long, glossy green on both surfaces, slightly paler below. Leaf margins finely serrated and often wavy, new growth is reddish-brown in colour.

Flowers: Yellow with 5 petals in Spring-Summer. Green calyx turns red after petals drop and fruit matures.

Fruit: Succulent green berries to 8 mm across, in clusters of 4-6. Ripen to black in Summer. Each berry contains a single seed.

Roots: Strong tap-root formed, with characteristic kink that renders it susceptible to breaking. Will reshoot form any root stock left in ground.

Dispersal: Seed spread by humans, birds, animals, water, contaminated soil machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Scrape and paint, basal bark.
*Very hard to control.

Montpellier Broom / Cape Broom

Genista monspessulana

Also known as Cape Broom, this plant was widely cultivated as a garden ornamental and hedging plant, particularly in temperate regions.

Family: Fabaceae

Origin: Northern Africa, southern Europe and western Asia

Habit: An upright and spreading shrub 1-3 m tall with pubescent stems.

Leaves: Tri-foliolate; leaflets obovate to oblanceolate, pubescent, 5-20 mm long, 2-10 mm wide.

Flowers: Pea shaped, yellow, mostly 8-12 mm long in clusters of 3-7, at the ends of stems and lateral branches. Spring and summer.

Fruit: Pod, narrow-oblong, 15-25 mm long, flat, densely hairy with 6-7 black long-lived seeds 2.5 mm long.

Roots: Extensive with a stout taproot and laterals.

Dispersal: Seedpods can eject seeds up to 3 m from the plant. Seed spread by water, animals, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull. Cut and paint or scrape and paint, foliar spray.
Report this plant to your local Council Weed Officer.

Myrtle-leaf Milkwort

Polygala myrtifolia

Polygala has been widely cultivated as a garden ornamental, particularly in the temperate regions of Australia.

Family: Polygalaceae

Origin: Southern Africa

Habit: Erect and broadly spreading shrub, usually 1-2.5 m high, densely leaved; stems smooth or with fine curled hairs.

Leaves: Alternately arranged, thick and leathery, rounded tips and entire margins. 1-5 cm long and 6-15 mm wide, usually oval in shape.

Flowers: Pea shaped at the tips of the branches, 10-20 mm long, pink to pale purple/ lilac. Keel longer than lateral petals and crested with 2 multi-branched appendages 4-6 mm long throughout year, mostly September-October.

Fruit: Rounded capsule 8-10 mm across with a small 1 mm wide wing along one side. It contains several broadly egg-shaped seeds 4-5 mm long that are covered with scattered hairs.

Roots: Substantial tap and lateral root system.

Dispersal: Seed spread by water, animals (mainly birds), ants, wind, humans, contaminated soil and garden refuse dumping.

Control: Hand dig / pull. Cut and paint or scrape and paint, foliar spray.

Winda Woppa NSW 2423

Parthenium weed

Parthenium hysterophorus

Causes contact dermatitis and respiratory problems in humans and livestock.

Parthenium can be spread though pelleted feeds. Check with your responsible merchant.

Family: Asteraceae

Origin: North and South America

Habit: Erect taprooted annual up to 2 m high, rough, pubescent; mostly singlestemmed and much branched above; glandular-punctate or resin-dotted.

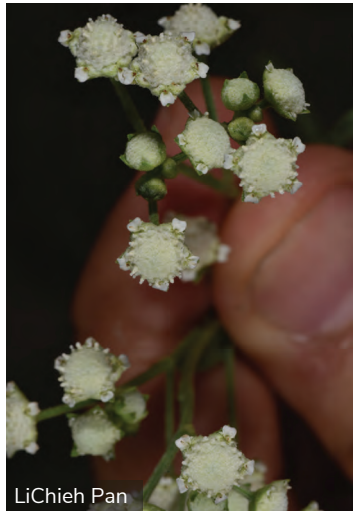
Leaves: Pale green, lower leaves are 5–20 cm long and deeply divided, upper leaves less divided and smaller covered with soft, fine hair alternate on the stem. Most leaves die after the plant flowers

Flowers: Creamy-white, 4–6 mm in diameter at the tips of the stems, made up of clusters of tiny florets in the centre, star-like with 5 distinct ‘points’ (each point has a tiny floret), in clusters that look a bit like ‘baby’s breath’

Dispersal: Parthenium weed spreads by seeds. Seeds close to the soil surface will germinate readily. Buried seeds can remain dormant for many years. Parthenium weed can germinate, flower, and set seed in four weeks (in favourable conditions) produces seeds continuously over a full summer season until it dies produces up to 15,000 seeds each year per plant (dense infestations can produce up to 700 million seeds per hectare). Seeds are introduced mainly on or in: harvesting machinery, hay, grain and organic chicken feed heavy vehicles that have picked up mud in Queensland. Seeds can also be moved in contaminated soil. When an infestation is established the seed is spread locally along waterways, in flood waters and by animals and whirlwinds.

Control: Hand dig / pull wearing PPE. Cut and paint or scrape and paint, foliar spray. Report this plant to your local Council Weed Officer.

LiChieh Pan



LiChieh Pan

Pigeon Berry / Golden Dewdrop

Duranta erecta cultivars

This new vogue plant to the Mid North Coast has become naturalised in some areas. It requires active management in all gardens.

Family: Verbenaceae

Origin: West Indies, Central and South America

Habit: A straggly evergreen shrub 1-5 m high with drooping branches and sharp spines.

Leaves: The ovate leaves are 2.5-7.6 cm long and arranged on the stem in pairs opposite each other, or in whorls of three.

Flowers: Showy inflorescences bloom almost all year long in terminal or lateral racemes up to 15 cm long. The individual flowers are tubular with five petals, white, light blue, violet or purple, and spread out at the mouth about 1cm across.

Fruit: Spherical yellow berry to 1.5 cm in diameter borne in showy hanging bunches.

Roots: Substantial tap and lateral root system.

Dispersal: Seed spread by humans, birds, animals, water, contaminated soil machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull. Cut and paint or scrape and paint, foliar spray.


Duranata 'sheenas Gold'


Duranata 'Geisha Girl'


Duranata 'Geisha Girl'

Scotch Broom

Cytisus scoparius

Introduced to Australia in the 1800s as an ornamental. A major woody weed of temperate areas, especially the Barrington Tops, NSW. There are other hybrids and species with different coloured flowers that may also naturalise.

Family: Fabaceae

Origin: Native to Europe

Habit: Large, Erect, perennial, woody, semi-deciduous shrub to 4 m tall.

Leaves: Sparse, tiny grey-green leaves with three leaflets; older plants may be almost leafless.

Flowers: Numerous yellow, Pea-like, 1.5-2.5 cm long late winter to summer.

Fruit: Seedpods 2-7 cm long and about 1 cm wide containing up to 22 seeds per pod but often less. Seed greenish to brown. Seeds are released explosively from ripe pods.

Roots: Extensive with a stout taproot and laterals that sucker readily.

Dispersal: Seed spread by water, animals, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles) and garden refuse dumping. Seedpods can eject seeds up to 4 m from the plant.

Control: Hand dig / pull. Cut and paint or scrape and paint, foliar spray.
Report this plant to your local Council Weed Officer.


Barrington Tops NSW 2422


Mark Tull


Mark Tull

Siam Weed

Chromolaena odorata

Young Siam weed looks similar to blue Billy goat weed (Ageratum spp.), but mature plants have a growth habit similar to lantana. Some graziers have referred to Siam weed as 'white lantana'.

Family: Asteraceae

Origin: Central and South America

Habit: In the open, Siam weed grows as a dense tangling bush to 2-3 m high. However, it can scramble up to a height of 20 m with support. Multiple stems develop from the crown of the plant. The stems are smooth, round and fairly brittle, becoming woody at the base when old.

Leaves: Soft, green, hairy and triangular in shape 5-12 cm long, with forward facing serrations and a distinctive three-vein 'pitchfork' like pattern. New growth exhibits a purple tinge.

Flowers: Terminal flat-topped clusters of white to pale lilac heads of flowers. Masses of pale lilac flowers that appear white from a distance and turn a darker lilac when mature. Winter.

Fruit: Seeds brown to black, 4–5 mm long, each possessing a (pappus)tuft of white silky hairs that aid its spread by wind.

Roots: Fibrous and shallow. Develops a swelling at the junction of the stem and root, which is referred to as the basal ball.

Dispersal: Seed & fragments spread by water, wind, animals, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles. Seeds may be blown long distances.

Control: Hand pull / dig, making sure to exlude all contact with soil or else regrowth will occur. Cut or scrape and paint, foliar spray.
Report this plant to your local Council Weed Officer.


Qld, DAFF


Colin Wilson


Colin Wilson

Telegraph weed

Heterotheca grandiflora

Telegraph weed is a new and emerging species to the midCoast at Yacaaba Peninsula Hawks Nest.

Family: Asteraceae

Origin: Native to North America

Habit: A short-lived herbaceous plant that gives of a strong odour. It develops a basal rosette during the early stages of growth and eventually produces upright stems that can reach up to 2 m in height.

Leaves: The alternately arranged leaves are grey-green in colour, are densly hairy and are somewhat sticky to the touch, producing a pungent odour.

Flowers: Small bright yellow daisy-like flower 15-22 mm across are borne at the tips of the branches.

Fruit: Numerous 'seeds' can be produced by each flower-head. Each of these tiny seeds (2-5 mm long) is topped with a ring of several yellowish-brown to reddish coloured hairs (4-7 mm long).

Roots: Fibrous and shallow.

Dispersal: This species reproduces only by seed. The hairs on these small seeds assist wind dispersal, allowing them to be spread significant distances by wind.

Control: Hand pull / dig, foliar spray.
Report this plant to your local Council Weed Officer.

Tropical Soda Apple

Solanum viarum

Family: Solanaceae

Origin: N.E. Argentina, S.E Brazil, Paraguay and Uruguay

Habit: An aggressive and very prickly, perennial shrub 1-2 m high. It invades open to semi-shaded areas including pastures, forests, riparian zones, roadsides, recreational areas, horticulture and cropping areas.

Foliage of TSA is unpalatable to livestock, reducing carrying capacities. Prickles on this plant can restrict grazing, and thickets can create a physical barrier preventing access to shade and water. The plant contains solasodine which is poisonous to humans.

Leaves: Ovate; green on both sides; 10-20cm long and 6-15cm wide bearing 5-7 lobes; covered with short hairs and white prickles. Prominent veins are cream-coloured on both sides of the leaves.

Flowers: White, star shaped with 5 petals, 1.5-2 cm wide, occuring in clusters of 3-6. Autumn to winter.

Fruit: Mature fruit are yellow and golf ball-size 2-3 cm in diameter. Immature fruit are pale green with green marbling, and resemble immature water melons. Palatable to animals.

Roots: Substantial tap root that gives rise to many laterals. Will re-shoot from any root stock left in ground.

Dispersal: Seed spread by water, animals (cattle, birds, feral pigs, deer) contaminated hay, contaminated soil.

Control: Hand pull / dig, making sure that all roots and stem fragments are removed. Cut or scrape and paint, foliar spray.
Report this plant to your local Council Weed Officer. **State Control order**.


Greg Egan

TREES

The tree weeds are often the most obvious, simply because they occupy a large area in an ecosystem. Because of the sheer size many of these plants can attain, it makes them one of the most costly and difficult group of plants to manage.

The main weed species locally are featured on their own pages but below is a list of:-

Other Problematic Trees:

Common Name	Botanical Name
Athel Pine	*Tamarix aphylla.*
Cadaghi Gum	*Corymbia torelliana*
Cecropia	*Cecropia* spp.
Coffee	*Coffea arabica*
Cootamundra Wattle	*Acacia baileyana*
Ice Cream Bean	*Inga edulis*
Jacaranda	*Jacaranda mimosifolia*
Leucaena	*Leucaena leucocephala*
Loquat	*Eriobotrya japonica*
Mount Morgan Wattle	*Acacia podalyriifolia*
Night Scented Jasmine	*Cestrum nocturnum*
Norfolk Island Hibiscus	*Lagunaria patersonia*
Paper mulberry	*Broussonetia papyrifera*
Prickly Acacia	*Vachellia nilotica*
Princess Tree	*Paulownia fortunei, P. tomentosa*
Pond Apple	*Annona glabra*
Rhus Tree	*Toxicodendron succedaneum*
Tagasaste	*Chamaecytisus palmensis*
Tree of Heaven	*Ailanthus altissima*
Tung Oil Tree	*Vernicia fordii*
Willows	*Salix* spp.

Olive fact: Olea europaea and ssp. was an early introduction to Australia and is now naturalised widely throughout southern regions, especially South Australia. Its fruit are readily dispersed by birds and foxes. Between 1995 and 2005 over 7 million trees were planted and with expansion of popularity the potential for further dispersal into bushland has also increased. European olives are widely available for sale in nurseries. The only possible reduction in its spread depends on modern breeding techniques which could produce radically improved cultivars with sterile seeds as well as superior fruit. Unfortunately the incentive for research to achieve this lies almost certainly in the promise of higher oil yield rather than one of reduced weed potential.

The African olive is currently the main species naturalised in NSW. and, is still sold in nurseries. It has escaped from ornamental hedges in home gardens.

African Tulip Tree

Spathodea campanulata

Not yet widely naturalised in NSW, but it is cultivated throughout parts of the MidCoast area as a garden plant and street tree.

Recent research indicates African tulip trees may be **toxic to native bee species.** Please consider replacing with alternative species.

Family: Bignoniaceae

Origin: Native to tropical western Africa

Habit: A large upright tree to 25 m tall with a spreading crown and a slightly buttressed trunk

Leaves: The large compound leaves (up to 50 cm long) have 7-17 leaflets. They are usually oppositely arranged along the stems. Leaflets are broadly oval or egg-shaped and have entire margins. They have a sparse covering of soft hairs and the extension of the leaf stalk is usually covered in brownish coloured hairs.

Flowers: The large and very showy orange flowers are tulip shaped and arranged in dense clusters at the tips of the branches. Individual flowers are borne on short stalks that are covered in brownish-coloured hairs.

Fruit: Large pod split when ready to reveal numerous papery seeds that are very light and surrounded by a see-through membranous wing.

Roots: A tree that invades disturbed sites, waste areas, forest margins and rainforests in tropical and sub-tropical regions. It favours wetter habitats and is especially common along creeks and gullies.

Dispersal: This plant reproduces mostly by seeds, which are light and usually released from a significant height. Larger trees may also spread via root suckers, particularly when they are damaged. Seeds are most commonly wind dispersed, but they may also be spread by water and in dumped garden waste.

Alexander palm

Archontophoenix alexandrae

Alexander palm is not locally native to to NSW so the similiar **Bangalow palm** (below) should be planted in local gardens instead.

Origin: Native to the coastal parts of northern and central Queensland.

Habit: A key feature of the Alexander palm is its capacity to tolerate inundation This survival quality has made the palm a dominant species in tropical Queensland. Easily identified by the silvery undersurface of the fronds.

Alexander and Bangalow palms are known to cross pollinate creating a seedling known as the Alebang. This may eventually pollute the species natural gene pool in NSW.

Bangalow palm

Archontophoenix cunninghamiana

Bangalow palm is the local native species to NSW, so should be planted in local gardens instead of the above species.

Family: Arecaceae

Origin: Native to central east coast of Australia.

Habit: Grows in or near rainforest in coastal districts, mostly in moist sites beside creeks and on alluvial flats; north from Batemans Bay.

Angels Trumpet

Brugmansia suaveolens
Brugmansia x candida

Brugmansia, *Datura* and other tropane-bearing plants are potentially very dangerous and can cause serious mental and physical reactions or death if consumed.

Family: Solanaceae
Origin: The Andies, Northern South America
Habit: Untidy, evergreen shrub or small tree to 4.5 m high, branching low from a short trunk.
Leaves: Dull green, oval, velvety leaves with wavy margin are arranged alternately, but confined to the branch tips.
Flowers: Large, white, pale violet, pale orange or peach, highly night scented, pendulous, trumpet shaped flowers to 30 cm long are borne in the Summer.
Fruit: Green, egg-shaped to narrowly oval berry, up to 20 cm long containing many seeds 8-12 cm across.
Roots: Woody, branching and relatively shallow.
Dispersal: Vegetation & seed spread by humans, birds, animals (foxes, rats), water, contaminated soil machinery including excavators, mowers, slashers, vehicles car tyres etc) and garden refuse dumping.
Control: Hand dig / pull juvenile plants. Various foliar spray methods, drill-injection; frilling, cut and paint, basal bark.


B. x candida


B. x candida


B. x candida

Awabuki Sweet Viburnum

Viburnum odoratissimum var. awabuki

New and emerging weed species on the MidCoast. Consider replacing with a less invasive garden species.

Family: Adoxaceae
Origin: Taiwan and Japan
Habit: Shrub or small tree, usually, 1-4 m tall, but occasionally up to 6 m in height. It develops brownish-grey bark on its older stems while its younger stems are green or reddish-tinged and hairless. Its has a dense spreading habit, becoming more open, multibranched with a rounded canopy when mature.
Leaves: Oppositely arranged leaves are borne on green or reddish stalks 1-3 cm long and are hairless. Leaves are relatively large (10-20 cm long and 4-9 cm wide) with irregularly toothed to almost entire margins and usually have pointed tips. New foliage is often a bronze colour.
Flowers: Spring and Summer. Large numbers of sweet-smelling, Small white flowers are produced in clusters at the tips of the branches in spring.
Fruit: Small egg-shaped berries turn from green to red or blackish in colour as they mature. They are fleshy but contain single hard seed in the centre.
Dispersal: Bird Lollys - birds and other animals eat the berries. Seeds may also be spread into bushland areas in dumped garden waste.
Control: Complete removal, cut stump, basal bark, stem injection or foliar spray.


Cape Hawk NSW 2428

Black Locust

Robinia pseudoacacia & cv's.

Black locust is naturalised in WA, SA, Vic, NSW and Qld. It is still available at nurseries in NSW.
A rootstock is utilised for the grafting of cultivars and may sucker and dominate when disturbed or stressed.

Family: Fabaceae

Origin: North America

Habit: Deciduous large shrub or small tree to 15 m, bearing many large rose like prickles.

Leaves: Compound 8-15 cm long, pinnate with 11-21 leaflets 2-5 cm long, 1-2.5 cm wide with entire margins.

Flowers: Sweetly perfumed, white, pink or purple pea-like flowers borne in racemes 10-15 cm long. Spring.

Fruit: Small brown glabrous pods 3-8 cm long, 10-15 mm wide with several hard black seeds.

Roots: Strong root system capable of coppicing and suckering when disturbed or stressed.

Dispersal: Seed spread by water, animals, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles car tyres etc) and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling; cut and paint, basal bark. Difficult to control.

Broad Leaf Pepper Tree

Schinus terebinthifolius

Broad leaf pepper tree has been in cultivation in Australia for almost 150 years and is recorded in nursery catalogues in Victoria in the mid 1860s.

Family: Anacardiaceae

Origin: Brazil, Argentina and Paraguay

Habit: Small tree up to 6-10 m tall and 4.5 m wide bearing a short trunk with multiple branches. Dioecious i.e. there are separate male and female trees.

Leaves: Compound, pinnate with 3-9 leaflets Leaflets to 3-8 cm long, mid to dark green, Main stem red tinged, peppery aroma when crushed.

Flowers: Inflorescence a panicle. Flowers small, 5 petals, cream to white in clusters at ends of branches. Intermittent Spring-Autumn.

Fruit: Round drupe, green ripening to glossy red, about 0.5 cm across.

Roots: Strong root system capable of coppicing and suckering.

Dispersal: Seed spread by humans, water, animals (foxes, rats & birds), contaminated soil machinery including excavators, mowers, slashers, vehicles car tyres etc) and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling; cut and paint, basal bark. Difficult to control. Report this plant to your local Council Weed Officer.

Boolambayte NSW 2423

Camphor Laurel

Cinnamomum camphora

Planted in eastern Australia in 1854 as a shade and street tree in school yards, playgrounds, cemeteries, parks and agriculturally. It has naturalised from the Nowra region to north Queensland, in areas of high annual rainfall.

Family: Lauraceae

Origin: China, Japan, Taiwan, Vietnam and Cheju-do (Korea)

Habit: A large, hardy evergreen spreading tree 20-30 m in height. Grey-brown, textured bark, becoming fissured with age.

Leaves: Leaves 5-11 cm long, ovate, glossy on upper surface; dull and chalky on lower surface. 3 main veins arise from petiole joint at base of leaf. Strong camphor smell when crushed.

Flowers: Inflorescence a panicle. Flowers Small, white, produced in clusters in Spring.

Fruit: Glossy green spherical berry to 1cm wide, ripen to black in late autumn. Each berry contains one seed.

Roots: Strong root system capable of coppicing and suckering.

Dispersal: Seed spread by Humans, birds, water, animals (foxes, rats), contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling; cut and paint, basal bark. Difficult to control.

The sanctuary, Forster 2428

Chinese Holly / Mahonia

Berberis lomariifolia

Mahonia can form dense thickets which exclude other understorey vegetation. Assessed as a very high weed risk, the priority is to prevent its establishment as a weed in north-east NSW.

Family: Berberidaceae

Origin: Asia; Yunnan, Sichuan, northern Burma and east to Taiwan

Habit: Tall, narrow shrub or small tree, up to 4-5 m high with a single stem or many upright branches and interesting fissured bark.

Leaves: Compound; holly-like; borne in tufts at the top of the stems. Made up of 14-21 pairs plus one terminal, long, shiny, narrow leaflets bearing many coarse spinose teeth on the margins.

Flowers: Fragrant yellow flowers are borne in dense terminal racemes up to 25cm long and in clusters of up to 20, Winter to Spring.

Fruit: Green ovoid or globose berries that turn frosted blue as they ripen. Spring.

Roots: Strong root system that may be capable of suckering.

Dispersal: Seed spread by animals (mainly birds), humans, contaminated soil and garden refuse dumping. Can reproduce vegetatively.

Control: Hand dig / pull juvenile plants. Drill-injection; frilling; cut and paint. Report this plant to your local Council Weed Officer.

Andel Früh

Plant Iust.com

Stefano Bolognini

Chinese Rain Tree / Golden Rain Tree

Koelreuteria elegans ssp. formosana
K. paniculata; K. bipinnata

Beginning to naturalise on roadsides and in parks & gardens of the Mid North Coast of NSW.

Family: Sapindaceae

Origin: Taiwan

Habit: A tree usually growing 5-12 m tall, but capable of reaching up to 25 m high.

Leaves: Twice-compound, alternately arranged leaves are very large (25-60 cm long and 15-44 cm wide) Leaves are borne on stalks carrying 8-17 leaflets. The leaflets (5.5-10 cm long and 1.3-4 cm wide) have entire to irregularly toothed margins and long pointed tips.

Flowers: Large, branched, clusters of small yellow flowers with four or five petals, sepals and stamens on each.

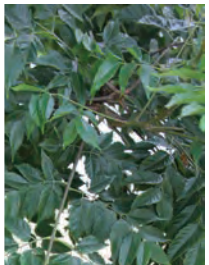
Fruit: Present during late summer and autumn, the bright red to deep rose-purple, inflated papery capsules are three-sided and somewhat oval in shape. Gradually fading to pink and eventually brown as they mature, each capsule contains six seeds, two in each compartment.

Dispersal: Generally spread to new areas by deliberate cultivation. The seeds are blown from the trees still contained in their light and papery capsule and potentially spread by water. They may also spread in dumped garden waste, while birds may also be a factor in their dispersal.

Control: Cut stump stem injection and basal bark, may require arborist.








Chinese Tallow Tree /Chinese Tallowood

Triadica sebifera

Still a popular park and Autumn foliage tree, Chinese Tallowood's are naturalised in many areas of NSW. The milky sap in both the leaves and the berries is poisonous to animals.

Family: Euphorbiaceae

Origin: China and Japan

Habit: A hardy deciduous medium tree to 7 m in height. Grey-brown, textured bark, becoming fissured with age.

Leaves: Diamond shaped, abruptly pointed at the tip, simple, alternate and 5-8 cm long. In Autumn the leaves turn brilliant shades of scarlet, orange, yellow and maroon.

Flowers: Yellowish green catkins on the branch tips produced in Spring.

Fruit: Three-lobed capsule with one seed in each lobe. Seeds are covered with vegetable tallow, a white waxy coating.

Roots: Strong tap root system capable of suckering.

Dispersal: Seed spread by humans, Birds, water, animals, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling; cut and paint. Difficult to control.
Report this plant to your local Council Weed Officer.




Cockspur Coral Tree

Erythrina crista-galli

Family: Fabaceae

Origin: Brazil, Bolivia, Paraguay, Argentina and Uruguay

Habit: Deciduous tree to 5-9 m taking on a gnarled appearance with age, bark is covered with large curved prickles.

Leaves: Compound trifoliate leaves with prickles on stems.

Flowers: Very large spikes 30-40 cm long of bright scarlet or coral-red pea like bird attracting flowers in Spring-Summer.

Fruit: Long green pods age brown and open with a twist revealing large, hard, bean like seeds.

Roots: Substantial tap and lateral root system capable of invading plumbing pipes. Will sucker from root fragments left in ground. Branches should not be left on the ground as they can re-grow into new plants.

Dispersal: Vegetation & seed spread by humans, water, birds, animals, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling, cut and paint. Very difficult to control.

Commonly cultivated, becoming widely naturalised, especially in coastal districts along drains & streams. Council recommends the removal of this species.

Has the potential to invade natural areas such as hind-dunes, rainforests, wetlands creeks, and saltmarshes.

Rainbow Flat NSW 2430

Coral Tree

Erythrina x sykesii

Family: Fabaceae

Origin: Uncertain

Habit: Deciduous tree 10-15 m high by 15-20 m wide with a dense rounded canopy, short stout truck and ascending branches with smooth greenish bark, and rose like thorns. Very brittle branches are shed when windy.

Leaves: Compound; tri-foliolate; leaflets triangular to obovate, 7-20 cm long, 7-12 cm wide mid green.

Flowers: Racemes usually 8-30 cm long and erect bearing up to 30-scarlet red pea like flowers. Most of year but mainly Winter - Spring.

Fruit: Nil.

Roots: Substantial tap and lateral root system capable of invading plumbing pipes. Will sucker from root fragments left in ground. Branches should not be left on the ground as they can re-grow into new plants.

Dispersal: Vegetation spread by water and humans via garden refuse dumping.

Control: Hand dig / pull small plants. Various foliar spray methods also drill-injection; frilling; cut and paint, basal bark. Very difficult to control.

Grows readily from fallen branches, and wood chips should not be used as mulch unless composted. Has the potential to invade natural areas such as hind-dunes, rainforests, wetlands, creeks, and saltmarshes.

Gauva - Cherry / Strawberry

Psidium cattleyanum var. cattleyanum

Cherry guava has been ranked as one of the world's 100 worst invasive species by the International Union for the Conservation of Nature (IUCN).

Family: Myrtaceae

Origin: South America

Habit: A shrub or small tree usually 1-3 m tall, but occasionally growing up to 10 m in height, baring characteristic grey-green to reddish-brown mottled bark.

Leaves: Simple, opposite, dark shiny green, thick & leathery, elliptical to obovate, 4-8 cm long & 2.5-4.5 cm wide with shortly pointed tips.

Flowers: Single, white, 15-25 mm wide with five petals, numerous stamens & borne in the upper leaf forks, during spring & summer.

Fruit: Rounded, fleshy berries 2-3.5 cm wide, turn from green to purplish-red when ripe (rarely yellow), during autumn and winter. They contain numerous seeds and a whitish pulpy flesh.

Roots: Substantial tap and lateral root system capable of suckering.

Dispersal: Seed spread by water, animals (pigs, bats & birds), humans, contaminated soil and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Drill-injection; frilling; cut and paint, basal bark, foliar spray.

Green Cestrum

Cestrum parqui

Prized for its sweet night scented flowers, Green Cestrum was widely planted as a garden hedge in 19th century Australia. All vegetative parts are toxic to sheep, cattle, pigs, poultry and horses. Even dead sticks can prove fatal to livestock.

Family: Solanaceae

Origin: Central and South America

Habit: Large woody evergreen shrub 3-4 m high.

Leaves: Dull grey/green colour above paler below, alternate, narrow and lance shaped, 2-7 cm long, usually 1-5 cm wide; the leaf stem (petiole) can be up to 1 cm long. Leaves have an unpleasant odour when crushed.

Flowers: Loose terminal clusters of greenish to bright yellow, tubular flowers to 3 cm long with 5 lobes. Very sweetly night scented. Flowers most of year.

Fruit: Green egg-shaped berry ripening to black, about 10-15 mm in length, seeds dark green or brown, 3–4 mm long.

Roots: Substantial tap root that gives rise to many laterals. Suckering habit. Will re-shoot from any root stock left in ground.

Dispersal: Seed spread by humans, birds, water, animals, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut and paint, scrape and paint, basal bark or foliar spray.

Himalayan Ash

Fraxinus griffithii

Commonly cultivated as a street and garden tree, particularly in the warmer parts of eastern Australia. Beginning to spread from cultivation and locally showing its potential as a weed with the carpets of seedlings produced after seeding.

Family: Oleaceae

Origin: Indian Sub-continent, China, Taiwan and S.E. Asia

Habit: Small to medium evergreen tree up to 10 m tall.

Leaves: Compound; bright green and glossy; 10-25 cm long with 5-11 leaflets. Leaflets are 2-10 cm long and 1-5 cm wide with entire margins and pointed tips.

Flowers: Small white flowers are arranged in branched clusters 10-25 cm long borne at the tips of the stems. Summer.

Fruit: Winged seeds 2.5-4 cm long and 4-5 mm wide that start green, turn pinkish and then brown as they mature. Summer - Autumn.

Roots: Substantial tap and lateral root system. Capable of spreading laterally via root suckers.

Dispersal: Seed spread by humans, wind, water, animals contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut and paint, scrape and paint basal bark or foliar spray.

Honey Locust

Gleditsia triacanthos

MidCoast Council has been implementing an eradication program with LandCare on the Wallamba River.

Introduced as a fodder tree and cultivated as an ornamental. Found in dense thickets along watercourses on the central & mid north coast, western slopes and tablelands of northern NSW and in S.E. Queensland.

Family: Fabaceae

Origin: Central & Eastern North America

Habit: Spreading deciduous medium to large tree 15 m to 25 m, bearing single or branched clusters of large savage thorns 2-10 cm's long.

Leaves: Compound, 15-20 cm long, usually bipinnate with 2-7 pairs of pinnae and 12-30 pinnules per pinnae; leaflets elliptic to ovate, 10-35 mm long, 5-12 mm wide, sparsely toothed.

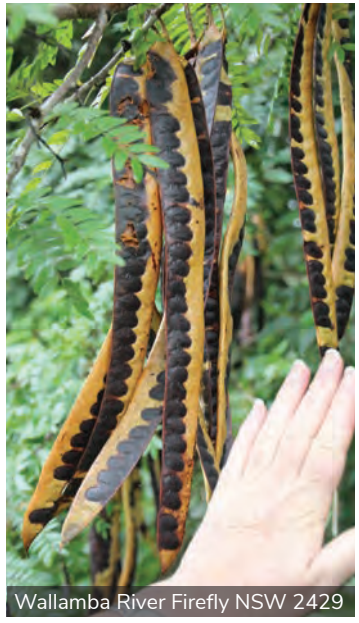
Flowers: Fragrant, brownish-yellow pubescent pea-like flowers borne in racemes 10-15 cm long in spring as leaves develop or after leaves appear.

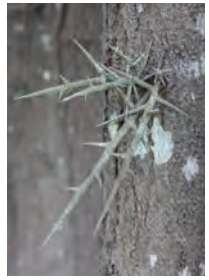
Fruit: Pod slightly sickle shaped, 15-40 cm long, 3-4 cm wide, dark brown not opening at maturity, containing 15-25 hard brown seeds.

Roots: Strong root system capable of coppicing and suckering when disturbed or stressed.

Dispersal: Seed spread by humans, water, birds, animals, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling; cut and paint. Difficult to control.
Report this plant to your local Council Weed Officer.


Wallamba River Firefly NSW 2429



Japanese hackberry / Chinese Celtis

Celtis sinensis

Naturalised in damp areas, particularly along banks of waterways, in S.E. Qld and to a lesser extent in N.E. N.S.W. A problematic environmental weed in these areas. Commonly found on clay soils. Seeds rarely survive for more than two years.

Family: Cannabaceae

Origin: China, Korea and Japan

Habit: Deciduous tree to 15 m to 20 m high with Smooth, silvery grey bark covered with lenticels (small corky spots).

Leaves: Ovate; Mature leaves 4-10 cm long, 2-4.5 cm wide, shiny, dark green and mostly hairless above, paler below with hairs on veins. Upper leaf edges only coarsely toothed, leaf bases asymmetrical.

Flowers: Inflorescences of few tiny, flowers bearing 4 creamy petals, 4 purplish sepals and 4 stamens. Flowers late winter to early spring.

Fruit: Globe-shaped, succulent, 6-8 mm wide, on stalk 0.4-1 cm long, green aging to orange/red in summer-autumn.

Roots: Strong tap root system capable of suckering.

Dispersal: Seed spread by humans, birds, animals, water contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling; cut and paint, basal bark. Difficult to control.
Report this plant to your local Council Weed Officer.

Japanese walnut

Juglans ailantifolia

Weed alert for the MidCoast area. Replace with less invasive spp.

Family: Juglandaceae

Origin: It is native to Japan. It is a weed around Mt Irvine in the Blue Mountains in the Greater Sydney region. In 2021 plants were found north west of Port Macquarie on the North Coast and these plants are under an eradication program. It has become a weed in New Zealand.

Habit: Japanese walnut can grow in a range of soils though it prefers moist well drained soils. It grows best in sunny sites and is frost tolerant. It can grow along waterways in disturbed forests and shrublands in pastures along roadsides.

Leaves: Leaves are up to 90 cm long and made up of 4–8 pairs of opposite leaflets with a single leaflet at the end. Leaflets are 6–18 cm long and 3–8 cm wide, hairy underneath especially on the veins sparsely serrated along the edges.

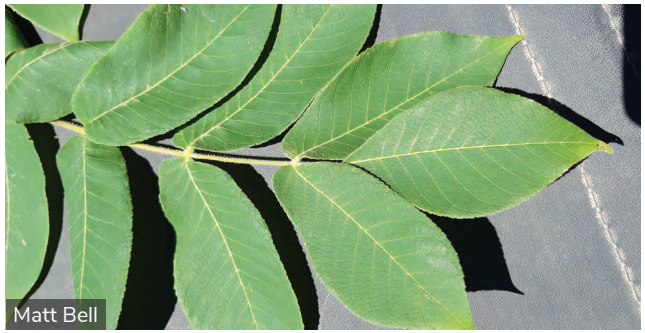
Flowers: Each tree has both male and female flowers. Male flowers are yellow-green and in clusters about 15 cm long that hang down from the stems. Female flowers are clustered in groups of 5–22 flowers on upright spikes which are swollen near the stem, green with small petals and obvious pinky-red stigmas and covered with purple hairs.

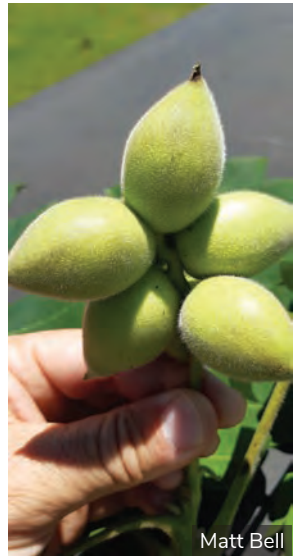
Fruit: green ripening to rust-coloured, round and contain hard, thick-shelled nuts 25–40 mm in diameter, covered in a furry husk when young and in clusters of up to 22 fruit.

Dispersal: Seeds are spread by water, animals and by people dumping garden waste

Control: Hand dig / pull juvenile plants. Various foliar spray methods also drill-injection; frilling; cut and paint., Basal bark.


Matt Bell


Matt Bell


Matt Bell

Mock orange

Murraya paniculata

Monitor your murraya for fruiting after flowering. Replace any heavy seeders with a lesser fruiting variety.

Family: Rutaceae

Origin: Native to southern China, Taiwan, the Indian sub-continent, south-eastern Asia and northern Australia

Habit: A bushy shrub or small tree usually growing 2-4 m tall, but occasionally reaching up to 7 m in height

Leaves: Its alternately arranged leaves are once-compound (6-11.5 cm long) with 3-9 glossy leaflets

Flowers: Its fragrant flowers are borne in clusters at the tips of the branches or in the upper leaf forks. These white flowers (10-18 mm long) have five petals that are curved backwards

Fruit: Its small egg-shaped or oval fruit (about 10 mm long) turn from green to orange or bright red in colour as they mature.

Roots: A weed of closed forests, open woodlands, watercourses (i.e. riparian areas), native bushland, forest margins, pastures, disturbed sites, waste areas, gardens and roadsides in the wetter tropical and sub-tropical regions of Australia.

Dispersal: This species reproduces by seed. These seeds are most commonly spread by birds and other animals that eat the brightly-coloured fruit. They may also be dispersed in dumped garden waste.

Olives

Olea europaea ssp. cuspidata - African Olive[1]

Olea europaea ssp. europaea - European Olive[2]

The main problem is that humans neglect trees or fail to harvest all fruit, leaving it for birds and animals to eat and spread.

Family: Oleaceae

Origin: Mediterranean region of Europe, Portugal, South Africa

Habit: Much branched evergreen tree 5-15 m high with drooping branchlets. Thin greyish bark covered by protruding lenticels.

Leaves: Simple, narrow, opposite, lance-shaped, 5-10 cm long and up to 2 cm wide with prominent midrib, dark green on upper surface; African Olive1 - yellowish-brown on lower surface, often with a hooked tip. European Olive2 - silvery-grey on lower surface, pointed tip.

Flowers: Small white to cream or greenish tubular flowers forming in racemes at branch tips. Spring-Summer.

Fruit: Green berries that ripen to purplish-black in summer. African Olive1 - round 1-2 cm in diameter. European Olive2 - oval shaped 2-5 cm long.

Roots: Substantial tap root that gives rise to many laterals. Will re-shoot from any root stock left in ground.

Dispersal: Seed spread by humans, birds, animals (foxes, rats), contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Drill-injection; frilling; cut and paint, basal bark, foliar spray. Bag and dispose of all fruit.
Report African Olive to your local Council Weed Officer.

Palm - Canary Island

Phoenix canariensis

This species is naturalised in many parts of Australia. Also naturalised overseas in Europe, N.W. Africa, Mexico, southern USA and New Zealand.

Family: Arecaceae

Origin: Canary Islands

Habit: Palm-tree to 15-20 m high; trunk single, erect, stout, to at least 1 m diam and topped with a large canopy of feathery plumes that persist for many months after death.

Leaves: Spreading, to 6 m long, 50 cm wide, petiole very short; leaflets stiff, deeply channelled, to 40 cm long and 3 cm wide, basal leaflets short, thick and modified to extremely spines.

Flowers: Many yellowish flowers in panicles form the inflorescence in Summer.

Fruit: Masses of bright yellow to reddish, ellipsoid “date-like” fruits 1.5–2.3 cm long, fleshy layer is rather thin.

Roots: Substantial fibrous root system capable of uplifting paths and garden edging.

Dispersal: Seed spread by water, animals (bats, rats & birds), humans, contaminated soil and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut down older trees bag all seeds.

Jepto

Piece of Eden Garden Blog

Palm - Cocos

Syagrus romanzoffiana

Once widely used in landscaping because of their hardiness, they are now commonly being removed because of the abundance of messy seed that are produced and spread by bats.

Family: Arecaceae

Origin: Brazil, Paraguay and northern Argentina

Habit: Palm tree 15-20 m high with a smooth straight grey trunk ringed with evenly spaced leaf scars and topped with a large canopy of feathery plumes that persist for many months after death.

Leaves: Dark glossy green fronds to 4.5 m have a double rows of leaflets to 1 m long and to 3 cm wide that droop to the ground.

Flowers: Many cream flowers in panicles form the inflorescence in Summer.

Fruit: Masses of bright orange oval “date-like” fruits (actually miniature coconuts) to 2.5 cm hang in heavy bunches to 2 m long that drop to the ground and rot.

Roots: Substantial fibrous root system capable of uplifting paths and garden edging.

Dispersal: Seed spread by humans, birds, animals (bats, rats), water, contaminated soil and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut down older trees bag all seeds.

Pine Trees
Radiata Pine[1] / Slash Pine[2]

Pinus radiata[1]
Pinus elliottii[2]

Pines have become widley naturalised on the mid north coast of NSW, particularly near forestry plantations.

Family: Pinaceae

Origin: California[1], SE U.S.A. to Central America, West Indies[2]

Dispersal: Seed spread by wind, water, birds, humans, contaminated soil garden refuse dumping and deliberate plantings.

Pinus pinaster is another wildling pine impacting biodiversity in the Hunter region.

Control: Hand dig / pull seedlings, low cut and fell juvenile or adult plants.

Radiata Pine[1]: Large tree to 30m with dark, often deeply ridged bark.

Leaves: Needle-like, relatively short and twisted, 8-15 cm long, usually borne in groups of three (rarely in twos).

Male cones: Cylindrical 1-1.5 cm long and clustered at the tips of the branches.

Female cones: Large, asymmetrical, 7-17 cm long, borne on short curved stalks.

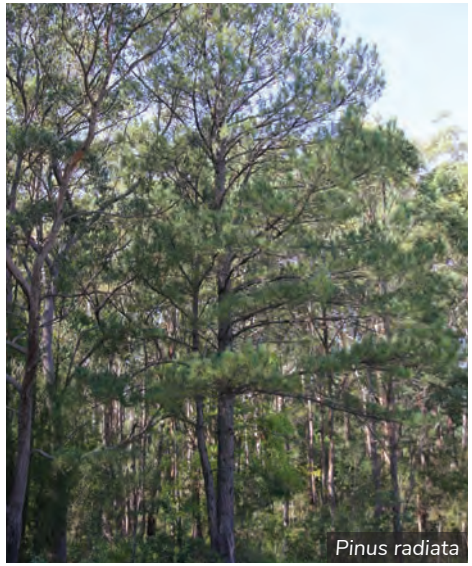
Slash Pine[2]: Tall tree to 30m with horizontal branches high on the trunk and grey to reddish-brown bark that sheds in thin scales.

Leaves: Needle-like, relatively long at 15-30 cm and borne in groups of two or three (usually in twos).

Male cones: Purplish, cylindrical, 2.5-6 cm long are and borne in clusters.Female cones: Large, symmetrical, 7-20 cm long, borne on short stalks.


Pinus elliottii


Pinus elliottii


Pinus radiata

Plume Poppy

Bocconia frutescens

This species is an emerging weed in the MidCoast region. Due to its prolific seed production and long lived seed bank it could be an ongoing issue if not controlled early.

Family: Papaveraceae

Origin: Central and South America and the West Indies

Habit: Largest member of the poppy family. With age, the plant becomes thick and bushy, producing multiple stems and growing to a small tree to 6 meters.

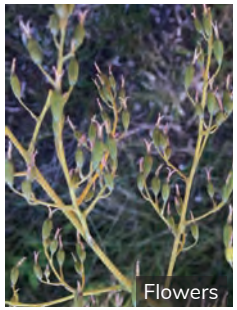
Leaves: It has large lobed leaves, up to 45cm long and 20 cm wide that are clustered at the branch tips. Leaves are discolourate having a green upper and silvery under surface.

Flowers: Large sprays of insignificant flowers, lack petals but have sepals each up to a centimetre long. The anthers dangle from the flower centre by their filaments.

Fruit: One mature plant can produce more than 300,000 seeds per annual fruiting season. Large sprays of fleshy red-black seeds that are attractive to birds and can be spread long distances.

Dispersal: Generally spread to new areas by deliberate cultivation. Seeds, which are attractive to birds can spread long distances. Also spread by water, animals, contaminated soil and garden refuse dumping.

Control: Seedlings and juveniles can be pulled by hand; larger plants root firmly and require cut and paint methods.
Report this plant to your local Council Weed Officer.


Flowers


Fruit


Kiwarrak NSW 2430

Privet - Large Leaf

Ligustrum lucidum

Was widely cultivated as a hedge plant, now a widespread weed of coastal bushland and wasteland, especially along streams; also extending to the western slopes of NSW and adjacent areas in Old.

Family: Oleaceae

Origin: China, Korea & Japan

Habit: Evergreen shrub or small tree to 12 m high.

Leaves: Ovate to elliptic or narrow-ovate, 4-13 cm long, 3-5 cm wide, dark green above, paler below with entire margin.

Flowers: Inflorescence is a dense, panicle 15-25 cm long. Flowers fragrant with 4 white petals, each 3-5 mm long; Spring–Summer.

Fruit: Berry 6-8 mm long, purple-black and succulent when ripe. Seeds dark-brown, finely pitted, about 5 mm long. Fruits in autumn and winter.

Roots: Substantial tap and lateral root system capable of invading plumbing pipes.

Dispersal: Seed spread by birds (mainly Currawongs), animals humans, water, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull small plants. Various foliar spray methods also drill-injection; frilling; cut and paint, basal bark. Relatively easy to control.

Tinonee NSW 2430

Privet - Small Leaf

Ligustrum sinense

Often still cultivated as a hedge. Widely naturalised, especially along fence lines in cleared areas, wasteland, stream banks and margins of rainforest.

Family: Oleaceae

Origin: China, Hong Kong, Taiwan, Laos and Vietnam

Habit: Evergreen to semi-deciduous (in cooler areas) shrub to small tree 3-5 m high.

Leaves: Elliptic to ovate, mostly 2-5 cm long, 1.5-2.5 cm wide.

Flowers: Inflorescence is a dense, panicle 5–10 cm long. Flowers fragrant with 4 white petals each 3-5 mm long with pink/purple pollen. Late winter to spring.

Fruit: Berry ovoid 4-7 mm long, black and succulent when ripe; seeds 3-4 mm long.

Roots: Substantial tap and lateral root system capable of invading plumbing pipes.

Dispersal: Seed spread by birds (mainly Currawongs), animals humans, water, contaminated soil, machinery including excavators, slashers, vehicles and garden refuse dumping.

Control: Hand dig / pull small plants. Various foliar spray methods also drill-injection; frilling; cut and paint, basal bark. Relatively easy to control.

Wootton NSW 2423

Rattlepod (Giant)

Crotalaria beddomeana

Mature seedpods produce a rattle sound when shaken, which is where the plant gains it's common name Rattlepod. This plant is easily confused with Wild Tobacco Tree before it flowers. Rattlepods are considered poisonous to livestock.

Family: Fabaceae

Origin: India

Habit: Erect shrub or small tree, 2-5 m high; stems densely pubescent.

Leaves: Simple, ovate or elliptic, 6-13 cm long, 33-80 mm wide, upper surface glabrous (smooth & glossy), under surface densely greyish pubescent (hairy).

Flowers: Large; pea-like; varying shades of yellow in racemes up to 15 cm long; Winter - Spring.

Fruit: Pod 50–70 mm long, glabrous; seeds c. 5 mm long, glossy, minutely papillose Pods often present throughout the year.

Roots: Substantial tap and lateral root system.

Dispersal: Seed spread by water, animals, humans, contaminated soil (earth moving equipment etc) and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut and paint, scrape and paint or foliar spray. Report this plant to your local Council Weed Officer.

Boomerang Beach NSW 2428

Red cestrum

Cestrum elegans

All Cestrum spp can escape the garden.

Toxic to animals they are a threat to biosecurity. The berries are bird lollies

Family: Solanaceae

Origin: A weed of rainforest gaps and margins, wetter open forests, roadsides, gullies, urban bushland and riparian vegetation. Native to Mexico

Habit: A shrub usually growing 1-3 m tall, but occasionally reaching 5 m in height.

Leaves: The alternately arranged leaves are simple and borne on stalks 5-15 mm long. These leaves are egg-shaped in outline, oval or somewhat elongated with entire margins and pointed tips. They are densely hairy when young, but quickly lose most of their hairs.

Flowers: Tubular flowers are arranged in branched clusters at the tips of the branches or in the upper leaf forks. Each of these densely clustered flowers is borne on a very short stalk about 1 mm long. The flowers have five green sepals (4.5-8 mm long) that are fused together at the base into a tube. Their red, reddish-pink, pink or purplish coloured petals are also fused together into a hairless tube 15-23 mm long with five small petal lobes at the tip. The flowers also have five stamens and an ovary topped with a style and stigma. The stamens consist of a stalk 9-12 mm long topped with an anther. Flowering occurs mainly during winter and spring.

Fruit: The fruit is a rounded berry 8-13 mm across. These fruit turn from green to dark pink or dull red as they mature and contain about eight seeds.

Dispersal: Dispersed by birds and dumping of garden waste.

Control: Basal Bark, cut stump, foliar spray.

Chuck b.

Dick Culbert

Tipuana / Rosewood

Tipuana tipu

Widely cultivated as a garden and street tree, particularly in the warmer regions of Australia. It has occasionally also been cultivated as a shade and fodder tree

Family: Fabaceae

Origin: Native to South America.

Habit: A fast-growing and spreading tree quickly reaching 15 m tall, and capable of growing up to 30 m or more in height.

Leaves: The leaves are once-compound with several paired leaflets and a single terminal leaflet. These leaves (with 9-29 leaflets) are alternately arranged along the stems and borne on stalks 15-20 mm long. The leaflets are oval (i.e. elliptic) or oblong in shape (2.5-7 cm long and 1.3-2.3 cm) with a rounded or notched tip.

Flowers: The flowers are borne in elongated clusters (5-11 cm long) in the upper leaf forks and at the tips of the branches. They are yellow or yellow-orange in colour, pea-shaped and about 2 cm across. Each flower has a large upper petal with reddish-coloured markings at its base, two side petals, and a folded lower petal that is actually made up of two fused petals. They also have five small green sepals (7-9 mm long), that are fused together into a tube at the base, and ten stamens

Fruit: The winged fruit (i.e. samara) contain one to three reddish seeds. It has a hard rounded base and a large thin wing (4-7 cm long) that causes the fruit to rotate as it falls to the ground. These fruit turn from green to pale brown in colour as they mature

Roots: A weed of roadsides, disturbed sites, waste areas, open woodlands, riparian vegetation and urban bushland in sub-tropical and tropical regions.

Dispersal: This species reproduces only by seed. The seeds are readily dispersed by wind and are also spread by water.


Tatters


Jan Smith


Forest and Kim Starr

Umbrella Tree

Schefflera actinophylla

First introduced to NSW as a potted indoor plant, it has now become naturalised in many areas of the coast. Sometimes epiphytic on rainforest trees. Native of Nth Qld.

Family: Araliaceae

Origin: Northern Queensland

Habit: A straggly often multi-stemmed, open perennial tree to 10 m, with dense foliage confined to the ends of trunks.

Leaves: Bright, glossy green, compound, leaves on stalks up to 50 cm long. Leaflets to 30 cm long, arranged in a palmate whorl (umbrella-like).

Flowers: Small red flowers in long sprays at top of plant, radiating from stem apex. Multiple flower spikes produced at the crown of each trunk. Flowers Summer-Autumn.

Fruit: Dark red, to 0.5 cm long each containing a single seed.

Roots: Substantial tap and lateral root system capable of uplifting buildings and invading plumbing pipes. Will reshoot from root fragments left in ground.

Dispersal: Seed spread by water, animals (mainly birds) and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut and paint or scrape and paint. Grows readily from stem pieces, so all cut plant material should be removed from site.

Velvet Tree / Miconia

Miconia calvescens

Miconia is a serious weed in Hawaii (a.k.a. 'the purple plague') & French Polynesia (a.k.a. 'the green cancer') where it has devastated local native flora & fauna.

Family: Melastomataceae

Origin: Central to South America - Mexico - Brazil

Habit: Small to medium evergreen tree growing up to 15 m tall and bearing very large showy leaves with a purple underneath.

Leaves: Very large; 17-40 cm long and 7-25 cm wide (occasionally up to 1 m long) oval in shape with pointed tips. Green upper surfaces and striking purple underneath with three distinct veins that run from the base to the tip of the leaf.

Flowers: Numerous small, short lived, fragrant flowers with five white or pinkish petals, 2-3 mm long, 1-2 mm wide, are borne in large clusters 20-50 cm long at the tips of the branches.

Fruit: Small fleshy berries 6-7 mm across that turn bluish, black or purple as they mature, are produced in large clusters. Each berry contains around 50-230 tiny seeds.

Roots: Substantial tap and lateral root system.

Dispersal: Seed spread by water, animals (mainly birds), humans, contaminated soil (mud on shoes, machinery etc) and garden refuse dumping.

Control: Hand dig / pull juvenile plants. cut and paint, scrape and paint, basal bark or foliar spray. Report this plant to your local Council Weed Officer.


Qld DAFF


Qld DAFF


Qld DAFF

Wattle - Crested

Paraserianthes lophantha ssp. lophantha

Widely naturalised in many parts of eastern NSW, Vic, Tas, S.A. and on Norfolk Island. Also naturalised beyond its native range in W.A.

Family: Fabaceae

Origin: Western Australia

Habit: Erect shrub to medium-sized tree usually growing 2-8 m tall, but occasionally reaching up to 10 m in height.

Leaves: Twice-compound (bipinnate) leaves 15-30 cm long with have 7-14 pairs of branchlets. Each leaf branchlet bears 15-40 pairs of small leaflets (4-11 mm long).

Flowers: Yellow - greenish-yellow with numerous prominent stamens 6-8 mm long, arranged in elongated clusters 4-8 cm long, borne singly or in pairs in the upper leaf forks.

Fruit: Flattened pods 6.5-12 cm long and 1.5-3 cm wide; each containing 6-12 dark brown or black oval seeds 6-8.5 mm long, 4.5-5.5 mm wide and 3-4 mm thick.

Roots: Substantial tap and lateral root system.

Dispersal: Seed spread by water, animals, humans, contaminated soil (earth moving equipment etc) and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Drill-injection; frilling; cut and paint, basal bark, foliar spray.


Booti Booti NSW 2428

Wattle - Golden Wreath

Acacia saligna

Golden Wreath Wattle self sows and suckers freely and should not be used for landscaping or planting in areas near bushland in the eastern states.

Family: Fabaceae

Origin: Western Australia

Habit: Erect or spreading tree or shrub 2-8 m high with weeping new growth. Life-span of only 10-20 years.

Leaves: Simple, relatively narrow, 7-30 cm long and 2-20 mm wide green or bluish-green in colour, either straight or sickle-shaped.

Flowers: Round, bright or golden yellow fluffy balls, borne in small clusters 9-12 mm across that are arranged into larger elongated compound clusters of 25-55 flowers, or rarely up to 75. July–September.

Fruit: Pods are flat, long and narrow, straight to strongly curved, and slightly constricted between seeds, 5-14 cm long, 4-6 mm wide.

Roots: Substantial tap and lateral root system capable of suckering.

Dispersal: Seed spread by water, animals (ants and birds), humans, contaminated soil (earth moving equipment etc) and garden refuse dumping. The long-lived seeds can remain dormant in the soil for more than a decade.

Control: Hand dig / pull juvenile plants. Drill-injection; frilling; cut and paint, basal bark, foliar spray.


Frewins Walk, Forster 2428

Wild Tobacco Tree

Solanum mauritianum

Widely naturalised and very common in the coastal districts of Queensland and New South Wales. Also present in South Australia, some parts of Victoria, on Lord Howe Island and Norfolk Island.

Family: Solanaceae

Origin: South America

Habit: A straggly, open perennial shrub to 5 m tall. All parts of the plant are covered with silvery-grey hairs.

Leaves: Large, alternately arranged, grey-green, elongated ovate shape 20-30 cm long, with prominent mid-vein.

Flowers: Small purple-white flower with five petals and yellow stamens, to 1cm diameter. Flowers Spring-Summer.

Fruit: Clusters of large succulent berries to 2 cm ripening from green to yellow in summer.

Roots: Substantial tap root that gives rise to many laterals. Will re-shoot from any root stock left in ground.

Dispersal: Seed spread by birds, animals (possums, bats, humans, contaminated soil machinery including excavators, mowers, slashers, vehicles car tyres etc) and garden refuse dumping.

Control: Hand dig / pull juvenile plants. Cut and paint or scrape and paint, foliar spray.


Minimbah, NSW 2312

Yellow Bells

Tecoma stans

Popular because of its magnificent floral display, Yellow Bells is on the increase on roadsides and disturbed bushland. Easy to grow, they are often sold at local fetes or backyard traded.

Family: Bignoniaceae

Origin: Central and South America. Mexico, Peru and Equador

Habit: Evergreen many branched shrub or small tree 4-7 m high.

Leaves: Compound leaves to 8-25 cm long, comprised of 5-13 leaflets. Leaflets are toothed and pointed, 2.5-10 cm long and 8-30 mm wide.

Flowers: Large clusters of showy, bright yellow trumpet-shaped flowers in Spring-Summer. Formed at the branch tips and forks.

Fruit: Green bean like seed pods aging brown, 10-22 cm long x 20 mm wide produced from spring to autumn, each containing numerous winged seeds.

Roots: Substantial tap root that gives rise to many laterals.

Dispersal: Seed spread by humans, birds, water, wind, contaminated soil, machinery including excavators, mowers, slashers, vehicles and garden refuse dumping.

Control: Hand Dig juvenile plants. Cut and paint or scrape and paint. Bag and dispose of all seed pods.

AQUATIC WEEDS

Aquatic weeds are plants that invade watercourses, dams and wetlands. These weeds are extremely detrimental to the aquatic environment, where they choke waterways, alter oxygen levels and reduce light penetration.

Most of the water weeds have originated from backyard fish ponds or home aquariums and have been accidentally released into the environment. They have been further spread by deliberate seeding of waterways by black market plant traders and accidentally spread between farm dams via fish, yabbie and eel traps or as a contaminant with back yard traded water lilies.

Water weeds may be spread either by vegetation from plant fragments and/or by seed depending on the plant.

Once established water weeds are difficult to eradicate and may require a combination of controls methods including registered herbicides, biological treatments as well as physical or mechanical removal. Water weed control is time-consuming, expensive work and usually requires many follow-up sessions.

The key to water weed control is early detection and to prevent their movement into uninfested waterways. If you think you might have any of the following water weeds, contact Council's Weeds Officer for expert identification, advice and assistance in preparing an effective control plan.

The main weed species locally are featured on their own pages but below is a list of:-

Other Problematic Aquatic Plants:

Common Name:	Botanical Name
Arrowhead:	*Sagittaria montevidensis*
Anchored Water Hyacinth:	*Eichhornia azurea*
Bog moss:	*Mayaca fluviatilis*
East Indian Hygrophila:	*Hygrophila polysperma*
Elodea:	*Elodea canadensis*
Eurasian Water Milfoil:	*Myriophyllum spicatum*
Horsetails:	*Equisetum* spp.
Hydrilla:	*Hydrilla verticillata (Native)*
Hydrocotyl	*Hydrocotyle ranunculoides*
Japanese knotweed:	Reynoutria japonica
Lagarosiphon:	*Lagarosiphon major*
Olive hymenachne:	*Hymenachne amplexicaulis*
Peruvian Primrose:	*Ludwigia peruviana*
Ruellia:	*Ruellia simplex, R. squarrosa*
Smart weed:	*Persicaria* spp. *(Natives and exotics)*
Spongeplant:	*Limnobium spongia*
Water Caltrop:	*Trapa natans*
Water Primrose:	*Ludwigia peploides ssp. montevidensis (Native)*
Water Soldier:	*Stratiotes aloides*
Yellow Burrhead:	*Limnocharis flava*

Alligator Weed

Alternanthera philoxeroides

Family: Amaranthaceae

Origin: South America

Habit: Perennial with mostly hairless surface stems that root at the nodes stoloniferous and underground stems producing shoots & roots (rhizomatous). Can form dense mats in or out of water.

Leaves & Stems: Glossy green lance shaped leaves arranged in opposite pairs on hollow stems. Terrestrial plants can have reddish stems.

Flowers: White, cylindrical to globe-shaped, papery, pom-pom like heads on stalks to 9 cm long that arise from the leaf-stem junction. Summer.

Fruit: Viable seed not recorded in Australia.

Roots: Extensive underground rooting system to 1m deep.

Dispersal: Vegetation spread by water, humans, animals (live stock), contaminated soil, earth moving machinery, boats and turf, Also spread by its misguided use as a culinary herb.

Control: Mechanical manual removal, foliar spray.
Report this plant to your local Council Weed Officer. Biosecurity zone

This plant is often confused with other species of *Alternanthera* (Joy weeds), Water Primrose (*Ludwigia* spp.), or Smartweeds, (*Persicaria* spp.) Difficult to identify in dense vegetation and when not in flower.

One of Australia's worst aquatic weed threats. Adapted to growing on damp land, occasionally flooded land, in shallow water (rooted in the substrate), attached to the bank (in deep water) or free floating. Will survive for a few days in sea strength salinity and thrive in 10% sea strength (3,500 mg/l) saline water.

Blue Pickeral

Pontederia cordata

Family: Pontederiaceae

Origin: Eastern North America, Central and South America

Habit: Emergent water plant of water and riverine habitats. Long-lived (perennial), rooted freshwater plant 1-2 m tall that grows in clusters and forms colonies

Leaves: This plant spreads vegetatively from fragmented rhizomes. The leaves are light or yellowish green, cordate in shape, 230 mm long by 70 mm wide. Leaves appear one per stem each with a long petiole that clasps the stem

Flowers: The flowers of *P. cordata* are blue in colour and appear at the terminal end of the stem. The flowers are on long spikes 50-150 mm long. Each flower is 15 mm long and the upper petal has a yellow blotch in the centre. This plant is sterile and does not produce fruits and seed.

Fruit: This plant is sterile and does not produce fruits and seed.

Dispersal: This plant spreads vegetatively from fragmented rhizomes.

Control: The precise management measures adopted for any plant invasion will depend upon factors such as the terrain, the cost and availability of labour, the severity of the infestation and the presence of other invasive species.

The best form of invasive species management is prevention. If prevention is no longer possible, it is best to treat the weed infestations when they are small to prevent them from establishing (early detection and rapid response).


Red Head NSW 2430

Cabomba / Fan Wort

Cabomba caroliniana

Cabomba has been dispersed throughout the world by the aquarium trade. One of Australia's worst aquatic weed threats. Dense infestations interfere with recreational and agricultural use of waterbodies. Difficult to control once established in large reservoirs.

Family: Cabombaceae

Origin: South America

Habit: Submerged perennial, with stems to 5 and rarely 10 m long. Submerged leaves and stems are covered with a sticky mucus like coating.

Leaves: Floating leaves to about 2 cm long; submerged leaves finely divided and fan-shaped, submerged opposite leaves divided into linear segments on a leaf stalk that varies from about 3 cm long on lower leaves to almost absent on upper leaves.

Flowers: Solitary, 6 white to pale yellow petals on stalks raised above the water surface. Summer.

Fruit: Seed information is limited at present with this species in Australia. Overseas seeds are oblong, 1.5–3 mm long and 1–1.5 mm wide with rows of minute wart-like projections.

Roots: Fibrous matted root.

Dispersal: Vegetation spread by water, boats and humans. The main method of spread is by human activities including deliberate and accidental spread via backyard plant trading, aquarium dumping and fish/eel trapping trade.

Control: Registerd herbicides are available to manage this weed. Mechanical / manual control may only offer short term options.
Report this plant to your local Council Weed Officer.

Andrew Petroeschevsky

Dense Water Weed / Leafy Elodea

Egeria densa

Submerged plant, forming extremely dense, surface reaching, masses that can seriously displace native aquatic plants and hinder water flow.

Family: Hydrocharitaceae

Origin: South America

Habit: Submerged aquatic plant, growing to 4 m depth, bearing cylindrical stems up to 2 m or longer. Flowing and standing water bodies, grows well in clear water.

Leaves: Linear to ovate, 2-5 mm wide, up to 4 cm long with tiny serrations on the margins, generally in whorls of 4 or 5 (sometimes up to 8) and are mostly densely clustered at branch ends near growing tips.

Flowers: Solitary, 3 white petals on stalks raised above the water surface from upper leaf axils, Male and female flowers produced on separate plants, only male plants recorded from Australia. Summer and Autumn.

Fruit: Fruit (overseas) a transparent capsule.

Roots: Fibrous; firmly rooted to the substrate.

Dispersal: Vegetation spread by water, boats and humans. The main method of spread is by human activities including deliberate and accidental spread via backyard plant trading, aquarium dumping and fish/eel trapping trade.

Control: Herbicide control are currently being assessed. Mechanical / manual control may only offer short term options.
Report this plant to your local Council Weed Officer.

Andrew Petroeschevsky

Rebecca Coventry

Frogbit

Limnobium laevigatum

Illegally traded as an aquarium plant. Now a significant water weed in NSW. This species cannot be imported into or traded within the state of NSW.

Family: Hydrocharitaceae

Origin: Tropical and subtropical Central and South America

Habit: floating or emergent aquatic herb. The floating rosettes send runners out into the water, the ends of which form juvenile plants. A large mat of runners and adult plants can develop very quickly.

Leaves: Leaves are subcircular, floating, glabrous and glossy above, with a thick layer of air-filled spongy tissue beneath, base rounded or shallowly cordate. A distinguishing character of the juvenile plant is the presence of spongy aerenchyma tissue upon the underside of the leaf. Mature plants grow up to 50 cm tall and have emergent leaves that differ greatly from juvenile leaves.

Flowers: Flowers are small, white, and unisexual. Female flowers have an inferior ovary. The fruit is a fleshy, berry-like capsule 4–13 mm long and 2–5 mm in diameter, borne on a recurved pedicel, developing in mud or under water.

Fruit: The fruit contains up to 100 seeds. The seeds are 1 mm long, ellipsoid, and hairy The small, floating seeds easily disperse via water and wind once produced.

Dispersal: Spread by humans, animals and water movement. Reproduces vegitatively and can reproduce sexually through flower pollination and seed production.

Control: Please do not attempt to treat or dispose of this weed yourself. For further information visit https://weeds.dpi.nsw.gov.au/Weeds/Details/286
Report this plant to your local Council Weed Officer. **Prohibited matter.**

Green Point NSW 2428

Hygrophila

Hygrophila costata

Sold as an aquarium plant. Now a significant water weed in northern coastal NSW and south eastern Qld where it displaces most other species in shallow water and neighbouring damp soil.

Family: Acanthaceae

Origin: Southern Mexico to Argentina

Habit: Aquatic and semi-aquatic herb to 2 m high. Stems bluntly 4 angled and hairless to shortly hairy, often reddish.

Leaves: Opposite, lanceolate to elliptic, 3.5–18 cm long, 0.5–5 cm wide, margins entire to undulate.

Flowers: Inflorescence of 10 or more flowers in axillary whorls. White, about 5-10 mm long and 1.5–3 mm wide, petals joined in a 2-lipped tube, upper lip shortly 2-lobed and hooded, lower lip 3-lobed, with sepals joined below half way. Flowers all year.

Fruit: Spindle-shaped capsule, 6–8 mm long, containing approximately 20 seeds. Seeds pale brown, round, flattened, about 0.3 mm wide.

Roots: Dense fibrous mat, rooting at stem nodes.

Dispersal: Seed and fragments spread by water, animals, humans, contaminated soil (earth moving equipment etc, deliberate planting for sale on the black market) and pond or aquarium dumping.

Control: Mechanical and manual removal, foliar spray.
Report this plant to your local Council Weed Officer.

Tea Gardens NSW 2324

Kidney-leaf Mud Plantain

Heteranthera reniformis

Kidney-leaf mud plantain is popular as an ornamental pond plant, and escaped plants have established to threaten local aquatic habitats.

Family: Pontederiaceae

Origin: North, Central and South America

Habit: A sprawling annual or perennial plant, forming dense mats in open shallow water bodies, such as wetlands and creeks, threatening local freshwater aquatic habitats.

Leaves: Kidney-shaped, bright green and glossy, up to 5 cm wide and arranged alternately along the stem. They are attached to a stalk 2-13 cm long and are either floating or emerging above the water. Leaves of seedlings are very narrow broadening with age.

Flowers: Very small 3-6.5 mm; very short lived; with six white-to-pale blue petals; 2-8 flowers appear in spikes 1-9 cm long.

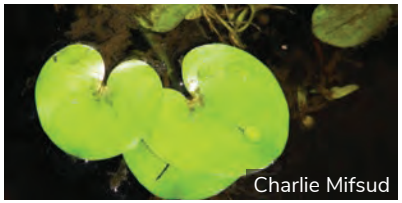
Fruit: Capsules 0.5-0.9 mm long and contain 8-14 winged seeds.

Roots: Forms dense fibrous / fleshy mats along the mud and on damp soil at the water's edge.

Dispersal: Vegetation and seed spread by water, animals, contaminated earth moving equipment and humans. Vegetative parts will establish and are spread by dumping from ornamental ponds and aquariums into waterways.

Control: Mechanical and manual controls, foliar spray.
Report this plant to your local Council Weed Officer.

Berrico Creek NSW 2422



Charlie Mifsud

Sue Haywood

Longleaf Willow Primrose

Ludwigia longifolia

Introduced to Australia as a garden ornamental and first recorded as naturalised near Sydney in 1991. Capable of producing up to 2.5 million seed per plant and 10 million seeds per square metre.

Ludwigia octovalvis is a similar looking local native species.

Family: Onagraceae

Origin: South America from Brazil to Argentina

Habit: Spring/Summer growing, woody, perennial, single stemmed or multi branched, erect, shrub ranging from 0.5 m to 2.5 m tall. Red, narrow, angular stems with unusual wing like characteristics.

Leaves: Simple, dark green linear to lanceolate/oblanceolate, up to 15 cm long and 2.5 cm wide, reducing in size up the stem.

Flowers: Solitary, 40-50 mm across with 4 yellow petals, prominently ribbed, found in the junction of leaves and stems. Summer-winter.

Fruit: Sharply 4 angled, oblong to narrow oblong 10-40 mm long, 4-8 mm wide. Unripe - green to red/green with prominent triangular sepals. Ripe - brown, papery and desiccated each containing around 7000 sawdust-like seeds.

Roots: Stout taproot and dense lateral roots.

Dispersal: Vegetation and seed spread by water, wind, animals, birds, humans, contaminated soil, earth moving machinery and garden refuse dumping.

Control: Hand dig / pull juvenile plants and remove as stems readily grow from cuttings, Scrape and Paint, foliar spray. An off label permit (7344) for Biactive glyphosate is available for herbicide control of this plant.
Report this plant to your local Council Weed Officer.

Cundletown NSW 2430

Parrots Feather

Myriophyllum aquaticum

Forms dense stands that impede flow, especially in nutrient enriched water. If male plants are introduced the species may become even more of a problem. This species is now widespread throughout the world.

Family: Haloragaceae

Origin: South America

Habit: Perennial submerged and emergent, aquatic herb, with spreading and erect stems.

Leaves: Blue-green emergent leaves, hairless, crowded towards tip. 2.5–3.5 cm long, 0.5-0.8 cm wide with 18-36 teeth, in whorls of 4-6; submerged leaves to 4 cm long.

Flowers: Male and female flowers produced on separate plants. Only female plants found in Australia. Flowers have 4 triangular white sepals, 0.4-0.5 mm long; petals absent.

Fruit: Lack of fruit and seed (in Australia).

Roots: Fibrous mat rooted to substrate. Stems rooted at lower nodes.

Dispersal: Vegetation spread by water, humans, animals (live stock), contaminated soil, earth moving machinery and boats. Cultivation as an ornamental has been the biggest cause of spread.

Control: Best achieved by herbicides, as mechanical controls can lead to further spread by fragmentation.

Bulahdelah NSW 2423

Sagittaria

Sagittaria platyphylla
Sagittaria montevidensis
(photos & details are for S. platyphylla)

Becoming increasingly common in dams, drains, shallow creeks and wetlands in parts of NSW including Sydney, Newcastle, Gloucester and Bulahdelah. Shade tolerant. Forms dense patches, obstructing water flow and competing vigorously with local native waterplants.

Family: Alismataceae

Origin: USA to Panama

Habit: Emergent, perennial aquatic 1-1.2 m high with tubers commonly formed.

Leaves: Submerged leaves translucent, strap-like, to 50 cm long. Emergent leaves lanceolate to linear-lanceolate, blade to 28 cm long and to 10 cm wide on a long stalk.

Flowers: Inflorescence bourne on a stem below leaf height, containing 2–12 flowers. Female flowers with 3 white petals and 3 sepals, male flowers 3 cm wide and with reflexed sepals. Flowers mainly spring to autumn, depending on latitude.

Fruit: Fruit a cluster (head) 0.5–1.5 cm across, consisting of 1-seeded segments, each segment flattened, winged, 1.5–3 mm long.

Roots: Fleshy tubers and rhizomes.

Dispersal: Seed, rhizomes, tubers spread by water and humans via contaminated soil, earth moving machinery and garden refuse dumping. Also being cultivated as an ornamental has aided its spread.

Control: Mechanical and manual removal making sure of complete removal of tubers and rhizomes, foliar spray.

Sagittaria platyphylla

Sagittaria platyphylla

Salvinia

Salvinia molesta
Salvinia minima

A serious weed that will choke and cover wetlands and lakes, excluding fish and invertebrates. In optimum conditions, it is capable of doubling its density in just a few days.

The Salvinia Weevil (*Cyrtobagous salviniae*) is a very successful biological control agent. In ideal conditions. Contact your local weeds officer for details. Adult weevils are approximately 2 mm in length. (pictured).

Family: Salviniaceae

Origin: South America - Southern Brazil and Paraguay

Habit: A perennial free floating fern that forms dense mats via multi-branched, horizontal stems. Individual plants are 5-30 cm long and invade still or slow moving water bodies.

Leaves: The 'leaves' (i.e. fronds) are oval or folded, depending on life stage, and are green or yellowish-green in colour. Each leaf has a covering of water-repellent waxy hairs (i.e. papillae) on their upper surface.

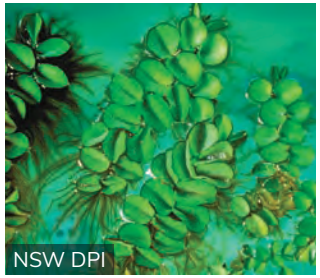
Flowers: Nil.

Fruit: Does not produce fertile spores. Reproduces vegetatively.

Roots: A modified frond, covered in fine brown filaments. This trails below each pair of aerial fronds.

Dispersal: Vegetation spread by wind, water, boats and humans. The main method of spread is by human activities including deliberate and accidental spread via the aquarium and fish/eel trapping trade.

Control: Mechanical / manual removal, foliar sprayBiological control for large infestations. Report this plant to your local Council Weed Officer.



NSW DPI

UGA1317057

Limekilns NSW 2324

Senegal Tea Plant

Gymnocoronis spilanthoides

Wanderer butterflies pollinate the flowers and are sometimes used to identify isolated infestations during the flowering period. Stems are hollow between the nodes, allowing the plant to float on water.

Family: Asteraceae

Origin: Tropical and subtropical America, from Mexico to Argentina.

Habit: Perennial plant growing in dense stands or as rounded bushes up to 1 m high, impacting on aquatic environments. Capable of growing over the water surface or in wet, boggy soils.

Leaves: Shiny dark-green; elliptic to lanceolate or ovate, 4-20 cm long, 1.5-8 cm wide, margins irregularly toothed.

Flowers: White; pompom like; 15-20 mm in diameter occur in groups at the ends of stems. Late Spring to early Autumn.

Fruit: Achene, yellow-brown, 5 mm in diameter, and ribbed.

Roots: Fibrous, often forming at nodes along the stems.

Dispersal: Vegetation and seed spread by wind, water, animals, contaminated earth moving equipment and humans. Vegetative parts will establish and are spread by dumping from ornamental ponds and aquariums into waterways.

Control: Mechanical and manual removal, foliar spray.

Report this plant to your local Council Weed Officer.

Rebecca Coventry

Graham Pritchard

Water Hyacinth

Eichhornia crassipes

Attractive but troublesome plant that has spread worldwide, obstructing waterways, reducing fish production, harbouring mosquitoes, and severely disrupting life in some communities along rivers and lakes.

Family: Pontederiaceae

Origin: South America

Habit: A free-floating fleshy perennial water weed to 65 cm tall that forms dense raft of vegetation across still or slow moving fresh water bodies.

Leaves: Glossy, dark green waxy/fleshy, spoon-shaped leaves on swollen, bulbous stalks.

Flowers: Showy clusters of pale blue/lavender short lived flowers on an upright spike, with a botch of yellow and purple on upper petals. Spring-Summer.

Fruit: Ovate-oblong, ribbed to 1 mm long, released into water when flower is spent. May remain viable for up to 15-20 years.

Roots: To 1 m long, feathery, black to purple, usually shorter if water is nutrient rich.

Dispersal: Daughter plants are produced on stolons from mother plant. Vegetation and seed spread by wind, water, animals, contaminated earth moving equipment and humans. Vegetative parts will establish and are spread by dumping from ornamental ponds and aquariums into waterways.

Control: Mechanical and manual removal, foliar spray.
Report this plant to your local Council Weed Officer.

Water Lettuce

Pistia stratiotes

Reproduces mainly by daughter plants. Under ideal conditions in nutrient rich water, it will produce luxuriant growth, expand rapidly and form obstructive mats. Frost sensitive.

Family: Araceae

Origin: Asia, Africa, equatorial America. Considered native to Australia's Northern Territory

Habit: Lettuce-like, stoloniferous, floating, perennial herb with rosettes up to 15 cm tall and 30 cm diameter.

Leaves: Spathulate to broad-ovate, 3-15 cm long, 2-8 cm wide, hairy, longitudinally ribbed, petiole shortened and inflated.

Flowers: Inflorescence small, whitish green, 1.5 cm long, amongst the leaf bases. Pistil partly fused to spathe. Male zone a whorl of stamens terminating a short free part of the spadix above a flap of spathe tissue. All year.

Fruit: Greenish berry, ovoid to ellipsoid, 6-10 mm long; Seeds oblong, about 2 mm long.

Roots: Long, brownish, dense and feathery.

Dispersal: Daughter plants are produced on stolons from mother plant. Vegetation and seed spread by wind, water, animals, contaminated earth moving equipment and humans. Vegetative parts will establish and are spread by dumping from ornamental ponds and aquariums into waterways.

Control: Mechanical and manual removal, foliar spray.
Report this plant to your local Council Weed Officer.

Saltwater NSW 2430

Water Star Grass

Heteranthera zosterifolia

The first and only known occurrence of Water Star Grass naturalised in Australia was recorded in Port Macquarie in December 2011.

Family: Pontederiaceae

Origin: South America

Habit: A long-lived and fast-growing plant of variable habit depending on environmental conditions. Capable of growing above or below the water surface. Can form very dense mats in shallow water.

Leaves: Bright glossy green, formed in star shaped clusters, dense, narrowly oval in shape up to 4 cm long, with roundish tips when emergent; longer, stalkless and relatively narrow up to 5 cm long with pointed tips when submerged.

Flowers: Small, often borne in pairs at or above the water surface. They are short lived, bearing six long, narrow bluish-purple petals darker at the bases, three stamens with yellow anthers.

Fruit: A small capsule containing numerous tiny seeds.

Roots: Fibrous, often forming at nodes on long running stems.

Dispersal: Vegetation and seed spread by water, animals, contaminated earth moving equipment and humans. Vegetative parts will establish and are spread by dumping from ornamental ponds and aquariums into waterways.

Control: Mechanical and manual controls, foliar spray.
Report this plant to your local Council Weed Officer.


Ben White


Ben White

Yellow Water Lily / Mexican Water Lily

Nymphaea mexicana

Grown as a water feature plant. Dies back in winter in NSW. Yellow Waterlily has the potential to spread into coastal lagoons, especially where waters are nutrient rich.

Family: Nymphaeaceae

Origin: Mexico and south eastern USA

Habit: Aquatic perennial with leaf blades and flowers above the water level. Leaf stalks arise from vertical rhizomes.

Leaves: Floating broad elliptic leaves with wavy margins, spreading on water surface or erect when crowded; blade to 25 cm long, young leaves often with brown markings.

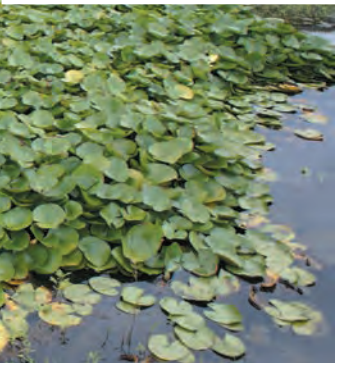
Flowers: Yellow, up to 12 cm wide opening during the day and closing at night; petals numerous merging into petal-like stamens. Sepals 4, yellowish green; Flowers Spring to Autumn.

Fruit: Seeds rarely formed in Australia, if formed globe-shaped and about 5 mm wide.

Roots: Vertical rhizomes to 30 cm long and 4 cm thick; long spongy stolons also produced at the top of the rhizome.

Dispersal: Daughter plants are produced on stolons from mother plant. Vegetation spread by wind, water and humans. Cultivation as an ornamental is the biggest cause of spread.

Control: Mechanical and manual removal, foliar spray. Very difficult control.



COMMON PLANT PARTS

Basic terminology for the most common parts of plants

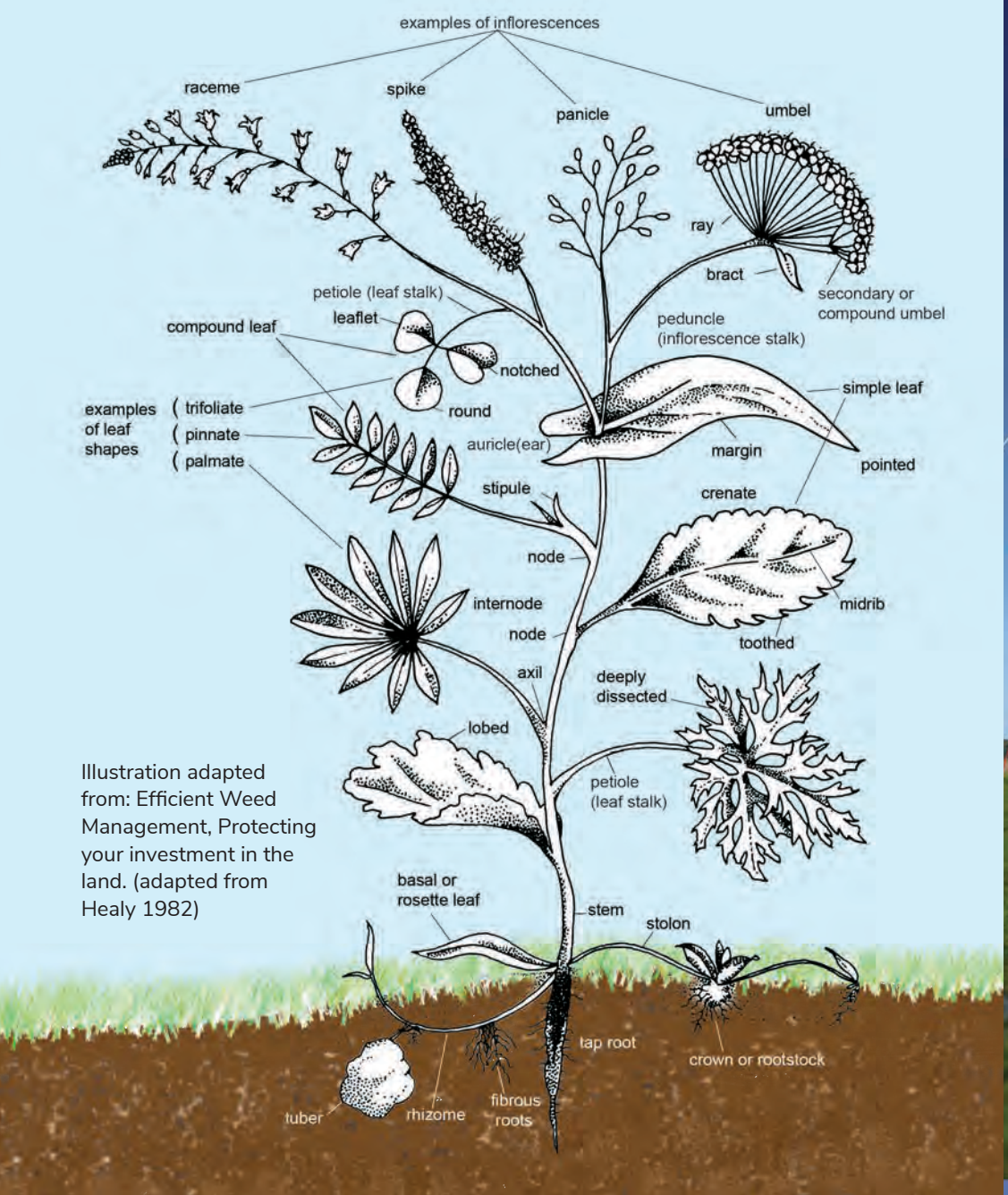


Illustration adapted from: Efficient Weed Management, Protecting your investment in the land. (adapted from Healy 1982)

CONTACT INFORMATION

MidCoast Council
Yalawanyi Ganya
2 Biripi Way, Taree 2430
02 7955 7777
Website: www.midcoast.nsw.gov.au/Contact

Local Land Services
Hunter: 815 Tocal Rd, (Private Bag 2010)
Paterson NSW 2421
Phone: 1300 795 299
Website: www.lls.nsw.gov.au/

NSW Department of Primary Industries
Head Office: 161 Kite Street, Orange
Locked Bag 21,
ORANGE NSW 2800
Weeds hotline: 1800 680 244
Website: weeds.dpi.nsw.gov.au/

National Parks and Wildlife Service
Head Office: 59-61 Goulburn Street, Sydney
PO Box A290,
SYDNEY SOUTH NSW 1232
Ph: (02) 9995 5000
Website: www.nationalparks.nsw.gov.au/

North Coast TAFE Taree Campus
Montgomery Crescent Taree
Website: www.northcoasttafe.edu.au/

Hunter Regional Weeds
For information on weeds in the
Hunter Region of NSW
Website: www.hunterregionalweeds.net.au

PLANT ME INSTEAD

The following list has been devised to assist land managers and home gardener select appropriate local native plants.

"As a rule-of-thumb, select plant species known to be naturally occurring in nearby bushland – these are adapted to our soils and climate, and likely to attract local native fauna."

Vines and Scramblers
Climbing Guinea Flower (*Hibbertia scandens*)
Dusky Coral Pea (*Kennedia rubicunda*)
Purple Coral Pea (*Hardenbergia violacea*)
Stiff Jasmine (*Jasminum volubile*)
Wonga Vine (*Pandorea pandorana*)

Grasses
Barb Wire Grass (*Cymbopogon refractus*)
Gymea Lily (*Doryanthes excelsa*)
Kangaroo Grass (*Themeda triandra*)
Narrow Leaf Palm Lily (*Cordyline stricta*)
Spiny-headed Mat Rush (*Lomandra longifolia*)
Mat Rush (*Lomandra hystrix*)
Weeping Grass (*Microlaena stipoides*)

Ferns & Orchids
Birds Nest Fern (*Asplenium australasicum*)
Bungwahl Fern (telmatoblechnum *indicum*)
Maiden Hair Fern (*Adiantum aethiopicum*)
Rasp fern (*Doodia aspera*)
Rock Lily (*Dendrobium speciosum*)
Rough Maiden Hair Fern (*Adiantum hispidulum*)

Ground covers, Bulbous & Herbaceous Plants
Blue Flax Lily (*Dianella caerulea*)
Cut-Leafed Daisy (*Brachyscome multifida*)
Fan Flower (*Scaevola calendulacea*)
Ivy-Leaved Violet (*Viola hederacea*)
Pastel Flower (*Pseuderanthemum variabile*)
Tufted Blue Lily (*Thelionema caespitosum*)

Shrubs & Small Trees
Boobialla (*Myoporum boninense* subsp. *australe*)
Coastal Rosemary (*Westringia fruticosa*)
Hairpin Banksia (*Banksia spinulosa*)
Heath Banksia (*Banksia ericifolia*)
Jelly bush (*Leptospermum polygalifolium*)
Purple Paperbark (*Melaleuca thymifolia*)
Rice Flower (*Ozothamnus diosmifolius*)
Slender Rice Flower (*Pimelea linifolia*)
Shining Burrawang (*Lepidozamia peroffskyana*)
White Native Fuchsia (*Correa alba*)
Willow-Leaf Hakea (*Hakea salicifolia*)

Larger Trees
Black She-Oak (*Allocasuarina littoralis*)
Blueberry Ash (*Elaeocarpus reticulatus*)
Blue Lily Pilly (*Syzygium oleosum*)
Christmas Bush (*Ceratopetalum gummiferum*)
Coast Banksia (*Banksia integrifolia*)
Grey Myrtle (*Backhousia myrtifolia*)
Lily Pilly (*Acmena smithii*)
Magenta Lily Pilly (*Syzygium paniculatum*)
Native Frangipani (*Hymenosporum flavum*)
Saw Banksia (*Banksia serrata*)
Water Gum (*Tristaniopsis laurina*)
Willow Bottlebrush (*Callistemon salignus*)
Weeping Lily Pilly (*Waterhousea floribunda*)

Check Your Choice

Look for the **Certified Gardening Responsibly eco-label** to ensure your ornamental garden plant has a low invasive risk.

You can help protect Australia's natural landscapes by selecting a certified low invasive risk plant. Find out more at **gardeningresponsibly.org.au**

Plant me instead

Gardening Responsibly is easy when you choose great plants from our expert suppliers

ECO

Eco-labelled plants have a low risk of becoming invasive weeds.

QUALITY

Our suppliers strive to provide the best products.

SCIENCE

Our certification program is based on the best available science.

gardeningresponsibly.org.au

Gardening RESPONSIBLY Plant Sure

Plant me instead

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MIDCOAST council

Mid Coast 2 Tops Landcare Connection

NSW GOVERNMENT Local Land Services

HUNTER REGIONAL weeds

north coast TAFE NSW

NSW National Parks and Wildlife Service

Barrington Coast

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4 Backyards Biodiversity