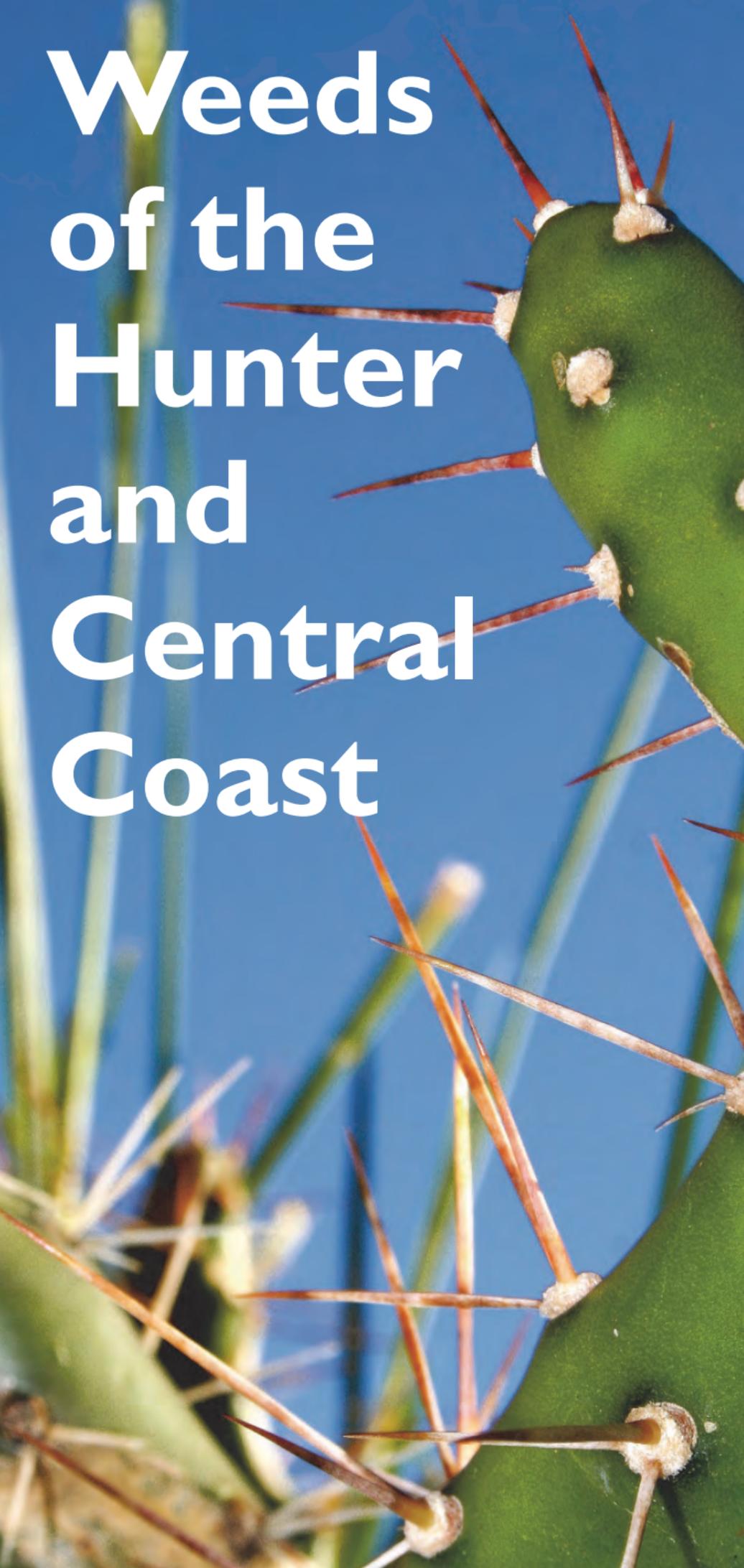


Weeds of the Hunter and Central Coast



Introduction

Weeds pose a significant threat to human health, the natural environment and the agricultural industry. The financial impact to the agricultural industry in NSW alone is estimated at \$700 million per year. It is important that all members of the community play their part in the control of weeds.

The diversity in nature and land use in the Hunter and Central Coast allows for the introduction of a broad range of weeds. Garden escapes threaten the biodiversity of local bushland while other plants cause hayfever and contact dermatitis in humans. Highly invasive pasture weeds are poisonous or unpalatable to stock, reducing the viability of agricultural pursuits while aquatic plants seriously threaten our waterways.

This booklet is intended to provide information to community members on the identification, impact and control of weeds commonly found in the Hunter and Central Coast region.

For further information on weeds displayed in this booklet or any other weed matter please contact the Weeds Officer at your local Council.

Control Methods

There are a number of methods available for the control of weeds. An integrated approach using a combination of control methods is the most effective.

The four methods for the control of weeds include:

- Biological control
- Mechanical or physical control
- Herbicide control – using a product registered for the purpose
- Environmental management – pasture improvement, etc

When making decisions regarding weed management, landholders should identify all available control methods and constraints (slope of land, environmental conditions, etc) that will affect the particular weed being targeted. It is important for landholders to discuss the methods they intend to use with appropriate experts prior to commencing their weed management. This will result in the most effective control being achieved.

African Boxthorn

Lycium ferocissimum



Description

- Perennial shrub to 4m, with long rigid thorny branches
- Leaves bright green, elliptical, fleshy and clustered
- Fruit round, succulent, 5-10mm, dull orange-red when ripe
- Flowers tubular, five pale lilac or white petals

Flowering Times

- Autumn through to spring

Control Measure

- Mechanical removal using extreme caution (large spines)
- Herbicides

Problems

- Bushes form dense, impenetrable thickets
- Thickets occupy valuable grazing land and harbour vermin
- Berries are a host for fruit fly and other insects
- Being an extremely hardy plant, is often very hard to kill

Alligator Weed

Alternanthera philoxeroides



Description

- Can form dense floating or rooted rafts up to 1m thick
- Greenish hollow stems with shiny leaves arranged opposite
- Flowers are rounded, white and paper-like on ends of stalks
- Roots can become thick and rhizome-like

Flowering Times

- Spring through to autumn

Control Measure

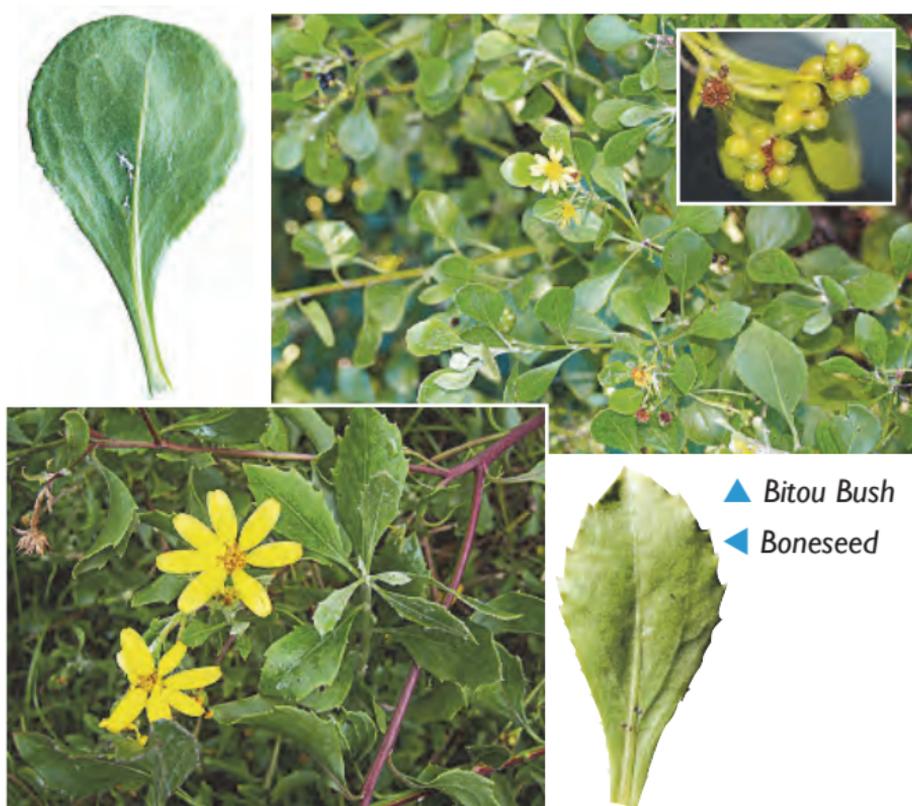
- Contact your local Weeds Officer for specific management options
- Herbicides

Problems

- Grows aggressively both in water and on land
- Extremely invasive – difficult to control
- Spread by water/floods, machinery, vehicles, and livestock
- Difficult to identify in dense vegetation when not in flower

Bitou Bush & Boneseed

Chrysanthemoides monilifera spp.



▲ Bitou Bush

◀ Boneseed

Description

- Bushy shrub with fleshy leaves and yellow daisy-like flowers, clusters of small berries
- Bitou – relatively smooth-edged leaves. Flowers up to 13 petals
- Boneseed – serrated-edged leaves. Flowers up to 5-7 petals

Flowering Times

- Bitou – autumn to winter. Boneseed – winter to spring

Control Measure

- Hand removal of small plants
- Herbicides
- Biological controls are available

Problems

- Invasive bushes producing dense thickets
- Smothers native vegetation
- Harbourage and food source for feral animals

Blackberry

Rubus spp.



Description

- Scrambling thorny shrub with arching canes
- Leaves dark green and serrated, 3 to 5 leaflets
- Flowers of white or pink, 5 petals
- Fruit is a green/red berry maturing to black when ripe

Flowering Times

- Spring to summer

Control Measure

- Physical removal
- Grazing – goats (with secure fencing)
- Herbicides

Problems

- Invades bushland and agricultural areas
- Forms impenetrable thickets
- Thorns are a hazard for humans and grazing animals
- Harbourage for feral animals

Bridal Creeper

Asparagus asparagoides



Description

- Herbaceous climber to 3m with growth over the winter months
- Numerous twisting shiny green, wiry stems
- Flowers are small, drooping and greenish-white
- Berries are pea-sized, green turning to burgundy when ripe

Flowering Times

- Winter to spring

Control Measure

- Physical – dig out all tubers
- Herbicides
- Biological controls are available

Problems

- Climbing stems smother shrubs, trees, and native plants
- Underground tubers grow in thick mats
- Extremely difficult to control

Burrs (Noogoora & Bathurst)

Xanthium occidentale & *Xanthium spinosum*

Noogoora ▼



▲ Bathurst

Description

- Fast growing annual herb with distinctive burr-like fruit
- Bathurst – triangular leaves, spiny stems, burrs to 15mm
- Noogoora – maple-like leaves, spineless rough stems, burrs to 25mm

Flowering Times

- Mainly summer to autumn

Control Measure

- Physical
- Herbicides

Problems

- Invasive – pastures, crops, and wasteland
- Burrs adhere to animals and clothing
- Young plants are toxic to stock
- Burrs impede shearing and contaminate wool

Chinese Violet

Asystasia gangetica subsp. *micrantha*



Description

- Mat-forming perennial creeper
- Leaves in opposite pairs and oval to triangular in shape
- Flowers – bell-shaped white with two purple marks inside
- Seeds are club-shaped containing four flattened black seeds

Flowering Times

- Late summer (though can flower all year round)

Control Measure

- Hand removal ensuring seed pods are collected
- Herbicides

Problems

- Invades bushland and smothers vegetation
- Rapid growth rate
- Grows in both shaded & exposed sites including maintained turf
- Seeds remain viable for years

Crofton Weed & Mistflower

Ageratina adenophera & *Ageratina riparia*



▲ Mistflower

◀ Crofton Weed



Description

- Herbaceous perennial shrub, purplish stems with white terminal flowerheads
- Crofton Weed – triangular to diamond shaped leaves, up to 2m
- Mistflower – narrow serrated-edged leaves, up to 1m

Flowering Times

- Crofton Weed – early spring. Mistflower – winter to spring

Control Measure

- Physical removal
- Herbicides

Problems

- Poisonous to horses
- Very invasive – spreads easily by wind and water
- Tolerates wet soils and will extend into wetlands

Giant Parramatta Grass

Sporobolus fertilis



Description

- Coarse tussocky grass to 2m
- Seed head to 40cm long resembling a rat's tail
- No gaps between top and bottom of seed head
- Base of plant flat, fan-shaped in appearance

Flowering Times

- Flowers and seeds mainly summer to autumn

Control Measure

- Herbicides
- Farm hygiene – manage stock and machinery to prevent spread
- Management – pasture improvement

Problems

- Produces thousands of seeds per tussock per year
- Seed spread by vehicles, livestock, machinery, floods (not windborne)
- Extremely invasive, persistent and adaptable to varying climates and pastures

Glory Lily

Gloriosa superba



Description

- A deciduous climbing plant that can grow to 2 metres high
- Leaves glossy, bright green and have tendril-like curled leaf tips
- Flowers lily-like, yellow with orange-red washes along the end of six ruffled petals
- Seed pods shaped like a rugby ball with seeds red, drying to brown

Flowering Times

- October to May

Control Measure

- Physical – ensure seeds and all parts of tubers are removed
- Herbicides

Problems

- All parts of plant are extremely toxic
- Forms dense understorey mats in coastal areas
- Competes aggressively with native vegetation
- Dumping of garden waste can lead to major infestations

Golden Dodder

Cuscuta campestris



Description

- Leafless parasitic, twining annual herb
- Bright yellow thin threadlike stems attached to host plant
- Small white flowers 3-4mm
- Seed capsule containing up to 4 seeds

Flowering Times

- Warmer months – September to May

Control Measure

- Herbicide
- Mechanical

Problems

- Threat to agricultural crops
- Smothers native vegetation
- Rapid growing and seeding
- Long seed viability in soil

Green Cestrum

Cestrum parqui



Description

- Erect perennial shrub to 3m
- Leaves alternate, to 12cm long, produce unpleasant odour when crushed
- Flowers are yellowish-green, tubular, clustered at branch ends
- Fruit are green oval berries that turn purplish-black when ripe

Flowering Times

- Throughout the year

Control Measure

- Herbicides – most effective method
- Physical – difficult as reshooting and suckering often occurs

Problems

- Extremely toxic to stock – especially cattle
- Invasive, suckering and spreading when disturbed
- Seeds spread by birds and water
- Seed viability rate high

Groundsel Bush

Baccharis halimifolia



Description

- Perennial, densely branched shrub to 4m tall
- Leaves alternate, wedge-shaped, prominently toothed
- Flowers are cream on male plant, white tufted on female
- Stems have characteristic striped bark

Flowering Times

- April to May

Control Measure

- Herbicides
- Physical – hand pull small plants and roots or slash
- Integrated management combining physical and herbicide control

Problems

- Rapidly colonises cleared and overgrazed land
- Prolific seeder – each plant produces over 1.5 million seeds p.a.
- Seeds readily dispersed by wind and water
- Tolerates a wide range of soil types and pH levels

Hygrophila

Hygrophila costata



Description

- Semi-aquatic, mat-forming freshwater herb
- Hairy leaves up to 18cm long with prominent veins and midrib
- Upper stems are 4-angled
- White flowers occurring in whorls just above leaf junctions
- Spindle-shaped seed capsule – 7mm long

Flowering Times

- Flowers all year round

Control Measure

- Physical – hand pull small plants
- Herbicide

Problems

- Easily spread by seed sticking to animals, humans, machinery
- Spreading stems sprout roots on contact with the soil
- Chokes waterways and wetlands
- Displaces native plants and animals

Lantana

Lantana camara



Description

- Heavily branched shrub – grows as a compact clump, dense thicket or climbing bush
- Square prickly stems
- Flowers in compact heads with many colours
- Fruits are green, rounded, and fleshy turning purplish when ripe

Flowering Times

- Spring through autumn

Control Measure

- Herbicide
- Mechanical
- Biological – in specific situations only

Problems

- Many varieties poisonous to stock
- Excludes native plants
- Harbourage for feral animals
- Spread by animals and garden waste dumped into bushland

Lippia

Phyla canescens



Description

- Perennial prostrate herb forming carpet-like ground coverage
- Thick taproot up to 80cm deep
- Leaves 1-3cm with blunt serrated edge towards the tip, tapering to a short stem
- Flowers tubular, 1cm diameter, white, cream with pink or pale lilac

Flowering Times

- Spring to late Autumn

Control Measure

- Management – pasture improvement
- Contact your local Weeds Officer for specific management options

Problems

- Highly invasive
- Spreads rapidly by rooting at nodes of stems
- Extremely difficult to control
- Inhibits growth of other plants – releases chemicals into the soil

Long-leaf Willow Primrose

Ludwigia longifolia



Description

- Annual shrub up to 3m high
- Alternate leaves up to 15cm long on reddish stems
- Yellow flowers with 4 petals
- Oblong shaped fruit containing numerous minute seeds

Flowering Times

- Summer to winter

Control Measure

- Hand removal before setting seed
- Herbicide

Problems

- Millions of minute seeds per plant
- Seeds readily dispersed by wind, water, animal and human activity
- Can dominate wetland and riparian communities
- Reduces biodiversity and habitat of native species

Mother of Millions

Bryophyllum spp.



Description

- Slender, erect, perennial succulent
- Pinkish-brown to grey mottled stems to 60cm high
- Flowers tubular, bell-shaped, red to orange in colour

Flowering Times

- May to October

Control Measure

- Herbicide
- Physical – ensure all fragments collected

Problems

- Highly toxic to stock
- Readily spread by plant fragments and seed
- Succulent nature allows it to adapt to dry conditions
- Rapidly invades bushland and disturbed sites

Pampas Grass

Cortaderia spp.



Description

- Dense perennial tussocky grass 2 to 4 m in height
- Leaves about 1m long, finely serrated and will cut if handled
- Large white feather duster-type flower heads

Flowering Times

- March through May

Control Measure

- Hand removal of small plants using gloves
- Mechanical removal of large plants including basal crown
- Herbicides.

Problems

- Up to 100,000 seeds per flower head
- Seeds readily dispersed by wind
- Invasive environmental weed
- Dense infestations create fire hazard

Paterson's Curse

Echium spp.



▲ Rosette stage

Description

- Erect biennial herb 60-90cm high
- Rosettes have multiple egg-shaped leaves up to 30cm long
- Flowers mostly purple, 5 petals fused to a trumpet shape
- Seeds brown to grey, three-sided, wrinkled and pitted
- Stems are covered with stiff hairs

Flowering Times

- Spring to summer

Control Measure

- Herbicides – rosette stage preferred
- Biological
- Management – pasture improvement

Problems

- Highly invasive – up to 30,000 seeds per m²
- Seeds spread by water, sticking to wool and fur of animals
- Can cause hayfever and skin irritation in humans
- Toxic to some stock

Pears (Tiger, Smooth Tree, Pest)

Opuntia spp.



Description

- Succulent shrubs
- Green to purple stems of rounded segments
- Prostrate to erect growth form
- Stems covered with sharp to barbed spines
- Yellow flowers

Flowering Times

- Late spring to summer

Control Measure

- Mechanical
- Herbicide
- Biological

Problems

- Injury to humans and domestic animals
- Readily spread by fragments attaching to vehicles, machinery
- Threat to agriculture industry
- Displaces native plants and animals

Salvinia

Salvinia molesta



Description

- Free floating aquatic fern
- Leaves have water-repellent hairs
- Young leaves oval and flat on water, older leaves spongy and folded along the mid-rib
- Long filament-like roots

Flowering Times

- Does not flower or produce seeds

Control Measure

- Physical – remove by hand or machine
- Herbicides
- Biological – in specific situations only

Problems

- Grows extremely rapidly
- Forms dense mats smothering other aquatic vegetation
- Encourages mosquito breeding
- Reproduces vegetatively from fragments

Senegal Tea Plant

Gymnocoronis spilanthoides



Description

- Erect or scrambling semi-aquatic perennial shrub
- Leaves shiny dark green and wavy with rough edges
- Flowers white and ball-shaped to 15mm in diameter
- Produces running stems in water or mud

Flowering Times

- October to May

Control Measure

- Herbicides – limited options
- Physical methods can lead to spreading of the weed

Problems

- Aggressive invasive plant – grows up to 15cm per week
- Grows in water or on marshy land
- Degrades natural wetlands
- Easily spreads by seeds and plant fragments

Spiny Burr Grass

Cenchrus longispinus



Description

- Erect or spreading annual grass to 60cm high
- Spike-like inflorescence with numerous spiny burrs
- Burrs are straw-coloured and sharply pointed
- Leaves up to 20cm long

Flowering Times

- Late spring to late autumn

Control Measure

- Mechanical
- Herbicide
- Cultural

Problems

- Injury to humans and domestic animals
- Threat to agriculture industry
- Displaces native plants and animals

St John's Wort

Hypericum perforatum



Description

- Erect branched herb/shrub up to about 1 metre tall
- Leaves have black dots along margins, oil glands visible when held to the light
- Flowers bright yellow, five petals, black-dotted along margins
- Most parts of plant have black oil glands that produce a red fluid when crushed

Flowering Times

- Spring to summer

Control Measure

- Hand removal of isolated plants
- Herbicides

Problems

- Known to cause photosensitivity in livestock, resulting in loss of condition, low productivity and – in extreme cases – death
- Prolific seeders with up to 30,000 per plant
- Seeds can remain viable for up to 12 years

Water Hyacinth

Eichhornia crassipes



Description

- Free floating plant with fibrous root system up to 1m long
- Leaves dark green and rounded on bulb-like stems
- Flowers bluish-purple, funnel-shaped, yellow mark in centre
- Seeds in capsules at base of flower

Flowering Times

- Mid-summer through to autumn

Control Measure

- Mechanical
- Herbicides
- Biological – in certain situations

Problems

- Chokes water systems and restricts recreation
- Long seed viability – up to 15 years
- Extremely fast growing – can double plant numbers in 5 days
- Reduces wildlife habitat

Water Lettuce

Pistia stratiotes



Description

- Free-floating perennial aquatic resembling an open head of lettuce or cabbage
- Leaves ribbed, spongy and velvet to the touch
- Flowers are very small and hidden in the leaf bases
- Roots unbranched and feathery up to 80cm long

Flowering Times

- Throughout the year

Control Measure

- Prevention is the best method
- Mechanical or hand removal of small areas
- Herbicides

Problems

- Encourages mosquito breeding
- Interferes with irrigation and recreational activities
- Spreads rapidly by daughter plants growing at the end of stolons and by seed

Wild Olive

Olea europaea ssp. *africana*



Description

- Much branched, rounded and wide tree up to 15m high
- Leaves oblong to elliptic, upper surface glossy grey-green, dull underside, with hooked tip
- Fruit are usually about 7mm across
- Flowers creamy white, four petals about 3mm long, branched

Flowering Times

- October or November and fruit ripen over summer

Control Measure

- Hand removal of small seedlings up to about 1 metre
- Mechanical removal of large plants including roots
- Herbicides

Problems

- Highly invasive
- Rapidly spread by birds eating fruit and dispersing seeds
- Outcompetes and reduces native species
- Fruit have no value for oil production

Yellowbells

Tecoma stans



Description

- Densely branched shrub/small tree to 4m tall
- Leaves bright green, paler underneath – leaflets have serrated margins
- Flowers are long trumpet-shaped and bright yellow – produced in clusters at end of branches
- Fruit are long straight pods containing many papery seeds

Flowering Times

- Mainly Spring to Summer, fruiting Spring to Autumn

Control Measure

- Mechanical removal
- Herbicide – cut-stump or basal-bark

Problems

- Invades bushland
- Produces large amounts of wind-borne seed
- Competes with native species

For further information
contact the Weeds Officer
at your local Council.

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