

Bathurst Burr

Xanthium spinosum CRASSULACEAE Origin: South America

Description:

An erect, spiny, annual herb to 1m, but usually 30-60cm. Flowers: Creamy green and small, developing into straw coloured burrs

Leaves: To 7cm long, dark green on upper surface, paler green on under surface, usually three-lobed with cream mid-vein. Fruit: Burrs are 1-1.5cm long, contain two seeds, and are covered in numerous yellow hooked spines.

Notes:

- Seeds disperse readily as burrs hook on animals, clothing, vehicles, etc. Burrs also float and can spread along watercourses
- Invades waterways, grasslands, open woodlands, floodplains and roadsides, displacing native vegetation.
- Status: Declared Noxious Weed

Weedy facts: Bathurst Burr seeds can germinate out of season.





False Caper

Euphorbia terracina EUPHORBIACEAE Origin: Mediterranean

Description:

An erect, perennial herb usually to 20-80cm. Much-branched woody stems, reddish at base.

Flowers: Small, yellowish-green cup-like structure. Leaves: Linear, lance-shaped, 1-4cm long, with finely serrated margins. Alternately arranged and bright green along stems. More oval on flowering branches.

Notes:

- Prolific seeder that forms dense thickets which out-compete native vegetation. Able to invade healthy bushland, coastal, and riparian areas, in addition to disturbed areas such as roadsides
- The stems are full of milky sap which can cause skin and eye irritation.
- Plants that emerge early produce the most seed, and can become increasingly tolerant to herbicide if not treated when small. Soil disturbance can trigger germination of the soil seed bank, so follow-up control is essential.

Status: Environmental weed in Colac Otway Shire

Weedy facts: False Caper is poisonous to humans.

Weed treatment:





Galenia pubescens AIZOACEAE Origin: South Africa

Description:

A perennial greyish mat-forming plant, up to 300mm high and spreading 1.6m or more across, with thick, woody stems. Flowers: Small white or pink inconspicuous fragrant flowers appear from spring to summer. They are hairy on the outside. Leaves: Semi-succulent, oval to spoon-shaped, hairy and flat with a slightly re-curved tip Fruit: Pentagonal cup-shaped capsules contain shiny black seeds to 1mm in length.

Notes:

- Galenia or Blanket Leaf is often found on disturbed sites, wasteland and roadsides
- Forms dense mats of foliage and stems displacing native grasses and other understorey species.
- · Disrupts light and prevents moisture getting to other species, and forms a monoculture.

Similar native species: Nodding Saltbush Einadia nutans.

Status: Environmental weed in Colac Otway Shire

Weedy facts: Said to threaten the honey industry as bees utilise

it but the honey becomes tainted.

Weed treatment:





Heliotrope

Origin: Europe

coarse hairs, greyish-green.

containing one seed. Notes:

- vegetation
 - length.

within one season

Weed treatment:



Herbs & Succulents



Hoary Cress (White weed)

Lepidium draba L. BRASSICACEAE Origin: Eastern Mediterranean to central and

southern Asia

Description:

An erect, perennial herb to 75cm. Stems are covered with fine downy hairs, are longitudinally ribbed, and branch near the top. Flowers: White, 4-6mm in diameter with four petals, arranged in terminal clusters, and fragrant.

Leaves: Ovate on the rosette and lower stems, obovate on the upper stems. Usually covered with fine white hairs. Margins can be smooth or alternately toothed.

Notes:

- A serious agricultural weed which forms monocultures and spreads to roadsides and other degraded areas. Competes with native understorey vegetation.
- Prefers open, dry, unshaded areas.
- Spreads readily by the movement of small fragments of root, and seeds.
- Highly tolerant of fire, drought, waterlogging and freezing conditions.

Status: Declared Noxious Weed

Weedy Facts: A single Hoary Cress plant can produce 1000 to 1500 seeds, with an 80% survival rate

Weed treatment:





Crocosmia x crocosmiflora IRIDACEAE Origin: South Africa

Description:

A corm-bearing perennial herb with annual leaves and flowers. Flowers: Up to 20 yellow to orange trumpet-shaped flowers per stem with zigzag flower stalks to 900mm high. Leaves: Soft, strap-like and mostly at the base with 6-12 leaves per plant, 300-800mm long and 10-20mm wide. Fruit: A usually shrivelled brown capsule containing round, brown seeds.

- Notes: Forms widespread and dense clumps to the exclusion of indigenous plants.
- Spread as corms and rhizomes are moved to new areas by water or machinery
- Many populations have originated from garden rubbish dumping.

Status: Environmental weed in Colac Otway Shire

Weed treatment:





Paterson's Curse

Echium plantagineum BORAGINACEAE Origin: Europe

Description:

An erect, many-branched, hairy annual herb usually to 1.2m

Flowers: Purple to bluish trumpet-shaped to 30mm long, with two of its five stamens much longer than the others. Flowers are crowded along one side of a curved flower spike. Leaves: Initially has rosette leaves to 300mm long, hairy and broadly oval. Stem leaves are smaller and also hairy. Fruit: Capsule is in segments of four, black to greyish-brown and wrinkled.

Notes:

- A major agricultural weed, also occurring in various natural habitats including grasslands, woodlands, heathlands and along roadsides.
- Poisonous to grazing animals and horses in particular.
- Can form very extensive, persistent populations in disturbed areas. A single plant produces over 10,000 seeds.
- Seed is dispersed by animals, water, machinery,
- contaminated agricultural produce and by movement of soil.
- Similar native species: Austral Bugle Ajuga australis.

Status: Declared Noxious Weed

Weedy Facts: Also known as 'Salvation Jane' in South Australia. It is considered a resource for bee-keepers. Weed treatment:





Description:

petals, 2cm dia

thickets.

long

Notes:

recruitment.

black dots on flowers.

rhizomes.



Heliotropium europaeum BORAGINACEAE

Description:

A low-growing but mostly erect, annual herb to 30cm. Covered in

- Flowers: White, tubular, with yellow throats, 2-2.5cm long. Arranged in two rows along the upper edge of a curved flower spike Leaves: Oval, greyish-green, to 7cm long. Hairy with well-defined
- Fruit: Brownish, splits into four wrinkled segments or 'nutlets', each
- Spreads from disturbed areas and pasture into native roadside
- · Leaves smell offensive when crushed. Has a slender much-branched taproot which can grow 1m in
- Rough surface of nutlets and hairs on flower spike help to disperse the seed on animals. Floodwaters can also spread seed. Status: Environmental weed in Colac Otway Shire
- Weedy facts: Several generations of Common Heliotrope can occur







Hemlock

Conium maculatum APIACEAE Origin: Europe, Asia and northern Africa

Description:

An erect biennial plant to 3m, but often less than 2m. Flowers: White to greenish-white, 2-4mm diameter, 5 petals, occurring in dense umbrella-like clusters at the ends of stems. Leaves: Fern or carrot-like, 12-15cm long but up to 50cm. Hairless, alternate, emitting a strong acrid odour when crushed. Stems are hollow with purple blotches and fine longitudinal

Fruit: Small, greyish-brown capsule. Green when immature.

Notes:

- Prefers damp areas; invades native habitat including waterways, wetlands, marshes, floodplains, gullies, forest margins and roadsides.
- Spread by water, wind, machinery, vehicles and dumped garden waste

Status: Declared Noxious Weed

Weedy facts: Hemlock is highly toxic to humans and livestock.

Weed treatment



About this brochure

This brochure identifies the 20 most significant weeds for the plains and stony rises of Colac Otway Shire

What are environmental weeds?

Environmental weeds are plants that pose a threat to our natural environment. They can be native to Australia, but most have been introduced from overseas. Some are well-known such as Gorse, while others are often overlooked and/or are emerging weeds, like Chilean Needle Grass. Some well-known weeds such as Blackberry have not been included in this brochure, though they still present a serious threat and must be controlled. Instead, less-familiar weeds have been included to raise awareness of the threat they present.

What impact do they have?

Environmental weeds degrade and displace native vegetation, which can lead to habitat loss, extinction of flora and fauna, increased bushfire risk, and decreased agricultural productivity. Each of the weeds described in this brochure represents either an existing or potential threat to Colac Otway Shire's environmental values. For example:

- Sweet Pittosporum, Banana Passionfruit and Bluebell Creeper attract birds which disperse their seeds into reserves and bushland. The ensuing plants can strangle and out-compete local plant species, causing their extinction and reducing wildlife habitat. Coast Tea-tree, Spanish Heath and species of Broom are highly flammable and substantially increase fuel loads around homes and surrounding areas, which adds to the bushfire risk and can change long-term fire patterns.
- Serrated Tussock and Chilean Needle-grass can quickly invade native grasslands which are already endangered, in addition to threatening the productive capacity of agricultural areas. Guarding against this threat requires Council, State and Federal Government local landholders and community volunteers to invest significant time, effort and resources in controlling and eradicating weeds.

What can I do to help?

- If you live in the shire you have a key role to play. You can help by:
- · Choosing your garden plants wisely and selecting local indigenous plants where possible. Indigenous species lists are available on Council's website. Note: this is particularly important if you live within 500 metres of a natural area.
- Removing identified weed species from your garden and replacing them with local indigenous plants. This brochure aims to help you fulfil this role by describing the 20 most problematic weeds in your area and identifying appropriate treatment methods for each.
- Depositing your garden waste in your green-lidded Council bin or at your local landfill.
- Entering and leaving natural areas with caution. Check your shoes and clothes for seeds and ensure you enter clean and exit clean. • Joining a local conservation group and volunteering to protect the natural areas that you know and love



St John's Wort Hypericum perforatum CLUSIACEAE Origin: Europe

A perennial herb to 80cm, with two-ridged stems. Forms tangled

underside, black dotted, with translucent oil glands. Occurring in

Fruit: Sticky, narrowly ovoid, reddish-brown capsule to 8mm

Potential to out-compete natives and restrict overstorey

Similar native species: Two native Hypericum species.

Flowers: Golden-yellow with black dots (glands) on edges of

neter, occurring in numero

Leaves: Oval to linear, hairless, upper margin curled, paler

opposite pairs 5-30mm long and 1.5-5mm wide.



Fennel Foeniculum vulgare APIACEAE

Description:

An erect, robust and many-stemmed perennial herb growing 2-3m high and forming large clumps of vegetation. Flowers: Numerous, tiny yellow-green flowers appear in flattopped umbrella-like clusters in late spring and early summer Leaves: To about 500mm long, light to mid-green. Finely divided into many feathery, thread-like segments. Fruit: Almost hairless cylindrical pods bearing 9-15 seeds.

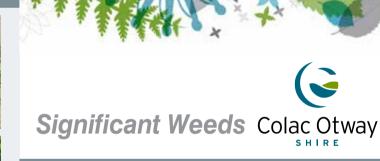
Notes:

- Often seen along roadsides, railway tracks, waterways and drains but also invading bushland, pasture and disturbed
- Smells strongly of aniseed when the foliage is handled. • Infestations eliminate most other ground-flora and severely
- impede overstorey regeneration. Status: Declared Noxious Weed.









Plains and Stony Rises





Distinguished by stems with four ridges, smaller leaves, and no

Status: Declared Noxious Weed Weedy Facts: One St John's Wort plant can produce thousands of seeds, which can remain dormant in the soil for 20 years.

• Spreads by seed, rhizomes, and movement of cut sections of

Weed treatment:

Origin: Europe



Horehound

Marrubium vulgare LAMIACEAE Origin: Europe

Description:

Bushy aromatic perennial herb to about 600mm tall with over 100 individual stems Flowers: White, two-lipped flowers are borne in dense whorl-like

clusters on the stems at the leaf-nodes. Flowers usually from summer through to autumn. Leaves: Paired along the stems at the base of the flower

clusters. They are very hairy and deeply wrinkled on the upper surface

Fruit: Calyx develops into a burr with hooked, curved spines and contains 4 brown or black seeds.

Notes:

- · Horehound is a widespread and troublesome weed, especially in degraded and disturbed areas • Particularly invasive in pastures and roadsides, and is also
- invading bushland. • Burrs and seeds are spread by adhering to animals and
- humans, water and vehicle tyres

Status: Environmental weed in Colac Otway Shire.



Weed treatment



Flax-leaf Fleabane

Conyza bonariensis ASTERACEAE Origin: South Africa

Description:

Erect, annual herb to 1m tall with grey, stiff, bristle-like hairs. Stems densely hairy and unbranched below the flower-heads. Flowers: Flower-heads in a pyramidal panicle, 5-6mm long and 8-12mm in diameter. Each head made up of many individual linear flowers. Flowers late spring to autumn. Leaves: Leaves oblong or narrow-oblanceolate, 4-9cm long and

5-15mm wide with toothed margins. Fruit: Oblong, pale, softly hairy achene with a white to pale pink

pappus. Notes:

- Grows on roadsides and in waste areas and disturbed ground
- It can also be found bordering swamps and lakes. Status: Declared Noxious Weed

Weed treatment:





Hedge Mustard

Sisymbrium officinale BRASSICACEAE Origin: Europe, northern Africa, Asia

Description:

A coarsely hairy annual or biennial herb to 90cm high. Flowers: Flowers are 4-8mm wide, yellow to pale yellow, clustered in inflorescences that elongate in fruit. Flowers usually in spring

Leaves: Leaves up to 25cm long, deeply-lobed, with toothed margins, growing in a basal rosette Fruit: Erect narrowly conical fruit 1-2cm long, which grows on stout stalks pressed against stem.

Status: Environmental Weed in Colac Otway Shire.

Weed treatment:



Notes:

lobed.

Weed treatment:



Trees & Shrubs



African Boxthorn

Lycium ferocissimum SOLANACEAE Origin: South Africa

Description:

Woody shrub to 3m forming dense stands. The ribbed stems are green and softly haired when young becoming greyish-brown and woody with age.

Flowers: Yellow pea flowers in tight clusters at the end of the branches in late winter to spring.

Leaves: The leaves are formed in 3 narrow leaflets that are dark green above, and silvery grey-green and hairy below. Margins are rolled under.

Fruit: Bears seeds in downy pods. Seeds mature in late springearly summer and the pods become grey-black.

Notes

- Highly invasive, can become dominant in disturbed or degraded areas.
- Prolific seeder forming large seed banks remaining in the ground for at least 10 years.
- Seed is dispersed by wind and animals.
- Similar native species: Common Wedge-pea Gompholobium huegelii
- Status: Weed of National Significance, Declared Noxious Weed. Weedy facts: Reproduces by seed with pods exploding to





Sweet Briar (Briar Rose) Rosa rubiginosa ROSACEAE Origin: Europe

Description:

A spiny perennial shrub to 3m high arising from shallow rootstock. Has multiple stems with backward facing spines along their length.

Flowers: Vary from white to pink with five petals. Flowers measure to 40mm. Appear in late spring to summer. Leaves: Consist of pairs of shortly-stalked, oval leaflets along

the leaf stalk with a single terminal leaflet. The leaflets contain glandular hairs on the underside and finely-serrated margins that secrete an apple-like fragrance. Fruit: Smooth reddish-orange elliptical capsules or hips in which

the seed is contained mature in late summer and are shed in autumn. Seeds are numerous.

Notes:

- Sweet Briar has the potential to invade native bushland. • Dense infestations provide food and harbour for pest animals, such as rabbits and foxes.
- Seeds are spread by fruit-eating animals and birds, and also by water. Regenerates by re-suckering from roots.
- Status: Declared Noxious Weed.







Origin: Europe

Description:

A large shrub to 3m, easily recognised by its flowers and its manybranched stems armed with numerous spines to 50mm long. Flowers: Bright yellow, fragrant pea flowers appear in clusters in winter and early spring.

Leaves: True leaves on seedlings have 3 leaflets, replaced by scales on mature plants.

Fruit: Flowers are followed by dark brown, oblong, hairy seed pods, 10-20mm long. Pods explode to release seeds.

Notes:

- Gorse forms dense thickets that harbour vermin and exclude growth of indigenous plants. · Seeding is prolific and the seeds have a hard, water-resistant
- coating.
- Seeds remain dormant in the soil for up to 30 years. • Seeds are dispersed by birds, animals, ants, water, vehicles, machinery, gravel, dumped garden waste and contaminated soil.

Similar native species: Prickly Acacia Acacia paradoxa. Status: Weed of National Significance, Declared Noxious Weed.

Weedy facts: Gorse is regarded as one of the worst weeds in Australia because of its potential for spread, and economic and environmental impacts. It is a major agricultural weed in Tasmania and parts of Victoria and is becoming an environmental threat in national parks and other bushland areas.





Description: A tussock-forming perennial grass, up to 1.2m high. Flower/Seed head: Loose, open, drooping panicle at the end of the flowering stems. The bracts holding the flowers are purple, giving the whole plant a distinctive purplish colour. Flowers and sets seed during spring and early summer. Seeds: pale brown and sharply pointed. Between the seed and its tail (awn) there is a characteristic raised ring (corona) 1-1.5mm long with small teeth encircling the awn. Cleistogenes (hidden seeds) are also produced at the stem nodes (elbows) and base of the plant beneath the leaf sheath. Leaves: Narrow, coarse leaves 5mm wide and 300mm long, with distinct ribs running from base to tip and slightly serrated edges. .

Notes:

• The stem seeds enable the plant to reproduce even if flowering is prevented by slashing or grazing. Similar native species: Similar to several native Australian Spear

Weed treatment:





Ulex europaeus FABACEAE



Prickly Lettuce Lactuca serriola ASTERACEAE

Origin: Europe, Western Asia

Description:

Annual or biennial herb to 2m high with stiffly erect stems. Flowers: Pale yellow flowers slightly exceeding the flower-cup which is 6-9mm long and up to 15mm long when in fruit. Flowers usually from spring to summer.

Leaves: Bluish-green leaves with spiny margin and midrib. Basal and lower stem leaves without stalks, oblong to oblanceolate in shape, 3-8cm long and 2-6cm wide, undivided and deeply

Fruit: Fruit is a cypsela or achene (dry, indehiscent and oneseeded) with a pappus to assist in wind-dispersal.

• Widespread on drier areas, but also found on the margins of swamps and lakes

• Occurs on roadsides, in gardens and crops. Status: Environmental Weed in Colac Otway Shire







Twiggy Mullein

Verbascum virgatum SCROPHULARIACEAE Origin: Europe

Description:

A biennial erect herb to 1m high. Flower stem grows from a

Flowers: Flowers are yellow with a purple centre, in inflorescences 30-60cm long. Flowers usually spring to autumn. Leaves: Oblong, regularly-toothed leaves 8-30cm long. Fruit: Fruit globular, 9mm in diameter. Seeds brown and cylindrical, 1mm long.

Notes:

· Occurs in disturbed sites, along roadsides and near habitation

Status: Environmental Weed in Colac Otway Shire



Treatment methods

This brochure identifies the recommended treatment methods for each specific weed as indicated by the icons below. Note that you should always seek professional advice in relation to using chemicals



Hand Removal/Pulling Remove the weed via hand or mechanical means



Saw or lop trunk and branches of weed Grubbing Use a mattock to remove the weed and its roots

Cut Trunk and Stems



then mulch Ringbark

Chip a 2-5cm wide ring around the trunk of the weed



Mowing or slashing weeds prior to flowering/seeding using a whipper snipper, lawnmower or tractor.



Foliar Spray Apply herbicide to the leaves and stems of the weed

Cut and Paint Cut weed close to ground and immediately paint herbicide on cut surface (within 10-30 seconds)



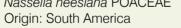
Scrape and Paint Scrape bark of weed close to ground and paint with systemic herbicide



Jse an axe to cut "frills" in trunk of weed and apply

Grasses

Nassella neesiana POACEAE



• As a vigorous competitor, it is a major threat to both conservation and agricultural lands.

 Capable of producing up to 22,000 seeds per square metre with a long-lived seed bank.

• The "needle-sharp" seeds can cause physical harm to both animals and humans.

grasses Austrostipa spp. The seeds of native Austrostipa spp. appear similar except that they don't have the corona. Identify when flowering to avoid misidentification

Status: Weed of National Significance, Declared Noxious Weed.

Weedy facts: Trials have shown that Chilean Needle-grass can out-

Serrated Tussock Nassella trichotoma POACEAE Origin: South America

Description: A fine-leafed perennial tussock-forming grass to about 600mm high.

Flower/Seed head: The multi-branched seed head is up to 350mm long and at each junction there are two or three branches with a single seed on each branch. It has a weeping appearance when in full flower and changes in colour as it matures from purple through to gold. Spring flowering. Seed: Hard and small with a ring of white hairs at one end and a twisted tail (awn) 25mm long at the other end. The awn is attached off-centre to the seed.

Leaves: Blades are thin, up to 500mm in length, and tightly-rolled with small serrations which can be felt when running the leaf between the fingers from the tip to the base.

Notes:

 A major agricultural weed in the region that has also invaded native grasslands, pastures, grassy woodlands, roadsides and riparian areas.

- Large, vigorous plants can produce 100,000 seeds annually. Seed remains viable in the soil for 10-15 years.
- Seeds are easily spread by wind, machinery and vehicles, and by slashing, and also by adhering to animals, clothing and footwear.
- Ripe seed heads break off and disperse on winds for several kilometres

Similar native species: Can be mistaken for native Tussock Grasses Poa spp., and Wallaby Grasses Austrodanthonia spp.

Status: Weed of National Significance, Declared Noxious Weed.





of a bushfire

identified in this brochure by a fire icon. Local Advice

management, and are available to provide advice and sometimes ssistance for their members. For information o your local Landcare Network, visit the Corangamite Catchment Management Authority website

The Colac Otway Shire would like to acknowledge the Surf Coast Shire for their generosity in sharing resources and publication designs, and those people who provided input to the Surf Coast Shire weed publications.

Photographs supplied by: Margaret MacDonald Mark Imhof and A J Brown (www.dpi.vic.gov.au/vro) Kevin Walsh Steve Smithvman

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Gillian Brew for graphic design.

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information in this publication. Released November 2015.

Weeds, particularly those with woody stems and branches, can significantly increase bushfire risk by adding to fuel loads and contributing to a fire's intensity. Some possess certain characteristics (e.g. leaf oils, fine foliage, dense growth) that add to their flammability while others, particularly vines and creepers, can also act as 'ladder fuels', carrying fire from the ground up into the canopy or

on to a structure. Most weeds produce huge numbers of seeds throughout their lifetimes, many of which have growth cycles that are stimulated by fire. This can result in a massive weed response in the aftermath

Weeds that increase fuel loads or contribute to a fire's intensity are

Landcare Networks have expertise in weed identification and source financial a





herbicide immediately to the frill Solarisation

Plastic bags or sheets are used to trap heat generated by the sun to kill weeds.

For more information on local weeds and appropriate control methods, please visit www.colacotway.vic.gov.au.

Further information

Emergent Weeds

Emergent weeds are those that have only recently spread to an area. They are often present in such small numbers that eradication is still possible. They should be eliminated as a priority.

Weeds and Fire