Environmental Weeds

Invaders of the Surf Coast Shire

Surf COAST SHIRE

ANGAIR

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PURPOSE OF BOOKLET

The purpose of this booklet is to:

- develop appreciation and knowledge of the natural environment of the coastal areas within the Surf Coast Shire
- encourage the preservation, the nurturing and, where necessary, the restoration of the natural vegetation of this beautiful area
- enable people to identify and control those plants, especially garden escapes that are invading our grasslands, coastal dunes, reserves and heathlands.

To achieve these aims, the booklet focuses mainly on the description and control of introduced plants that have escaped from gardens and are known to cause problems in areas of natural vegetation.

HOW YOU CAN HELP PRESERVE OUR NATURAL VEGETATION

- Read this booklet and become aware of those plants that are, or have the potential to be, problem plants.
- Remove environmental weeds from your property and encourage friends and neighbours to do likewise.
- Deposit garden rubbish at Waste Disposal Sites, not in the bushland or along roadsides.
- Take care not to spread seeds of environmental weeds in compost and mulching material.
- Plant non-invasive species in your garden, preferably those indigenous to the area.
- Talk to your neighbours and friends and encourage them to value and preserve the natural vegetation.
- Watch for signs of environmental weed problems in your district, and make a commitment to eliminate the culprits.
- Join the local conservation group and work as a member of a team to remove environmental weeds from natural vegetation areas.
- Read the article on Cinnamon Fungus in the booklet, watch for signs of the disease, and take precautions to prevent its spread.

OUR NATURAL ENVIRONMENT

The natural environment of the Surf Coast Shire has changed remarkably since European settlement. Indigenous vegetation communities have become largely isolated, restricted to areas such as Angahook Lorne State Park, Anglesea Heath (Alcoa Lease), the Ironbark Basin, various flora reserves, corridors such as roadsides and streams, and neglected places such as rocky land and steep banks.

These communities still provide a rich diversity of indigenous vegetation and habitat for the many species of native fauna.

The coast and hinterland area that extends from Point Impossible to Lorne includes indigenous habitats as diverse as the saltmarsh at Breamlea, the sand dunes at Torquay, Fairhaven, Moggs Creek and Lorne, the dwarf vegetation of the cliff tops between Jan Juc and Aireys Inlet, the heathlands at Anglesea, and the tall forests of the Eastern Otways.

The inland area that extends from Connewarre to Winchelsea and north to the Barrabool Hills retains remnants of native grasslands and grassy woodlands. Many of these are of regional, state and national significance, and some represent almost the last example of a type of vegetation left in the municipality, as documented in Surf Coast Shire Report on Environmental Resources, Ecology Australia, 1996.

Pressures caused by urban development, agricultural activities and access for recreation continue to threaten these last remnants. Individuals and community environment groups work to both reduce the impact of these threats, and to raise community awareness about the importance of these places.

Several sites have been listed on the Australian Heritage Commission Register of the National Estate, including the Angahook Lorne State Park and 7721 ha of the Anglesea Heath (Alcoa Lease) to the north of Anglesea. Botanical

assessment here has highlighted the unusual richness of flora and fauna species, uncommon ecosystems and the importance of the area as a research site.

The coastal heathlands and woodlands extending from O'Donohue Road in Anglesea along the Great Ocean Road towards Urquhart Bluff are now part of the Angahook Lorne State Park and will be protected under the National Parks Act. The conservation groups and the individuals who made such great efforts to see this land preserved can be very proud of their achievements.

The whole of the coastal reserve between Urquhart Bluff and Painkalac Creek at Aireys Inlet, as well as privately owned land along the Great Ocean Road, is also listed on the Register of the National Estate. Conservation Covenants have been entered into between the Trust for Nature and the property owners. These covenants should ensure that this land remains free from development and will be preserved to provide habitat for native flora and fauna.

The Surf Coast Shire is committed to the further protection and enhancement of our beautiful coastal natural environment.

We can all help - full-time residents, part-time residents, holiday makers. The contribution, regardless of its size, will assist to protect and enhance this environment for present and future generations to appreciate and enjoy.

INDIGENOUS VEGETATION

What is indigenous vegetation?

Indigenous vegetation comprises those species of plants that grow naturally in a particular area.

Why is indigenous vegetation important?

Indigenous vegetation:

- provides habitat for native fauna - our birds, our mammals, our reptiles, our amphibians, our insects, our spiders
- is part of our botanical heritage.

Species lost are gone for ever.

How can indigenous vegetation be preserved, nurtured and restored?

Two main ways are:

- removing environmental weeds from our own properties and from reserves, roadsides, bushland
- planting species known to grow naturally in this area.

Why plant indigenous species?

It is important to plant indigenous species because they:

- maintain the unique local visual character of the area
- preserve the biodiversity of the region for future generations
- attract wildlife to gardens and provide habitat for native fauna
- help the movement of pollinators between remnants of bush vegetation
- extend the beauty of the local natural surroundings and reserves into home gardens
- have adapted to the low nutrients in our soils and do not need fertilising
- need little or no additional water once established
- do not become environmental weeds.

ENVIRONMENTAL WEEDS

Declaration of Weeds of National Significance, State Prohibited, Regionally Prohibited and Regionally Controlled weeds.

Certain weeds have been classified as noxious weeds. Some weeds included in this booklet have been identified as Weeds of National Significance (WONS), some as Regionally Controlled Weeds (RCW), and Serrated Tussock as a Regionally Prohibited Weed (RPW).

What are environmental weeds?

- Environmental weeds are plants that invade native vegetation, usually adversely affecting regeneration and survival of the indigenous flora and fauna.
- An environmental weed in Victoria can be an exotic plant introduced from overseas, an Australian native species from outside Victoria, a Victorian species that has spread outside its pre-European distribution, or in some cases an indigenous plant that has become 'out of balance' and has invaded indigenous vegetation communities.

Why do they grow so well?

- They find the local conditions perfectly suited to their needs because of soil type, climate and the absence of natural means of control.
- Many environmental weeds are very attractive and strong. We grow and care for them in our gardens for their beauty, and when they escape into the environment they usually grow faster than indigenous species and successfully compete for the available nutrients, water, space and sunlight.

For many of us, the beauty of much of our indigenous vegetation is less obvious - the flowers are small, the colours are more delicate and the foliage is more muted than that of many of our garden plants. A little time spent observing our native plants can provide unexpected appreciation, awareness and enjoyment.

What problems do they cause?

Environmental weeds:

- alter the landscape character of the Australian environment and cause extinction of local plant species
- reduce the available habitat for our local wildlife species
- can easily dominate natural vegetation and prevent regeneration of indigenous trees and shrubs
- increase fuel loads, and make areas more fire prone
- change water cycles and affect erosion
- change nutrient levels of the soil.

Environmental weeds are considered to be the single greatest threat to native vegetation.

How do they spread?

There are many ways in which plants with weed potential may be inadvertently dispersed.

- **Natural mechanisms:** Wind, water and animals (feral, domestic, & humans) with seed adhering to fur, feathers, feet, clothing etc.
- **Artificial mechanisms:** Vehicles, farm equipment, dumping of unwanted garden refuse, and moving of contaminated soil.

Aquatic plant species are also easily dispersed by human agency. Ships are known to have brought weed species into Australia, and some plants imported as aquarium plants have escaped and become serious pest plants.

Some exotic species have been deliberately introduced to stabilise soils and control erosion in coastal situations. Most are seriously weedy and are now considered environmental weeds.

Control of environmental weeds

As residents of the coastal areas of the Surf Coast Shire we have decided to live or spend our holidays in one of the most biologically rich areas of Australia. We have a responsibility to care for the area, to ensure that this rich environment is preserved for future generations.

We hope and feel confident that you will use the information provided in this booklet to assist you to control the growth of environmental weeds on your property, and that you will also encourage your friends and neighbours to do likewise. Many of the plants described in the booklet are beautiful and well-suited for growing in urban gardens - **they are just not suitable for growing in our coastal areas.**

When you begin to replace exotic plants with species native to the area, it could be useful to seek advice from those knowledgeable in the field.

Advice so given could include the following:

- Assess the site. Identify both indigenous and introduced species present. Remember many species will only be noticeable at certain times of the year.
- Ensure an understanding of the biology of the weed species present - growing season, seed dispersal, growth rate, root system, means of control.
- Commence hand weeding, cutting and painting stems or spraying with systemic herbicides, taking care not to disturb soil and adjacent indigenous species.
- Dispose of weeds carefully. Seed-heads, stem portions, bulbs and plants with persistent root systems should be sealed in bags and taken to Waste Disposal Sites.
- Maintain a sustained effort throughout the year.

Not the only ones

The environmental weed species described in this booklet are not the only problem plants for this area.

Seek advice when planting.

TREES AND SHRUBS

Acacia longifolia var. sophorae
Coast Wattle

Acacia longifolia var. longifolia
Sallow Wattle

Family
MIMOSACEAE

Description
These two species of wattle form large dense shrubs to 15m wide or trees to 10m high and bear yellow flower spikes in late winter and spring. The (phyllodes) leaves of the Coast Wattle are thick, short and broad while those of the Sallow Wattle are mostly thin, pliable and up to 20cm long. Hybrids between the two species are very common in the area.

Origin
Australia. Sallow Wattle - Eastern Vic. N.S.W. Coast Wattle - S.A. Vic and Eastern coast. Coastal dunes only.

Major Problems
Coast Wattle/Sallow Wattle is one of the worst environmental weeds in the area. Stimulated by fire it will produce many seedlings. It has invaded heathlands and woodlands smothering all other indigenous vegetation. It alters the nutrient balance of the soil preventing regeneration of indigenous vegetation. It creates large fuel loads. Seed is spread by birds. Many other introduced wattles are also dispersing seeds and becoming problem plants in our area.

Control Measure
Remove small plants by hand. Cut trunks of larger trees near ground level. If re-sprouting occurs re-cut and paint the stumps with herbicide.

Chamaecytisus palmensis

Family

Tree Lucerne (Tagasaste)

FABACEAE

Description
A large dense weeping shrub or small tree to 4m high with short stalked leaves that are formed of three leaflets. Cream to white pea flowers occur in winter and spring in clusters at the end of the short branches. These are followed by downy pods that grow to about 5cm long and contain approximately 10 seeds. Tree Lucerne is widely planted as hedges and in agriculture.

Origin
Canary Islands

Major Problems
This plant encroaches along roadsides and into reserves and bushland displacing indigenous vegetation. It is spread by birds, ants, graders, earth moving equipment and dumped garden waste. It is a prolific seeder and seed will remain in the ground for long periods of time. Fire will kill plants but will stimulate seed germination.

Control Measure
Pull small seedlings and plants by hand. Dig out or cut the stems of larger plants and treat the stumps with a systemic herbicide. Monitor area for seedling growth.

Chrysanthemoides monilifera ssp. Monilifera

Boneseed **RCW WONS**

Family
ASTERACEAE

Description
A soft wooded multi-branched large shrub or small tree to 3m with large oval leaves that are light green with toothed margins. Young growth is cobwebby. Leaf surface of mature plants is usually covered with fine white hairs. Bright yellow, daisy-like flowers appear in clusters at branch tips in late winter and spring. The fruit is covered with a green fleshy skin which later becomes black. Stems of old plants may form trunks to 10cm in diameter.

Origin
South Africa

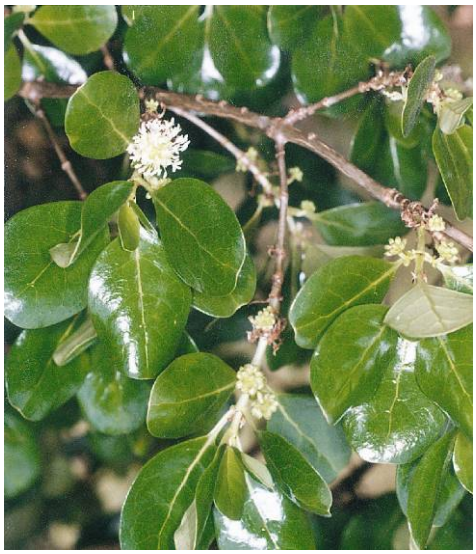
Major Problems
Boneseed is classified as both a Regionally Controlled Weed and a Weed of National Significance. It is a serious environmental weed within the Surf Coast Shire. It is a prolific seeder and the seed bank remains in the ground for many years. Dense thickets are formed eliminating the growth of indigenous species. Boneseed is fire sensitive but regenerates massively after burning. Birds are the main agents for seed dispersal.

Control Measure
Most plants can be removed by hand. Cut stems of large shrubs and treat the stumps with a systemic herbicide. Monitor for new plants.

Coprosma repens

Family

New Zealand Mirror Bush



RUBIACEAE

Description
A large shrub or small tree to 5m high. It is a vigorous, salt-tolerant species that thrives in coastal areas where it has often been planted as a hedge or windbreak. Glossy, deep green, rounded leaves, slightly notched at the tip and almost fleshy, are a familiar characteristic of this plant. Small creamy-white clusters of flowers are present during summer months. These flowers are followed by orange-red berries.

Origin
New Zealand

Major Problems
Spreads along roadsides and into reserves where it tends to grow in quite dense clumps eliminating indigenous species. Birds, particularly blackbirds, feed on the berries, and thus transport the seed to new areas. In coastal dunes the species can become almost prostrate, and new plants will form where branches touch the ground.

Control Measure
Pull small plants by hand. Dig out or cut and treat the stems of larger shrubs and trees with a systemic herbicide.

Erica Lusitanica
Spanish Heath

Family
ERICACEAE

Description
A shrub to 2.5m high, bearing masses of white or pink tubular flowers during winter and early spring. The leaves are crowded in whorls of 3 or 4 , short and very narrow. Seeds are produced during spring.

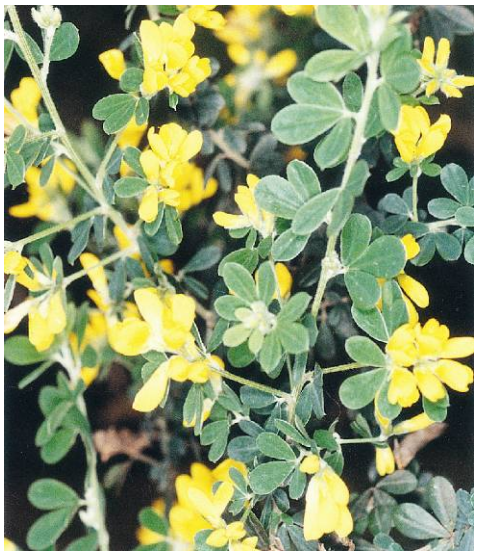
Origin
Spain, Portugal and France.

Major Problems
This is a particularly invasive plant spreading along roadsides and into reserves and coastal heathlands. It produces dense cover and prevents growth of indigenous plant species. Seeding is prolific and the small seeds are spread by water, wind, graders, slashing equipment and animals. Roots readily sucker.

Control Measure
Pull seedlings by hand or dig out when soil is damp. Cut stems of larger shrubs at ground level and treat stumps with a systemic herbicide. With large infestations spray foliage with systemic herbicide.

Genista linifolia
Flax-leaf Broom RCW

Genista monspessulana
Montpellier Broom (Cape Broom)
RCW



Family FABACEAE

Description
Both species form dense stands of shrubs to 3m high and bear yellow pea flowers at the end of their branches in late winter to spring. The leaves of both species are formed in three leaflets. Flax-leaf Broom has silvery grey-green leaflets while those of Montpellier Broom are dark green. Flax-leaf Broom bears seeds in grey to black silky pods while Montpellier Broom has brown or black flat pods.

Origin
Mediterranean region

Major Problems
Both species are classified as Regionally Controlled Weeds and are very serious environmental weeds in our area, encroaching on grazing land, along roadsides and into reserves and neglected areas providing a haven for rabbits and other vermin. They displace indigenous vegetation. They are both prolific seeders and form large seed banks which will remain in the ground for many years. Seed is dispersed by wind and animals. Burning will kill adult plants but stimulates seed germination. English Broom is also a problem plant in certain areas.

Control Measure
Pull up seedlings by hand. Dig out, or cut the stems of larger shrubs and paint the stumps with a systemic herbicide.

Hakea drupacea

Family

Sweet Hakea

Hakea laurina
Pincushion Hakea

PROTEACEAE

Description
Both species of hakea form dense large shrubs to 4m high and bear flowers in autumn. Sweet Hakea (formerly known as Hakea suaveolens) has a cream inflorescence while Pincushion Hakea bears red and creamishpink round pincushion flowers. The leaves of Sweet Hakea are narrow and divided into 2-8 segments, while Pincushion Hakea has narrow elliptical leaves. Both species are commonly planted as hardy, salt-tolerant shrubs in coastal areas. Several other species of hakea are indigenous.

Origin
Western Australia

Major Problems
Hakea species tend to grow very quickly and rapidly invade, especially in coastal situations. The fire sensitive shrubs sprout and regenerate prolifically after burning when small seedlings will be found in very high numbers. Both species smother indigenous vegetation and prevent regeneration. Seed is spread by wind and in dumped garden waste. Other introduced hakea species are also of concern.

Control Measure
Pull seedlings by hand. Kill larger plants by cutting the stems as close to ground level as possible. Should re-sprouting occur, re-cut and treat the stumps with a systemic herbicide.

Leptospermum laevigatum
Coast Tea-tree

Family

MYRTACEAE

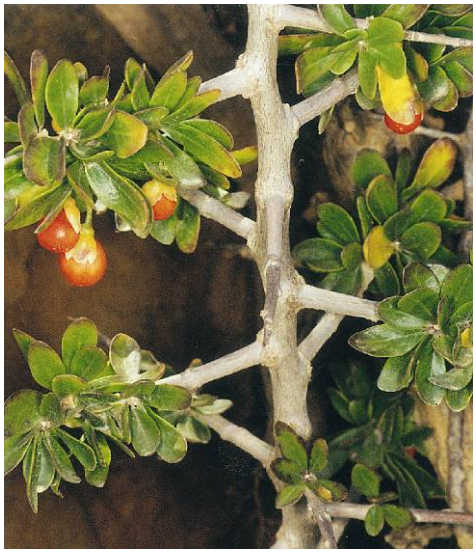
Description
A shrub or small tree to 5m high with dull grey-green, stiff leaves and large white flowers that appear in the spring. The capsules which develop after flowering are flat topped. The bark flakes in thin strips.

Origin
Coastal New South Wales and Victoria. Should not naturally occur further west than Torquay.

Major Problems
Coast Tea-tree is one of the worst environmental weeds when it invades areas outside its range. It has invaded many coastal areas since the 1983 fires forming thickets on dunes and heathlands, and smothering all indigenous vegetation. It is spread by wind, water, human planting and in dumped garden waste. It is fire sensitive, but regenerates prolifically after burning from canopy stored seed. It also creates large fuel loads.

Control Measure
Pull up seedlings as soon as observed. Cut the stems of larger plants at ground level. Should re-sprouting occur, re-cut and treat the stumps with a systemic herbicide.

Lycium ferocissimum
African Box-thorn RCW



Family
SOLANACEAE

Description
A large multi-branched shrub to 5m high with mature rigid stems that are brown to grey bearing stout spines to 15cm long. Smaller spines terminate the numerous branchlets. The smooth, fleshy, short stalked leaves form in clusters at the numerous nodes. White flowers with lilac or purple throats are followed by green berries about 1cm diameter that turn orange-red mainly in the summer.

Origin
Southern coast of Africa

Major Problems
Box-thorn is classified as a Regionally Controlled Weed. It is an aggressive plant, its spines making it a formidable barrier to people and animals, although thickets commonly harbour rabbits. It grows densely, eliminating the growth of indigenous vegetation. The fruit is commonly eaten and spread by birds (especially by silver gulls and blackbirds in coastal areas) and also by foxes.

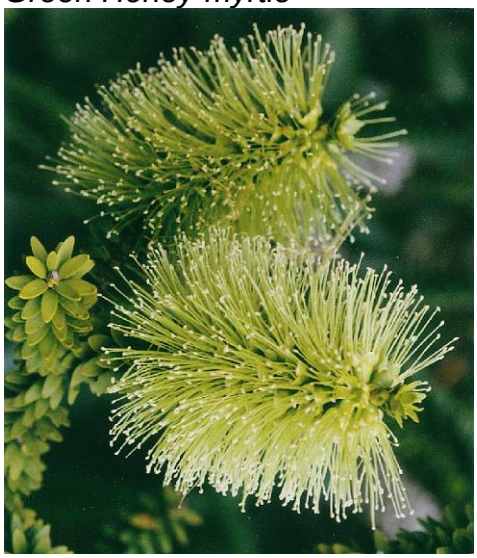
Control Measure
Cut the stems and treat the stumps with a systemic herbicide. Plants reshoot vigorously from the base if the top growth is broken or removed without treatment.

Melaleuca armillaris

Family

Giant Honey-myrtle

Melaleuca diosmifolia
Green Honey-myrtle



MYRTACEAE

Description
Giant Honey-myrtle is a large spreading shrub or tree to 5m high with firm, rough bark. Creamish yellow bottlebrush-like flowers to 6cm long appear in spring and summer. The leaves are slender with recurved pointed tips. Green Honey-myrtle is a large, dense, upright shrub to 3m with crowded leaves. Light green bottlebrush-like flowers with green stamens and yellow anthers appear in the summer and spring.

Origin
Giant Honey-myrtle - Eastern NSW. and Gippsland. Green Honey-myrtle - Western Australia

Major Problems
Both species are very serious environmental weeds as they are fast growing and quick to invade coastal heathlands, reserves and roadsides. They increase fuel loads, making areas more fire prone. Growth of seedlings is stimulated greatly by fire. The seed is dispersed by wind and water.

Control Measure
Pull seedlings by hand. Dig out or cut the stems of larger plants at ground level. If re-sprouting occurs re-cut and apply a systemic herbicide.

Melaleuca hypericifolia

Family

Red Honey-myrtle

Melaleuca nesophila
Mauve Honey-myrtle

MYRTACEAE

Description
Red Honey-myrtle is a dense shrub to 4m high with drooping branches. The leaves sometimes turn red or have bronze tips in winter. The large rusty red bottlebrush-like flowers are concealed amongst the foliage in late spring and summer. Mauve Honey-myrtle is a bushy, fast growing large shrub or small tree to 4m high. Pinkish-mauve terminal flower heads tipped with gold appear during the summer months.

Origin
Red Honey-myrtle - Queensland and N.S.W. Mauve Honey-myrtle - Western Australia

Major Problems
Both species are serious problem plants as they spread very easily from gardens into roadsides, reserves and bushland. They are fast growing shrubs, displacing the indigenous vegetation. The seed is dispersed by wind and water. The Red Honey-myrtle is particularly invasive often forming quite dense thickets of new plants.

Control Measure
Pull seedlings by hand. Dig out, or cut the stems of larger plants at ground level. If re-sprouting occurs re-cut and treat the stems with a systemic herbicide.

Paraserianthes lophantha
Cape Wattle

Family
MIMOSACEAE

Description
A large fast-growing shrub or small tree to 5m high with large much dissected feathery leaves and creamy yellow bottlebrush shaped flower spikes in winter and spring. The flowers are followed by large dark brown seed pods that split to expose the large black, bird-dispersed seeds.

Origin
Western Australia

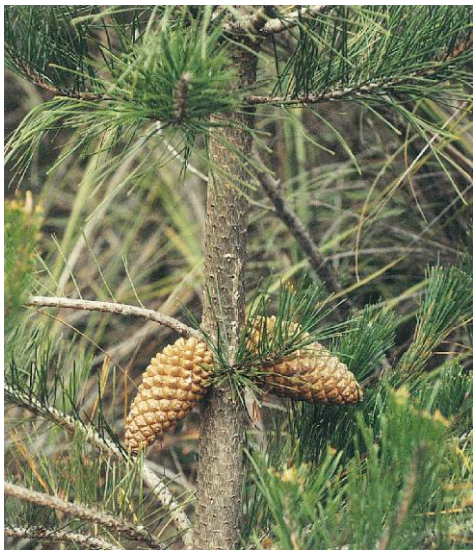
Major Problems
A major weed particularly along the coast where the plants form dense thickets replacing indigenous vegetation. It is an aggressive species usually establishing along roadsides and bushland margins before invading adjacent undisturbed areas. The species seeds prolifically with the seeds being spread by birds, wind and water. Fire stimulates the growth of thousands of seedlings. Cape Wattle increases fuel loads, making areas more fire prone. Seeds remain viable for decades in the soil.

Control Measure
Early treatment is the best method of eradication. Pull out seedlings by hand. Dig out or cut the stems of larger plants at ground level.

Pinus pinaster
Maritime Pine

Family
PINACEAE

Pinus radiata
Radiata Pine



Description
Large cone-bearing trees with slender needle-like leaves. Radiata Pine has leaves in groups of 3, while Maritime Pine has leaves in pairs. Flowers are borne in late winter, when male cones scatter pollen abundantly to fertilise the female cones. Pines were planted in the forested areas near Anglesea for timber, and many large trees with their distinctive cones are still apparent in the area. Pinus radiata and Pinus pinaster are the most common, but other species also exist.

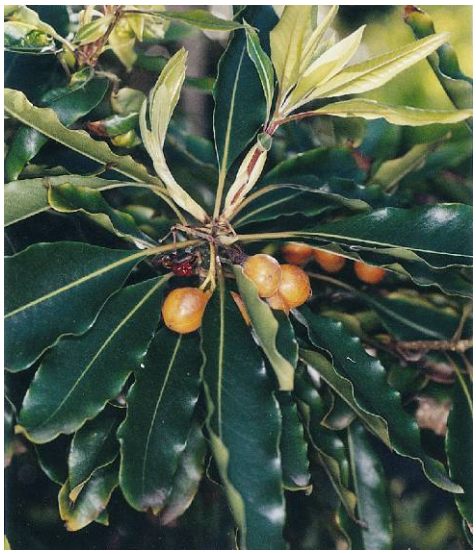
Origin
Maritime Pine - Mediterranean Coast Radiata Pine - California

Major Problems
Pines suppress and kill understorey plants because of shading and excess water use. The winged seeds are released from mature cones and spread by the wind. Intense fire kills the trees but causes large seed release. Mature pines seed into adjacent roadsides and bushland where many seedlings will establish themselves.

Control Measure
Pull out small seedlings. Cut trees at base or ringbark trunks.

Pittosporum undulatum
Sweet Pittosporum

Family
PITTOSPORACEAE



Description A tree to 15m. Leaves grow to about 12cm and are shiny and elliptical with wavy margins. Small creamy white, perfumed flowers appear in terminal clusters in spring. The flowers are followed by large berries that turn orange when ripe.

Origin
East Victoria, New South Wales and Queensland.

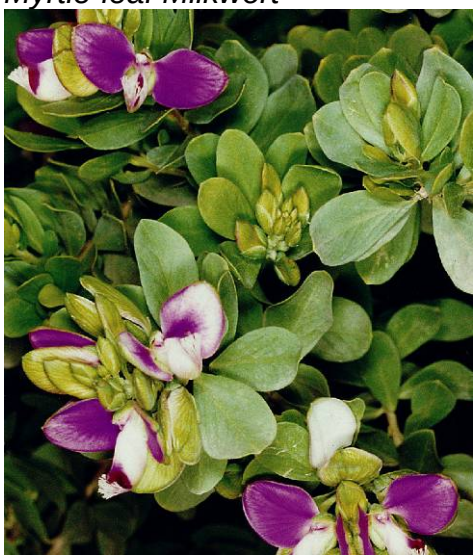
Major Problems
This species is a serious threat because of its ability to spread quickly from gardens to reserves and natural bushland communities, where it forms a very dense canopy excluding all light to the understorey. It is particularly invasive in warm temperate forests and woodlands, but invades a great range of vegetation types. The sticky seeds are eaten and dispersed to new areas by birds, especially currawongs, silvereyes, and blackbirds.

Control Measure
Early treatment is the best method of control. Pull out small seedlings. Cut larger stems and treat the stumps with a systemic herbicide.

Polygala myrtifolia var. myrtifolia

Family
POLYGALACEAE

Myrtle-leaf Milkwort



Polygala myrtifolia var. grandiflora
Myrtle-leaf Milkwort

Description
Both species form shrubs to 3m high with clusters of pinkish-purple pea-like flowers being displayed on the ends of leafy branches almost all the year round, although the main flowering season is from late winter to spring. Polygala grandiflora is a much stronger species. The flowers are larger, and the longer tapering leaves are a darker green.

Origin
South Africa

Major Problems
Myrtle-leaf Milkwort is a very serious environmental weed. It is a salt-tolerant species that thrives in Australian conditions, especially in the coastal, sandy soils where it builds up a large seed bank. Plants are fire sensitive but germinate massively after burning. Seedlings form dense carpets under adult plants, smothering all associated vegetation. Seed is dispersed by water and ants and also by the dumping of garden refuse. Polygala grandiflora once thought to be sterile is now recorded as being able to set seed, and so could also become a problem plant.

Control Measure
Pull seedlings by hand. Dig out or cut the stems of larger plants, and treat the stumps with a systemic herbicide.

Rhamnus alaternus
Italian Buckthorn

Family
RHAMNACEAE

Description A large dense shrub or small tree to 5m with dark green foliage, glossy on top and paler underneath. The leaf margins are often shallowly toothed, and the leaf has a pointed tip. Yellow-green fragrant flowers appear in clusters from May to October. Fruiting is prolific and red berries appear in summer and turn black. The species is sometimes used as an ornamental plant or hedge.

Origin
Europe

Major Problems
This species is a very serious environmental weed. It will stand considerable drought and thrives near the coast where it has escaped into native vegetation forming medium to large populations. It crowds out the indigenous species where its dense growth prevents light reaching the ground-cover plants. Plants reshoot vigorously from the base whenever top growth is damaged or removed. Seed is dispersed by birds, especially blackbirds, and also by dumping of garden wastes.

Control Measure
Pull seedlings by hand. Dig out or cut and treat the stems of larger plants with a systemic herbicide.

Rubus Fruticosus spp. Aggregate
Blackberry RCW WONS

Family
ROSACEAE

Description
A scrambling shrub growing in thickets from 2 to 3m high with stems arching and entangling. The large dark green leaves are alternate and divided into 3 or 5 leaflets, often with whitish hairs on the light green underside. There are short prickles on the leaf stalks and the underside of veins. White or pink flowers appear in late spring or summer with the fruit ripening in summer to autumn. Take care to distinguish from the native Small-leaf Bramble which has smaller, lighter green leaflets.

Origin
Europe

Major Problems
Blackberries are classified as both a Regionally Controlled Weed and a Weed of National Significance. They are highly invasive plants, reproducing by seed, root suckers, and from the trailing stems that will root and form other plants. They cover large areas with a dense canopy that excludes light from the soil surface, suppressing growth of other plants. The fruit is attractive to birds which play a major role in dispersion.

Control Measure
Control is difficult because of the aggressive nature of the species. Spray foliage with a systemic herbicide in autumn and early spring.

Ulex europaeus
Furze (Gorse) RCW WONS

Family
FABACEAE

Description

A large shrub to 3m, easily recognised by its bright yellow fragrant pea flowers, and its many-branched stems armed with numerous spines which grow to 5cm long. Flowers appear in winter and early spring. The flowers are followed by dark brown, oblong, hairy seed pods.

Origin
Europe

Major Problems
Furze/Gorse is classified both as a Regionally Controlled Weed and a Weed of National Significance and is a very serious environmental weed in the Surf Coast Shire. It is highly invasive and provides excellent shelter for rabbits. It is highly flammable and greatly increases fire risk. Seed production is prolific and the seeds remain viable in the ground for many years. Seeds are dispersed by birds and by water.

Control Measure
Control is difficult because of the strength of the plant and its sharp spines. Seedlings and smaller plants can be dug out. With larger plants apply systemic herbicide to foliage or cut the stems and paint the stumps with the herbicide.

HERBS AND SUCCULENTS

Agapanthus praecox ssp. orientalis
Agapanthus (African Lily)

Family LILIACEAE

Description Bulbous perennial herb growing from a thick rhizome. Large blue or white flower heads on long stems to about 1m high emerge from a mass of glossy green strap shaped leaves in summer. The seed capsules release abundant glossy black winged seeds in late summer and autumn.

Origin South Africa

Major Problems Commonly naturalises in a variety of coastal and inland situations where plants can often be seen growing along roadsides. Reproduction is by seed or dumped garden refuse. Seeds are wind and water dispersed, sometimes for many metres along drainage lines.

Control Measure Dig out and remove plants, or use systemic herbicide applied to foliage. As an interim measure remove the seed heads before they ripen and release their seeds.

Allium triquetrum
Angled Onion RCW

Family
LILIACEAE

Description
A bulbous summer-dormant perennial herb 30 to 50cm with flat green leaves. White tubular flowers with green stripes appear from winter to spring. The plant has a characteristic garlic odour.

Origin
Western Mediterranean region

Major Problems
Angled Onion is classified as a Regionally Controlled Weed. It is an extremely aggressive plant that has the potential to rapidly occupy large tracts of land. It often grows extensively on drainage lines and other moist sites, completely smothering adjacent vegetation. Dispersal is by seed and bulbs being transported by water along drainage lines. It is also spread by road maintenance machinery and the spread of contaminated soil.

Control Measure
If the invasion is a small one, dig up the plants in autumn and spring and remove the bulbs from the soil. Usually because of the scale of the problem, the most appropriate means of control is to apply systemic herbicide to foliage.

Arctotheca calendula
Cape Weed

Family
ASTERACEAE

Description
A prostrate, spreading annual to 30cm high. The yellow daisy like flowers with dark centres appear from September to November.

Origin
South Africa

Major Problem
Cape Weed is becoming more prevalent in the Surf Coast area and is often seen along roadsides, on the edges of tracks and even in our reserves and on coastal dunes. It forms quite extensive clumps of vegetation which because of their dense nature smother the small ground-covering indigenous species. Seed is spread by wind and in dumped garden waste.

Control Measure
Dig up and dispose of the stems and roots appropriately to prevent spread of the plant. Ensure that all small pieces are removed from the site or new plants will form. Systemic herbicide can be applied to foliage as an alternative to digging up plants.

Crocosmia x crocosmiiflora
Montbretia

Sparaxis bulbifera
Bulbil Sparaxis

Family
IRIDACEAE

Description
Both species are corm-bearing perennial herbs. Sparaxis grows to 35cm high and in the spring produces masses of creamish-white flowers, the outside tinged with purple. The flowers, on wiry stems, stand quite tall amongst clumps of bright green leaves. The flowers can have numerous colour variations. Montbretia grows to 90cm high and produces stems with up to 20 yellow to orange trumpet-shaped flowers.

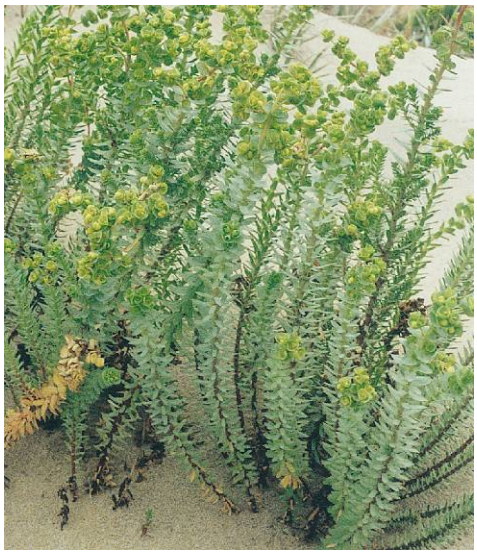
Origin
South Africa

Major Problems
Both of these species are posing a very serious threat to associated vegetation spreading along roadsides and into reserves where they form widespread ground cover. They smother indigenous species. Sparaxis is spread by wind moving bulbils which form in axils of stem leaves. Montbretia is spread as corms and rhizomes are moved to new areas by water or by road maintenance equipment. Many populations have originated from garden rubbish dumping.

Control Measure
Foliage can be sprayed with systemic herbicide. Sparaxis should be treated in late winter when new corms and bulbils are not yet fully formed, while Montbretia should be sprayed in spring before new corms develop and flower stalks lengthen.

Euphorbia paralias
Sea Spurge

Family



EUPHORBIACEAE

Description
A fleshy perennial herb 60 - 90cm with a long tap root and clusters of yellowish-green flowers being borne on the ends of long stems especially in the summer. Mass germination occurs in spring-summer. Stems die off after flowering and are replaced by new stems arising from the root crown. Dead stems generally remain on the plant for another season.

Origin
Mediterranean region

Major Problems
Sea Spurge has invaded most of our coastal primary dunes to the detriment of our indigenous coastal vegetation. It changes the dune shape from softly angled to a steeper form more prone to being undercut by wave action. It is difficult to remove because of the very long tap root. Seed is spread by wind and on ocean currents and also by beach recreation equipment.

Control Measure
Pull out plants after rain. Otherwise dig the roots out from the sand carefully as, when damaged, the plant exudes a caustic milky sap which can be harmful to the eyes. Take care to remove all pieces of the crown as new plants will form. Systemic herbicide can be applied to foliage.

Freesia alba x F. leichtlinii *Family*

Freesia

IRIDACEAE

Description
Both species are corm-bearing perennial herbs. Freesias grow to 30cm high with flat leaves arranged in a fan shape. The highly fragrant white to cream coloured flowers with yellow markings often have purple markings on the outside of the tube. A wide range of colours is available in garden varieties. Wild Gladiolus has 3-6 basal leaves and grows to 80cm high with 3-8 white to cream flowers with a blue-green tinge.

Origin
South Africa

Major Problems
Both species can spread rapidly by producing abundant corms. Freesias also spread by seed. Both species appear along roadsides and in our reserves often as a result of dumped garden waste or contaminated soil. Both species displace our indigenous vegetation.

Control Measure
Freesias need to be kept under control as garden flowers. Dig up and dispose of the corms of any escapes in an appropriate manner to prevent spread of the plants. Where removal of plants by digging is impracticable, apply systemic herbicide when plants are actively growing in late winter. Wild Gladiolus can also be treated with a systemic herbicide as the hundreds of tiny cormils produced by each bulb make it almost impossible to remove the species by digging.

Gladiolus undulatus
Wild Gladiolus

Gazania linearis
Gazania

Family
ASTERACEAE

Description
A perennial low-growing, clump-forming trailing herb. Large daisy-type flowers of varying shades of orange and yellow, often with shades of brown, appear amongst clumps of greenish-grey leaves over long periods of the year. Other forms in varying colours are also available.

Origin
South Africa

Major Problems
This species tends to smother all indigenous vegetation as it grows in clump size. It has spread along roadsides, into reserves and on to the coastal dunes. The plant spreads by seed and also by pieces of root often as a result of road maintenance machinery or dumped garden waste.

Control Measure
Dig up and dispose of the stems and roots appropriately to prevent spread of the plant. Ensure that all small pieces are removed from the site or new plants will form. Systemic herbicide can be applied to foliage as an alternative to digging up plants.

Lotus creticus
Cretan Trefoil

Family
FABACEAE

Description
A perennial herb from 30 to 40cm with bright golden yellow pea flowers appearing from amongst masses of silky, silver three-lobed leaves. The flowers mainly appear in summer and autumn, and are followed by pods bearing nine to fifteen seeds.

Origin
Mediterranean coast and Portugal.

Major Problems
Cretan Trefoil is a prolific seeder and is establishing itself on the coastal dunes where it has spread at a very fast rate as the ripe seed pods explode scattering the seed. Cretan Trefoil completely smothers the low indigenous vegetation amongst which it grows.

Control Measure
This species is very difficult to eradicate. The complex root system makes it almost impossible to pull by hand, and even to cut and spray the stems of major infestations is very tedious. Application of a systemic herbicide to the foliage is the best means of control.

Senecio elegans
Purple Groundsel

Family
ASTERACEAE

Senecio jacobaea
Ragwort RCW

Description
Purple Groundsel is an annual herb growing from 20-100cm tall and bearing rich purple flowers with yellow centres in spring and summer. Ragwort is a biennial or perennial herb from 45 to 60cm with bright yellow flower heads usually appearing in large clusters at the end of branches in late spring and summer. The young plant develops as a rosette of leaves, deeply cut and wrinkled, dark to mid-green on upper surface, lighter and slightly downy underneath.

Origin
Purple Groundsel - South Africa, Ragwort - Europe

Major Problems
Purple Groundsel is invading our coastal dunes and is spreading rapidly displacing indigenous vegetation. Seeds are spread by wind and by contaminated sand. Ragwort is classified as a Regionally Controlled Weed and is a potential threat to our indigenous plants. It is a prolific seeder and the seed can remain viable in the ground for many years. The seed is spread by wind and water, and also by animals and vehicles. The plant reproduces from crowns, roots and seeds.

Control Measure
Purple Groundsel can be hand weeded. Ragwort is difficult to eliminate as new plants will grow from the smallest pieces of crown. Treat Ragwort plants with a systemic herbicide.

Watsonia meriana var. bulbillifera
Bulbil Watsonia RCW

Family
IRIDACEAE

Description
A perennial summer-dormant herb to 2m high with large underground

corms and small stem bulbils. Salmon pink to orange-red trumpet-shaped, curved flowers appear in summer on terminal spikes growing from amongst clumps of strap-like green leaves.

Origin
South Africa

Major Problems
Bulbil Watsonia is classified as a Regionally Controlled Weed, and is a very serious environmental weed encroaching along roadsides and into bushland, displacing associated vegetation. It spreads rapidly, often being transferred to new areas by road maintenance equipment and during slashing. Dispersal of bulbils is usually by water along drainage lines.

Control Measure
Dig out individual plants taking care not to damage the roots of adjacent indigenous vegetation. Great care should be taken to prevent bulbil formation. Large infestations are best sprayed with a systemic herbicide to the foliage as bulbils are forming in late winter or early spring.

Zantedeschia aethiopica
Arum Lily

Family
ARACEAE

Description
Perennial herb with large starchy tuber-like underground rhizome. The small yellow male and female flowers arranged in the central column are surrounded by a large white spathe on an erect stem to 1m. Leaves are large, dark green and arrowhead shaped. Flowers mostly in spring and early summer, but often at other times. The plant produces berries that turn orange when ripe.

Origin
South Africa

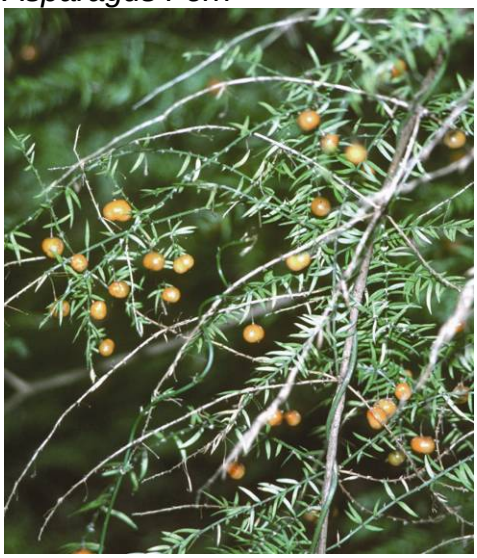
Major Problems
Highly invasive along streams, drainage lines and in swamps or in inter-dune corridors. Reproduces by bird or water dispersed seed and by fragmentation of rhizome. Is often spread by movement of contaminated soil and through dumping of garden waste. The species is considered extremely poisonous to all animals and is also toxic and can cause irritations to humans.

Control Measure
Carefully dig out plants, taking care to remove all the rhizome fragments, or use systemic herbicide applied to foliage.

CLIMBERS AND CREEPERS

Asparagus asparagoides
Bridal Creeper WONS

Asparagus scandens
Asparagus Fern



Family
LILIACEAE

Description
Both Asparagus species are twining, climbing perennial herbs. Bridal Creeper has dense bright green leaves and small greenish white flowers that appear in late winter and spring. These are followed by bright orange-red berries. Asparagus Fern is somewhat fern-like in appearance and produces orange to red berries in spring and summer. These berries may remain on the plant until the next flowering season.

Origin
South Africa

Major Problems
Bridal Creeper is classified as a Weed of National Significance. It is a major weed in the region and is most abundant in coastal areas on dunes. It smothers and eliminates associated ground vegetation and also forms huge masses of canopy over shrubs and trees preventing any regeneration occurring. Asparagus Fern is becoming more common and has invaded some of our reserves and moister areas. It also smothers and eliminates associated vegetation. Birds disperse the seeds of both species.

Control Measure
Dig out and remove entire rootstock, including rhizomes and tuberous roots. In situations where this is impracticable, spray foliage during active growth with a systemic herbicide.

Delairea ordorata

Family

Cape Ivy

ASTERACEAE

Description
A robust climbing or scrambling perennial herb to 4 or more metres high with dense, pale green, smooth ivy like leaves and fragrant bright yellow flowers in winter. Stems and runners tend to be purple and are easily broken.

Origin
South Africa

Major Problems
A dense vigorous fast-growing climber that twines or scrambles over associated plants, forming a dense ground cover to 30cm thus preventing growth of indigenous vegetation. It also forms an overhead canopy, eventually killing the vegetation over which it climbs. It is very shade tolerant and grows successfully in gullies, along river banks, in cool forests and in coastal scrub.

Control Measure
Cape Ivy does not produce seeds, thus all reproduction is by vegetative means. Stems root where they touch the soil, and new plants arise from fragmentation. Material should be disposed of safely. Control is affected by application of a systemic herbicide to foliage, or by fire.

Dipogon lignosus
Dolichos Pea

Family
FABACEAE

Description
A robust semi-woody vine climbing many metres over other vegetation to heights of 6m. Stems are initially thin but become woody and rope-like. Leaves are bright green with three leaflets. Abundant pinkish purple or white pea flowers appear during late winter, spring and summer. After flowering, the plant produces large pea-like pods.

Origin
South Africa

Major Problems
Dolichos Pea is a devastating weed of coastal shrubland. It is highly invasive, smothering and eliminating associated ground vegetation. It also forms a canopy over shrubs and trees preventing any regeneration occurring. The species seeds prolifically and seeds remain viable for decades in the soil. Seed is spread by birds, in contaminated soil and in dumped garden waste. Massed seedlings appear after fire.

Control Measure
Pull out seedlings by hand. For larger plants apply systemic herbicide to foliage or cut the stems at ground level and apply systemic herbicide. Take care to remove all cut pieces and pulled seedlings from the site as rooting can occur. Monitor areas for regrowth of seedlings.

Hedera helix

Family

English Ivy

ARALIACEAE

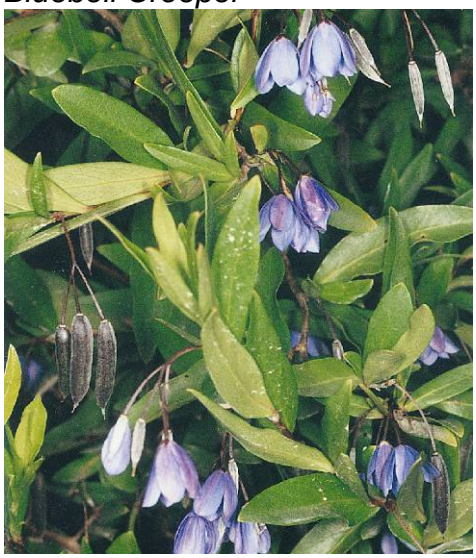
Description
A large woody climber attaching itself to trees, rocks and other surfaces by numerous fine stem roots. Horizontal stems root at the nodes when they contact the soil. This perennial evergreen grows to a height of 30m or more. It has small yellowish-green flowers in the autumn and small, black berries in the winter.

Origin
Europe

Major Problems
Ivy is highly shade tolerant and forms a dense impenetrable ground cover. It then climbs and smothers shrubs and trees. It may occur in a variety of locations and is most seriously invasive in forests where it grows high into the canopy. Birds eat the berries and disperse the seeds.

Control Measure
Physically remove the plant, ensuring all stems are dug out. Plants climbing up trees will die if stem is cut at the base in summer. After cutting, pull the bark away from the stem in the ground and immediately paint with systemic herbicide. Alternatively apply systemic herbicide to foliage.

Sollya heterophylla (current name Billardiera heterophylla)
Bluebell Creeper



Family
PITTOSPORACEAE

Description
A dense, tangled shrub to about 1.5m high, or twining climber to 3m or more with smooth dark-green leaves. Juvenile plants do not climb, but after establishing their root system the plants quickly convert to the mature form. The plant has nodding, deep blue bell-shaped flowers from spring to summer. After flowering the plant produces pendant, translucent grey-green sausage-shaped berries that darken as they ripen.

Origin
Western Australia

Major Problems
This is one of the region's most devastating weeds, smothering and strangling associated vegetation. Large colonies of many metres wide can be formed by purely vegetative means. The species thrives in a wide range of environments including dune shrubland, heathland, woodland and forest. Thousands of seedlings appear after fire. Birds disperse the seeds to new areas.

Control Measure
Early treatment is the best method of control. Pull out seedlings by hand. Dig out larger plants or cut the stems and paint with systemic herbicide.

Vinca major

Family

Blue Periwinkle

APOCYNACEAE

Description
A trailing perennial herb capable of covering hundreds of square metres. It forms a dense intertwined ground cover with dark green, shiny leaves and sky blue flowers in spring.

Origin
Europe

Major Problems
Blue Periwinkle is a very serious threat to our indigenous plants as it smothers and prevents the growth of associated vegetation. It produces little or no seed and is spread primarily by stems rooting at the tips. Roots also develop where stem nodes come in contact with the soil. Thus the species can progress to cover large areas, especially in shaded moist locations. It will also grow in a wide range of conditions on moderately fertile soils provided there is seasonal moisture.

Control Measure
Dig out and remove all stems and rhizomes. This process is very difficult and usually impracticable. Systemic herbicide applied to foliage is the best method of control.

GRASSES

Family
POACEAE

Many weedy grasses compete with the local flora, spreading over large areas, and preventing the regeneration of indigenous vegetation. They are usually wind pollinated and often set a high level of seed which is also spread by earth-moving machinery, slashers and animals as the seed adheres to their bodies. Herbicides are often the best means of control, but if these weedy grasses have invaded native vegetation, then time and patience are required to conserve the indigenous vegetation. Identification of grasses is difficult and challenging. Some of the most problem weedy grasses in the area include:-

Ehrharta erecta
Panic Veld Grass

Occurs in grassy woodlands, forests, heathlands and riparian areas. An aggressive perennial herb with short rhizomes and aerial stems to 60cm high. Leaf blades are flat to 20cm long and 2-10mm wide. Flower spike is 10-40cm long emerging at any time of the year. Can be removed by digging as rhizomes are very shallow. Annual Veld Grass Ehrharta longifolia is also a problem weedy grass in the area.

Origin South Africa

Lagurus ovatus
Hares-tail

Occurs in dry coastal vegetation, grasslands, grassy woodlands and wetlands. This hairy annual grass grows in small tufts and has aerial stems to 60cm high bearing the well-known “Hares-tail”. The leaves are grey-green and velvety with the blade to 20cm long and 15mm wide. Easily removed by hand pulling.

Origin Mediterranean

Paspalum dilatatum
Paspalum

Occurs in heathlands, grasslands, woodlands, forests, wetlands and riparian areas. Summer growing tufted perennial herb with rhizomes. The leaf blades are flat to 20cm long and 15mm wide. The flowers are borne on aerial stems to 20cm high with hanging green or purplish flower heads up to 12 cm long. Its dense habit of growth smothers all ground flora.

Origin South America

Pennisetum clandestinum
Kikuyu

Occurs in coastal heathlands and dunes, grasslands, grassy woodlands, moist forests and riparian areas. A vigorous perennial herb with long rhizomes and trailing stems that produce roots. The species forms a dense mat, growing over itself and any other vegetation in its way, thus eliminating all other ground flora. The flowers are very inconspicuous.

Origin Eastern Africa

Stenotaphrum secundatum
Buffalo Grass

Occurs in most bushland settings but is most troublesome on light sandy soils along the coast where it will eliminate all other ground flora. A perennial herb with rhizomes and trailing stems that produce roots. The leaf blades are flat and broadly channelled. The flowers are borne on an aerial stem to 40cm high.

Origin Southern USA

Cortaderia selloana
Pampas Grass
Family
POACEAE

Description
A perennial herb to 4m high that forms a massive tussock of long, narrow, sharp-edged leaves. Large white feathery flower heads appear on long stalks in the autumn. Seeds are produced during winter and spring. Another species, Pink Pampas Grass Cortaderia jubata, also grows in the area and causes concern.

Origin
South America

Major Problems
Commonly planted around dams and in gardens, this species forms dense, impenetrable thickets that exclude most other ground cover. It completely changes the structure of the habitat it invades. Individual flower heads contain huge numbers of seeds with viability exceeding 75%. It spreads very easily along roadsides and into native vegetation as seeds from the flower heads are dispersed freely by the wind for many kilometres. It also reproduces by underground rhizomes.

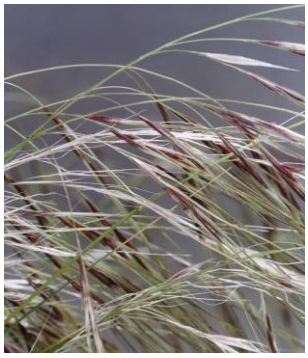
Control Measure
Pull or dig out small plants when first noticed. Apply systemic herbicide to foliage of larger plants. Follow up spraying may be necessary. Flowering heads should be removed as an interim measure.

Nassella trichotoma

Family

Serrated Tussock
RPW WONS

Nassella neesiana
Chilean Needle Grass
WONS



POACEAE

Description
Serrated Tussock is a perennial tussock-forming grass, often mistaken for a native tussock grass, but can be identified by the small serrations on the leaf surface that can be felt when the leaves are pulled upwards between the fingers. The plant grows up to 50cm high with a 75cm diameter of drooping leaves. Flowering occurs in the spring. Flowers first appear purple and then golden. Chilean Needle Grass is a tussock forming spear grass similar to several native species but distinguishable by a distinct collar or ring around the top of the mature seed. Tussocks are often a lighter green.

Origin
South America

Major Problems
Both of these species are classified as Weeds of National Significance and Serrated Tussock as a Regionally Prohibited Weed. They invade native grasslands, pastures, grassy woodlands and riparian areas. They have large seed banks and seeds are easily spread by wind, machinery and vehicles, and by slashing. Needle grass is also spread by adhering to animals, clothing, footwear etc.

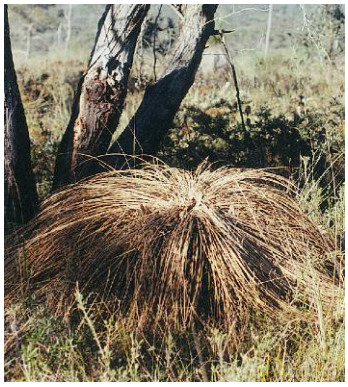
Control Measure
Commence treatment as soon as noticed. Methods include digging out or spraying with systemic or grass-selective herbicides: Serrated Tussock in spring, Needle Grass in autumn.

CINNAMON FUNGUS DIEBACK

What is Cinnamon Fungus?
Cinnamon Fungus causes a root rot that destroys many of our native

Phytophthora cinnamomi

Healthy Grass-tree Xanthorrhoea australis



Grass-tree affected by Cinnamon Fungus

plants. The disease is caused by a microscopic fungus Phytophthora cinnamomi that lives in plant roots, and spreads in drainage water, wet soil and gravel.

Origin

The Cinnamon Fungus was originally isolated from cinnamon trees in Indonesia.

Problem

Cinnamon Fungus kills many plants and causes a change in the vegetation, usually replacing rich vegetative communities with grasses and sedges. It may come in cycles in warm, wet periods. Australian Grass-trees are particularly susceptible.

How does Cinnamon Fungus kill plants?

Cinnamon fungus is carried in swimming spores formed in roots and moving in moist soil and water. The disease spreads downhill with the movement of water and soil, often being transported on vehicle tyres and shoes.

The fungus infects and rots the roots of plants. Some plants are resistant to the disease, some die very quickly, while others may only show signs after periods of stress (for example drought).

How can we control Cinnamon Fungus?

- Always start your outing with clean, dirt-free gear: vehicles, boots, bushwalking and camping equipment.
- Always stay on formed walking tracks. Moving off infected tracks into uninfected areas will spread the disease.
- Clean boots before leaving a diseased area.
- Do not take soil or gravel for landscaping works from roadside areas. Sterilised materials should be purchased from retailers.
- Inform other people about the seriousness of the disease and always set a good example by your own actions.

Control

Spray with phosphonate (1-2%) which is available from nurseries. Inject trees 20%. Phosphonate is neither a herbicide or pesticide, is water-soluble and not expensive. It helps to make plants resistant to the disease.

Can we be optimistic about control?

Current research is indicating that the Australian bush can recover from this disease. However it is a long slow process and it is not certain that the richness of the vegetation will return. Thirty years has been suggested as a time span. Endangered species are particularly at risk.

USE OF HERBICIDES

Home gardeners can safely use a systemic herbicide for weed control. Using herbicide is less physically demanding and often more effective than other means.

With many weeds it is beneficial (and in some cases critical) to apply the herbicide at a particular time of the year. Discuss with specialist suppliers.

Herbicides usually take best effect during sunny weather. Avoid use if rain is forecast in the next 6 hours.

The following precautions apply to use of herbicides:

- Observe the directions on the label
- Wear gloves and protective clothing
- Avoid inhaling herbicide fumes
- Mix only the required amount of solution. If disposal is needed, excess herbicide must be buried. Do not dispose to sewer or stormwater.
- Use a wick applicator, a small hand spray, or a small paintbrush to paint the cut stump with the herbicide
- Use a small pressure pump spray to apply herbicide to foliage
- Avoid spraying during windy conditions when the herbicide spray may drift. Add vegetable dye to the mixture to indicate plants treated.
- Apply herbicide as soon as the stem is cut.

The control measure for some species suggests cutting at ground level. This should be sufficient for these particular species. However, should re-sprouting occur as sometimes happens, make a new cut in the remaining stump and paint the cut area with systemic herbicide.

WHERE TO OBTAIN INDIGENOUS PLANTS

An important part of environmental weed control is to replace problem plants with plants which do not pose a problem.

Under the Flora and Fauna Guarantee Act 1988 it is illegal to remove indigenous plants or seeds from reserves, roadsides or bushland areas without a permit.

There are several nurseries that supply indigenous species within the Surf Coast Shire.

Beach Tree Nursery	1135 Surf Coast Highway MT DUNEED 3216 5264 1771
Dragonfly Aquatics	Mail order only RMB AB 366 COLAC 3249 5236 6320 dragonflyaquatics@hotmail.com
McGain's Nursery	1 Simmons Court ANGLESEA 3230 5263 3841
Moriac Plant Nursery	By appointment only 640 Cape Otway Road MORIAC 3240 5266 1388
Otway Greening	By appointment only Pennyroyal Station Road DEANS MARSH 3235 5236 3314
Otways Indigenous Nursery	By appointment only 85 Gilbert Street AIREYS INLET 3231 0417 154 413
Surf Coast Gardens	Great Ocean Road BELLBRAE 3228 5261 6337
West Coast Indigenous Nursery	By appointment only 50 Coppards Road NEWCOMB 3219 5261 5773 or 0425 752 648

INDEX

MORE WEED INFORMATION

Further information about environmental weeds, including the weeds described in this booklet, can be found on the Department of Primary Industries website www.dpi.vic.gov.au. Two interesting links under the Online Services heading are: Victorian Resources Online with a further link to Pest Plants Information Notes Series with a further link to Weeds.

ASSISTANCE WITH WEED CONTROL

Many contractors are prepared to carry out weed control on both private and public land. Information regarding local contractors is available from the Surf Coast Shire.

The Shire can be contacted on 1300 610 600 or via their website www.surfcoast.vic.gov.au.

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