

ENVIRONMENTAL WEEDS

Nature Conservation Information Sheet



A serious threat to biodiversity

Environmental weeds are plants that have been introduced to our area from other parts of the world, including other areas of Australia, and are spreading and displacing native species. They have been introduced as ornamental garden plants, for fruit production or other agricultural use and have escaped from gardens and farms and are invading creeklines, forests, woodlands and coastal areas.

Many of these plants are fast growing, hardy and highly adaptable. They have highly successful reproductive and seed dispersal mechanisms, including abundant seed production, seeds that remain viable for many years, and fruit and seeds that are attractive to birds and mammals. Many also have the ability to spread by vegetative means, such as rhizomes, bulbs and corms. They often have few predators or diseases to keep them under control in their new habitat.

Weeds are spread by seeds attached to shoes, clothing or vehicles, dumping of garden waste, and the movement of seed by wind, water and animals.

Why do environmental weeds matter?

Remnant native vegetation provides valuable food, shelter and breeding habitat for native plants and animals. Environmental weeds impact on the values of remnant vegetation by out competing native plants for space, water and nutrients, changing and simplifying the composition of vegetation communities and reducing their value as habitat for native animals. Many weeds also increase fuel loads and fire risk.

Invasive environmental weeds present one of the most serious threats to biodiversity in the Margaret River region.

What you can do

Prevention: don't give weeds the chance

- Keep disturbance of bushland and waterways to an absolute minimum. Creating tracks, firebreaks, excavating for sand and gravel, and rubbish dumping will all create a favourable environment for weed establishment.
- Don't divert water into bushland as this will favour weed growth.
- Check your existing introduced plants and remove any that readily spread and are likely to invade remnant vegetation on your property.
- Choose local native plants. These plants occur naturally in your local area. Sometimes plants from the eastern Australia are referred to as 'native' but are not native to WA and may be invasive (such as many weedy wattle species that have been planted extensively in the Margaret River region and are now spreading).
- If using non-native species choose non-invasive plants for your garden and landscaping. Choose safe alternatives, including sterile forms of species that would otherwise set seed.
- Dispose of garden waste responsibly. Dumping plants is one of the key 'escape' routes. Never dump garden waste over the back fence, on roadsides or in remnant vegetation. Cover your trailer when transporting garden waste to the tip to avoid weeds and cuttings falling off and invading roadside bushland.
- Treat weeds when present in small number and before they become established. Early detection and control before a species becomes well established is highly recommended.

Plan a control program for emerging and established weeds

A plan will improve the likelihood of a successful weed control. It will help you determine priorities, organise your work and monitor success. A plan can be as simple as a weed map and list of management actions including timing and control method.

To determine priorities it is suggested that you map priority weed species on your property, assess the condition of the remnant vegetation in which they are present, determine your weed control priorities and develop a plan of action as outlined briefly below. See [Nature Conservation Information Sheet: Biodiversity Management Plans](#) for more information.

Step 1: Map presence and density of priority weed species

Priority species includes weeds that are: obviously invasive, become dominant, have long lived seed, and have a major impact on the vegetation community. See Tables 2 and 3 at the end of this Information Sheet for weeds that are recognised as a priority for control in the Margaret River region.

Step 2: Determine management priorities

Have a close look at your remnant vegetation, creeks and wetlands and use the information in Table 1 to help you determine their condition. It is unlikely that the area you are assessing will fit neatly into one of these categories. The lists provide factors for you to consider when assessing condition and you will need to decide which of the three conditions is the best fit.

Protection of excellent and good condition vegetation and control of very invasive weeds are the highest priority. For example, a small outbreak of an invasive weed in an area of good quality vegetation is a serious threat requiring urgent attention. A larger patch of a less invasive weed in a more degraded area poses less of a risk to biodiversity values and is a lower priority.

Step 3: Work out a plan of action

Prioritise the protection of excellent and good condition areas of vegetation and focus on priority weed species.

Table 1: Factors to assist assessment and determination of vegetation condition

Excellent	Good	Degraded
The native tree cover remains largely intact. Very minimal, if any, signs of tree clearing and related damage	Some tree clearing has occurred – eg. trees logged for firewood, bush poles, fence posts, timber. Many native trees remain.	The tree cover is partly or completely cleared
The trees have a healthy foliage	Some trees are showing signs of dieback	The trees show signs of dieback
There is a reasonably diverse and abundant cover of native understorey plants	Understorey plants remain but are limited in number and diversity	Little to no understorey plants remain
Very few weeds and exotic grasses are present. If present, very localised only.	Weeds and/or exotic grasses are present but not dominant	Weeds and/or exotic grasses are the dominant understorey
Regeneration of trees and other plants is occurring	Some regeneration of young trees and other plants is evident	Little to no regeneration of young trees and other plants
There are old trees with hollows	There are obvious signs of disturbance from clearing, logging and grazing	Active erosion occurring
There are fallen logs and timber	There are old trees with hollows	Introduced tree species may be present
Leaf litter is present	Leaf litter is present	
There may be some small areas of localised disturbance where the soil is exposed and there are some weeds.	There are fallen logs and timber	

Undertaking weed control

When developing control strategies consider the biology of the weed species: when is it actively growing; when is it flowering and seeding; how long does seed stay viable in the soil; how does it respond to fire; is there a preferred time for physical or chemical control. Control methods include:

Physical

Manual pulling

Hand-pulling of individual weeds may be suitable when:

- the bush is in very good condition, with only a few small and localised areas of weed infestation
- the bush to be weeded is close to the house and frequently visited
- the weed species is easily removed by pulling
- rare and endangered plants are closely associated with the weed and could be damaged by other methods
- a weed new to the area is first detected in small numbers.

When hand weeding, the whole of the plant needs to be removed including bulbs, corms, rhizomes or tubers. If possible collect all seed pods or capsules. Remove from the site. Hand pulling can create soil disturbance and favourable conditions for further weed invasion.

Felling and ringbarking

Suitable for trees and shrubs that do not resprout or sucker, so correct identification is essential.

Mowing and slashing

Mowing and slashing are appropriate where areas are dominated by grasses and there are no desirable native species. This should be done before seed sets as it does not kill the weeds; indeed it may shake off and spread the seed. If seed set is to be prevented, slashing would have to be repeated several times during the growing season. Slashing can be very useful when used on densely tufted grasses such as African lovegrass, fountain grass or tambookie, as the dense growth of old leaves impedes the efficient penetration of herbicide. Fresh growth after slashing will be more susceptible to herbicide control.

Chemical

Used with care, chemicals can be a very effective method of managing weeds. They should be applied when the plant is actively growing, at a time of day when transpiration is most rapid (early morning or late afternoon) and when the plant is not under stress (eg. extreme heat or cold). Chemicals should not be applied in wet or windy weather. Follow safety precautions when using herbicide.

Herbicides can be applied by: blanket spraying, spot spraying, wiping, stem injection, painted on to a cut stump, and basal barking (sprayed or painted on to lower 60 cm bark with herbicide and penetrant – usually diesel). They should be applied in a way that minimises impacts on surrounding vegetation.

More information on how to use these control methods, and the best methods of control for specific species is available at www.herbiguide.com.au, [Woody Weeds of the Cape Naturaliste to Cape Leeuwin Region](http://www.florabase.dpaw.wa.gov.au/weeds/), <https://florabase.dpaw.wa.gov.au/weeds/> and Brown, K & Brooks, K (2002) *Bushland Weeds A practical guide to their management*. Environmental Weeds Action Network at https://www.natureconservation.org.au/wp-content/uploads/2019/03/Bushland_Weeds_Book.pdf

We recommend that you use these resources to find out the most up to date advice for control before you begin.

Follow up and on-going maintenance is essential to successful weed control.

Restoration of the native plant community

Where weeds occurs sparsely or in isolated patches in good quality native vegetation, the gap created by removal is small and quickly colonised by native species. However, where the weed is widespread and/or dense removal will leave an area susceptible to invasion by other weeds. Control of these weeds may help facilitate establishment of native plants. Consideration should also be given to direct seeding or revegetation with local native species.

Table 1: Emerging and established weeds that are very high priority for control in the Margaret River region

Scientific name	Comments
	Flinders Range wattle (<i>Acacia iteaphylla</i>) is a bushy, spreading, often weeping shrub to 5 m high with simple 'leaves' (phyllodes) that are silvery blue-green in colour. It has pale yellow to lemon yellow globular flowers in autumn to spring. Flinders Range wattle is native to SA. It has been widely planted and is spreading in roadsides and undisturbed bushland. It has enormous potential to spread further. It has explosive germination after the death of the parent plant, fire or disturbance. Plants are short lived but seeds are long lived and germinate readily. It can form dense thickets and inhibits the regeneration of local native species.
	Sydney golden wattle (<i>Acacia longifolia</i>) is a small tree to 10 m high with simple 'leaves' (phyllodes) that are bright green or dark green in colour. The phyllodes are elongated to linear in shape with 2-4 prominent longitudinal veins. It has yellow, rod-like flowers in July to Sept. Sydney golden wattle is native to NSW and Vic. It has been widely planted and is spreading in roadsides, creeklines and undisturbed bushland. Seeds are long lived and germinate readily. It can form dense thickets and inhibits the regeneration of local native species.

	<p>Blackwood (<i>Acacia melanoxylon</i>) is a tall, erect tree or shrub to 40 m high with dark green leaves. It has cream/yellow flowers in August, Sept. It is a hardy tree, tolerates shade, invades bushland, shades out and excludes local plants, dominating the vegetation. Suckers aggressively and coppices. Long lived with long seed viability. Excellent timber and firewood after removal. Germinates readily and suckers, massively after fire/disturbance. Widely planted on farms, bush blocks, rural residential blocks and roadsides.</p>
	<p>Madeira vine (<i>Anredera cordifolia</i>) is native to South America and a garden escape in parts of WA. It grows rapidly, blanketing and smothering both shrubs and trees and causing irreversible damage to the invaded ecosystem. It has been declared a Weed of National Significance in Australia. Currently limited in our region. Known only from Yallingup and Yelverton areas.</p>
	<p>Asparagus fern or climbing asparagus (<i>Asparagus scandens</i>) is a perennial twining vine. It has fine fern-like leaves, white flowers in late winter and spring, and green berries turning orange/red through spring and summer. Birds eat the berries and disperse the small seeds. It is an aggressive plant, producing underground tubers which form dense, impenetrable mats. It is shade tolerant preferring moist sites. It competes with native plants preventing seedling regeneration and strangling or smothering soft barked plants. It has been declared a Weed of National Significance.</p>
	<p>African feather grass (<i>Pennisetum macrourum</i>) is a highly invasive clump forming perennial grass. It has the ability to spread rapidly due to a vigorous rhizome system. It can form dense infestations that out compete all other plants. Large infestations present a significant fire hazard, reduce biodiversity and block access to waterways. Limited in extent in the Margaret River region at the moment. Present in Burnside area and along the lower Margaret River.</p>
	<p>Dolichos pea (<i>Dipogon lignosus</i>) is a perennial, robust climber with alternate leaves divided into 3 broadly triangular leaflets each 2-7 cm long. It flowers in spring and early summer and has many clusters of large pea flowers that are white or pink to purple and 8-15 mm long. Seed is viable for many years, and germination can be stimulated by disturbance or fire. It has perennial, spreading, underground rhizomes. Originally from South Africa it is commonly grown in gardens and is now spreading into roadsides and bushland. It grows rampantly smothering shrubs and trees as well as native groundcover plants.</p>
	<p>Geraldton carnation weed (<i>Euphorbia terracina</i>) is a Mediterranean shrub-like herb to 1 m high. It grows rapidly, forms dense thickets and seeds prolifically. Seeds are spread in limestone used in road and path construction as well as in water, and carried by animals and machinery. Geraldton carnation weed can invade areas of healthy bushland out competing native species for space, light and nutrients.</p>



Common fig (*Ficus carica*) is a large, spreading, deciduous, shrub or small to 10m. It has smooth grey bark, 3-5 lobed large leaves. Fruit 3-5 cm, green - purple. Sap of tree irritant to human skin. Serious weed of waterways and rivers. Widely planted tree with many existing around old settlements and orchards.



Montpellier (*Genista monspessulana*) and **flax-leaf broom** (*Genista linifolia*) are yellow-flowered shrubs 1-3 m tall. Montpellier broom leaves are on short stalks and consist of three rounded leaflets. Flax-leaf broom leaves consist of three narrow, pointed leaflets. Leaf undersides and young stems have woolly, grey hairs, which can give plants a silvery look from a distance. Montpellier broom flowers in winter/spring, sometimes late summer/autumn. Flax-leaf broom flowers mainly in spring. The pea-like seed pods are narrowly oblong and hairy.

Brooms grow quickly, produce large amounts of seeds and can tolerate diverse environmental conditions. They establish rapidly after disturbance, such as fire or grazing, but can also invade relatively undisturbed bushland areas. They are listed as Weeds of National significance.



Victorian teatree (*Leptospermum laevigatum*) is a tall, bushy shrub or small, twisted tree to 6m. Leaves are grey-green, obovate, to 2 cm. Flowers white in spring/early summer. Hardy species, widely planted especially for hedging and coastal windbreaks. Weedy throughout SW WA and much of Australia and overseas. A serious pest especially in coastal areas. It is allelopathic – ie. inhibits the growth of surrounding plant species.



Myrtle leaved milkwort or butterfly bush (*Polygala myrtifolia*) is a shrub to 2.5 m high with crowded light green elliptic leaves that are 1.5 cm long. It has pea like magenta and white flowers in clusters much of the year, followed by circular fruit capsules. Native to South Africa, it is a garden escape now invading bushland. It can form dense, mixed-aged thickets preventing most other species establishing. It is a serious weed throughout Australia.



European olive (*Olea europaea*) is a hardy, drought tolerant, very long lived species that is planted throughout the Margaret River region. Seeds are dispersed by birds and mammals. It is a serious bushland weed in South Australia where it forms mixed age thickets that virtually preclude native plant recruitment. Young olive trees are increasingly being found in bushland, waterways and roadsides in our region. Every effort should be made to prevent this species becoming an environmental weed in the south west.



Sweet pittosporum (*Pittosporum undulatum*) is a spreading small tree to 8 m. It has large green glossy oval leaves, strongly perfumed attractive creamy flowers in spring followed by bright orange fleshy fruits highly attractive to birds. It is native to south eastern Australia. It has escaped garden plantings and is invading creeklines, forest and woodland areas. It is a shade tolerant species which out competes local native species, forming exclusive thickets.

	<p>English blackberry (<i>Rubus anglocandicans</i>) is a semi deciduous, perennial shrub with scrambling, arching, prickly stems (canes) that may form dense, tangled thickets to 4 m high. The stems take root where they touch the ground, often forming dense thickets. The succulent and delicious fruits are an aggregation of numerous tiny fruitlets that are initially red but turn black as they mature. Native to England, English blackberry is a declared plant and a serious weed of creeklines, spreading into forest and woodland along water courses. It flowers in late spring and summer.</p>
	<p>Watsonia (<i>Watsonia</i> spp.) is a hairless, tufted herb with erect, flat, sword shaped leaves to 1 m in length which are produced annually from a corm. The flowering spike is usually unbranched and up to 2.5 m high with many large, trumpet shaped flowers. It reproduces from a large, fibre covered, underground corm and many cormels on the flowering stem and at the base of the leaves. Native to South Africa, it is now common in the south west and serious weeds of roadsides, watercourses and railway lines, often invading bushland. They flower in spring and early summer.</p>
	<p>Arum lily (<i>Zantedeschia aethiopica</i>) has a tuft of dark green, shiny, somewhat succulent leaves arising annually from perennial tuberous roots. It is easily recognised by its conspicuous large, white, funnel-like 'flower' about 100 mm across, which has a central, orange, pencil-like column of minute male and female flowers. In fruit, the tiny female flowers at the base of this column are replaced by orange-yellow berries. Native to South Africa, arum lily is a common and widespread serious weed of pasture and bushland, particularly of damp areas but also invading drier sites. It flowers mainly in late winter and spring and the berries are spread by birds. It is poisonous to stock, pets and humans.</p>

Table 3: Some common weed species known from the Margaret River region			
Scientific name	Common name	Scientific name	Common name
<i>Acacia elata</i>	Mountain cedar wattle	<i>Gomphocarpus</i> spp.	Cottonbush
<i>Arundo donax</i>	Giant reed	<i>Histiopteris incisa</i>	Bat's wing fern
<i>Asparagus asparagoides</i>	Bridal creeper	<i>Homalanthus novo-guineensis</i>	Bleeding heart
<i>Cenchrus clandestinus</i>	Kikuyu, Kikuyu grass	<i>Hyparrhenia hirta</i>	Tambookie grass
<i>Centranthus ruber</i>	Valerian	<i>Hypericum perforatum</i> var. <i>angustifolium</i>	St John's Wort
<i>Chamaecytisus palmensis</i>	Tree lucerne, Tagasaste	<i>Ipomoea indica</i>	Blue morning glory
<i>Chasmanthe floribunda</i>	African cornflag	<i>Kunzea baxteri</i>	Kunzea
<i>Cyathea cooperi</i>	Rough tree fern	<i>Lavender</i> spp.	Italian/French lavender
<i>Echium fastuosum</i>	Pride of Madeira	<i>Leptospermum laevigatum</i>	Victorian teatree
<i>Echium plantagineum</i>	Paterson's curse	<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Ehrharta calycina</i>	Perennial veldtgrass	<i>Melaleuca armillaris</i>	Bracelet honey-myrtle
<i>Ehrharta longiflora</i>	Annual veldtgrass	<i>Moraea flaccida</i>	One-leaf cape tulip
<i>Eragrostis curvula</i>	African love grass	<i>Paspalum dilatatum</i>	Paspalum
<i>Eucalyptus citriodora</i>	Lemon-scented gum	<i>Pinus radiata</i>	Radiata pine
<i>Eucalyptus globulus</i>	Blue gum	<i>Psoralea pinnata</i>	Taylorina, Psoralea
<i>Gladiolus undulatus</i>	Wavy Gladiolus	<i>Vinca major</i>	Blue Periwinkle

Acknowledgements

Photos courtesy of John Moore, www.herbiguide.com.au, Department of Agriculture and Food WA, NSW Department of Primary Industries, M Baker and Tasmanian Herbarium.

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