NOXIOUS & ENVIRONMENTAL WEEDS & PLANT PATHOGENS

of the Mornington Peninsula

MORNINGTON PENINSULA Shire

COMMITTED TO A SUSTAINABLE PENINSULA

WHY CONTROL WEEDS?

Weeds are a major threat to remnant vegetation and the fauna that rely on locally native plants for survival. Weed invasion is responsible for the loss of many species of plants and animals from areas across Australia, including the Mornington Peninsula. Weeds also impact on waterways, stock, pets, crops, tourism, health (e.g. allergies) and safety (e.g. road visibility), gardens and the landscape of an area.

Note: *Removal of weeds that are 'trees' or 'shrubs', within the Shire, may require a Planning Permit. If you intend to remove weedy trees or shrubs, ensure that you discuss it with the Shire before removal by calling 1300 850 600. A permit is not required to remove 'noxious' weeds.*

WANT MORE INFORMATION?

Mornington Peninsula Shire - www.mornpen.vic.gov.au
Ph: 1300 850 600 or +61 3 5950 1000

Department of Primary Industries (DPI)
Ph: 136 186 - www.dpi.vic.gov.au/weeds

Department of Sustainability and Environment (DSE)
Ph: 136 186 - http://www.dse.vic.gov.au/

Weed and Pathogen Publications

Armillaria Root Rot Fact Sheet. Department of Sustainability and Environment (2003).

Bush invaders of south-east Australia. Muyt, A. (2001).

Environmental weeds. Blood, K. (2003).

Management of Phytophthora cinnamomi for Biodiversity Conservation in Australia. Department of the Environment and Heritage (2006).

Myrtle Rust Fact Sheet. Department of Primary Industries (2012).

Weeds of the South-East: an identification guide for Australia. Second Ed. Richardson R.G., Richardson F.J. and Shepherd R.C.H. (2011).

Brochure credits

Photography: Linda Bester (LB), Matthew Dell (MD), Rosamond C. H. Shepherd (RS), Kate Blood (KB), Friends of Sherbrooke Forest (FS), Helen Moss (HM), Daniel Joubert (DJ), Forest & Kim Starr (FKS), Garrique Pergl - Mornington Peninsula Shire (GP), Department of Primary Industries (DPI) and Ian Smith - Bushbury Forest Pathology Service (IS).

Technical advice: Dr Robert Holmes (DPI) and Andrew Henderson (DPI).

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SHRUBS

Berry-flower Heath *Erica baccans*
Flowering time: Spring.
Reproduction: Seeds; Spring – Summer.
Control time: All year.

Blackberry *Rubus fruticosus* spp. agg.
Flowering time: Early Summer.
Reproduction: Berries ripen late Summer – early Autumn.
Control time: October – April.

Boneseed *Chrysanthemoides monilifera*
Flowering time: Winter – Spring.
Reproduction: Seeds; Summer.
Control time: March – April. **Note:** The W.O.N.S. status applies to both subsp. *monilifera* and *rotundata*.

Thorn Apple species *Datura* spp.
Flowering time: Mostly Summer.
Reproduction: Seed.
Control time: Spring. **Note:** *D. inoxia, D. ferox* and *D. stramonium* are all Noxious within PPWP.

Bracelet Honey-myrtle *Melaleuca armillaris*
Flowering time: Spring.
Reproduction: Seeds; Summer.
Control time: All year.

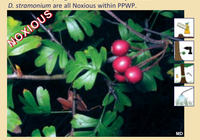
Cape Broom *Genista monspessulana*
Flowering time: Spring.
Reproduction: Seeds; Summer.
Control time: June – November.

Cotoneaster species *Cotoneaster* spp.
Flowering time: Spring.
Reproduction: Seeds; Late Summer – Autumn.
Control time: All year.

English Broom *Cytisus scoparius*
Flowering time: Spring.
Reproduction: Seeds; Summer.
Control time: All year.

Flax-leaf Broom *Genista linifolia*
Flowering time: Winter – Spring.
Reproduction: Seeds; Summer.
Control time: October – December.

Gorse *Ulex europaeus*
Flowering time: Sporadic all year; predominantly Spring.
Reproduction: Seeds; Predominantly Summer.
Control time: All year.



Hawthorn *Crataegus monogyna*
Flowering time: Spring – Summer.
Reproduction: Seeds; Autumn – Winter.
Control time: September – April.

Ink Weed *Phytolacca octandra*
Flowering time: All year.
Reproduction: Seeds; All year.
Control time: All year.

Italian Buckthorn *Rhamnus alaternus*
Flowering time: Summer – Autumn.
Reproduction: Seeds; Autumn – Winter.
Control time: All year.

Mirror Bush *Coprosma repens*
Flowering time: Late Spring – early Summer.
Reproduction: Seeds; Late Summer – early Autumn.
Control time: All year.

Briar Rose *Rosa rubiginosa*
Flowering time: Mostly Spring – Summer.
Reproduction: Seeds; Summer – Autumn.
Control time: Summer – Autumn, before fruits mature.

Ragwort *Senecio jacobaea*
Flowering time: October – March, but damaged plants may flower any time.
Reproduction: All year.
Control time: All year.

Sallow Wattle *Acacia longifolia*
Flowering time: Spring.
Reproduction: Seeds; Summer.
Control time: All year.

Spanish Heath *Erica lusitanica*
Flowering time: Winter.
Reproduction: Seeds; Winter – Spring.
Control time: All year.

Sweet Hakea *Hakea drupacea*
Flowering time: Winter.
Reproduction: Seeds; All year.
Control time: All year.

Tree Lucerne *Chamaecytisus palmensis*
Flowering time: Winter – Spring.
Reproduction: Seeds; Summer.
Control time: All year.

Willow Hakea *Hakea salicifolia*
Flowering time: Late Spring.
Reproduction: Seeds; All year with suitable conditions.
Control time: All year.

VINES AND SCRAMBLERS

Asparagus Fern *Asparagus scandens*
Flowering time: Spring.
Reproduction: Seed within orange berries; Summer.
Control time: All year.

Banana Passionfruit *Passiflora mollissima*
Flowering time: Autumn
Reproduction: Seeds; Winter – Summer
Control time: All year

Bluebell Creeper *Billardiera fusiformis*
Flowering time: Spring – Summer.
Reproduction: Seeds; Autumn – Winter.
Control time: August – February.

Blue Periwinkle *Vinca major*
Flowering time: Spring.
Reproduction: Mostly vegetatively; rarely seeds.
Control time: All year.

Bridal Creeper *Asparagus asparagoides*
Flowering time: Spring.
Reproduction: Seeds; Summer.
Control time: June – October.

Cape Ivy *Delairea odorata*
Flowering time: Late Autumn – Winter.
Reproduction: Seeds; Early Spring.
Control time: All year.

Climbing Dock *Acetosa sagittata*
Flowering time: Autumn – Winter.
Reproduction: Seeds; Spring.
Control time: All year.

Climbing Groundsel *Senecio angulatus*
Flowering time: Winter.
Reproduction: Seeds; Spring.
Control time: All year.

Dolichos *Dipogon lignosus*
Flowering time: Spring – Summer.
Reproduction: Seeds; Summer.
Control time: All year.
Note: Flowers may also be white.

English Ivy *Hedera helix*
Flowering time: Late Autumn – Winter.
Reproduction: Seeds; Winter – Spring.
Control time: All year.

Japanese Honeysuckle *Lonicera japonica*
Flowering time: Spring – Summer.
Reproduction: Seeds; Summer – Autumn.
Control time: All year.

Madeira Vine *Anredera cordifolia*
Flowering time: Autumn – Winter.
Reproduction: Seeds; Spring.
Control time: All year.

Morning Glory *Ipomoea indica*
Flowering time: Spring – Summer.
Reproduction: Vegetative only.
Control time: All year.

Wandering Tradescantia *Tradescantia fluminensis*
Flowering time: Summer.
Reproduction: Vegetative only.
Control time: All year.

KEY

Hand pull
Weeds can be pulled out by hand if it is easy to do so and if material will not be left behind e.g bulbs and rhizomes. All fertile material must be bagged.

Dig out
Digging may be necessary to remove material such as bulbs. It's often not a good option for large infestations or if amongst areas of native vegetation.

Cut and paint
This involves cutting a stem as low as possible to its base, and painting the fresh cut immediately with neat herbicide. Ideal for woody weeds.

Drill and fill
Drill and fill refers to drilling a number of holes around the stem, into the sapwood of a woody weed, and filling it immediately with neat herbicide.

Ring-bark
Refers to the use of a sharp blade to cut away the outer bark and sapwood. Only suitable for woody weeds that do not resprout or sucker when cut.

Wipe
Involves wiping neat herbicide directly onto the plant's leaves. Useful method for plants which have storage organs that are not easily dug up e.g. bulbs.

Slash
Involves slashing weeds to either stop them from setting seed, or to reduce their mass, often before applying herbicide. Avoid seed laden weeds.

Foliage spray
Herbicide spraying should be avoided within or near waterways and native vegetation, unless you are trained to apply it. Always read the label.

DEFINITIONS

Environmental weeds
are plants that invade disturbed areas and areas of native vegetation. The CALP Act does not control environmental weeds.

Noxious weeds
are plants that are described in Victoria's Catchment and Land Protection Act (1994). This Act defines who should control noxious weeds.

Weeds Of National Significance (W.O.N.S.)
The Commonwealth Government has declared twenty weeds as being nationally significant based on criteria including environmental impact, potential for spread and economic cost.

SOME TIPS ON REDUCING WEEDS IN YOUR AREA

- Correctly identify plants to avoid removing native species. If required seek advice on weed control measures and identification.
- Identify the best control method. Timing is important.
- Minimise disturbance to the soil profile to avoid potential weed spread/erosion.
- Use weed control to help reduce wildfire fuel loads.
- Avoid spreading weed seeds via clothing, equipment and vehicles accessing the site.
- Remove weeds in stages to help minimise any negative impacts on native animals that are using them as refuge.
- Identify which weeds are being utilised by native fauna and provide alternative habitat.
- Revisit control sites before targeting new areas.
- Encourage native plant regeneration when weeding.
- Consider enhancing the attractiveness of your garden to native fauna by selecting suitable local native plants.
- Avoid bringing soil into your property from elsewhere, as it is likely to contain weed seed.
- Avoid purchasing and using soil, mulch and other plant material (e.g. Pea Straw) that may contain weed seed.
- Avoid disposing of aquarium plants and animals on your land or into waterways.
- Consider health and safety precautions when controlling weeds, and always read herbicide labels before use.

Follow up is <u>essential</u> for effective control

PLANT PATHOGENS & THEIR IMPACTS

on the Mornington Peninsula

What is a plant pathogen?

A plant pathogen is an agent that can cause disease and death to occur in living plants. They are capable of causing extensive damage to public and private property (including both natural and planted vegetation), and can have significant impacts on industries that rely heavily on good plant health.

Which pathogens occur on the Peninsula?

There are three main pathogens that are of concern here. As each is a fungus, they produce spores which spread quickly via air, wind, water, soil, clothing, vehicles and equipment.

MYRTLE RUST *Uredo rangelii*

Myrtle Rust (JA Thompson, DPI)

Identification: Myrtle Rust appears as small raised spots that are brown to grey (often with a red-purple border), developing into masses of distinctive yellow to orange spores up to 14 days after infection.
Distribution: After being found in NSW in April 2010 it quickly spread to South-east Queensland followed by Victoria in late 2011. It is now known at numerous sites in Melbourne and country Victoria, including production and wholesale nurseries.
Affected species: It is only known to affect plants in the Myrtaceae family (including Eucalypts, Melaleucas, Callistemons and Lilly Pillys), hence its name. **Origin:** Sth America.
Spread: As it is a fungus, it produces spores which spread quickly via air, wind, water, soil, clothing, vehicles and equipment.
Control: Eradication is possible on a small scale e.g. home gardens. Large scale eradication is difficult, and consequently the focus is on minimising the spread and impact of this organism. For more information on control visit the following website: www.dpi.vic.gov.au/myrtlerust
If detected: If found, immediately record what you see (e.g. number of infected plants, species affected and location) and contact the national **Exotic Plant Pest Hotline: 1800 084 881**. **Do not touch, move or collect samples.** Alternatively you can email photos of the material to plant.protection@dpi.vic.gov.au together with your contact details.

CINNAMON FUNGUS *Phytophthora cinnamomi*

Banksia wilted by *Phytophthora* (JE Hill)

Identification: Verifying its presence is difficult without microscopic analysis, however there are some common signs. If certain plant species are found to be dead or dying (but not all individuals) in an area of largely healthy vegetation then this fungus may be a suspect.
Distribution: It has been detected on the Peninsula in eucalypt forests and other vegetation, however no formal survey has been conducted locally with regards to distribution.
Affected species: It affects species across many plant families including the Epacridaceae (heaths), Myrtaceae (e.g. eucalypts), Proteaceae (e.g. Banksias and Hakeas), Xanthoreaceae (grass trees) and Fabaceae (peas), removing their ability to take up water.
Origin: It is believed to be native to South East Asia.
Control: Eradication is very difficult, so as with other fungal pathogens, containment is the key.
If detected: Contact the national **Exotic Plant Pest Hotline - 1800 084 881**

AUSTRALIAN HONEY FUNGUS *Armillaria luteobubalina*

CDP

Identification: Infected trees develop inverted v-shaped lesions at their base and white rot in the wood, making it stringy. The bark dies and discolours up to 3 m above the ground and clusters of fruiting bodies appear at the base in Autumn (see photo).
Distribution: Also known as Armillaria Root Rot, it can be found in a range of vegetation types throughout Australia. No formal survey has been conducted for this fungus locally.
Affected species: It can affect all species of fruit trees, most native trees, plantations, ornamentals, and some herbaceous plants, and is a major cause of eucalypt deaths and forest dieback
Origin: As its common name suggests, it is native to Australia.
Control: Eradication is very difficult, so as with other fungal pathogens, containment is the key.
If detected: Contact the national **Exotic Plant Pest Hotline - 1800 084 881**

Pathogens - where can I find out more?

Contact the Department of Primary Industries (DPI) on **136 186** or visit the DPI website: **www.dpi.vic.gov.au**

Photo: Site affected by Cinnamon Fungus (LB)

GRASSES AND OTHER HERBS

African Love-grass *Eragrostis curvula*
Flowering time: All year.
Reproduction: Seeds; all year.
Control time: All year.

Agapanthus *Agapanthus praecox* ssp. *orientalis*
Flowering time: Early Summer.
Reproduction: Seeds; late Summer – early Autumn.
Control time: All year.
Note: The same weed species can also have blue flowers.

Arum Lily *Zantedeshia aethiopica*
Flowering time: Late Winter – early Spring.
Reproduction: Seeds; late Spring.
Control time: All year.

Buffalo Grass *Stenotaphrum secundatum*
Flowering time: December to February.
Reproduction: Primarily vegetatively, but also seeds.
Control time: Autumn and Spring.

Bulbil Watsonia *Watsonia meriana* var. *bulbillifera*
Flowering time: After 3rd year; Spring – Summer.
Reproduction: Stem bulbils and underground corms; Summer – early Autumn.
Control time: May – October.

Freesia hybrid *Freesia alba x Freesia leichtlinii*
Flowering time: Spring.
Reproduction: Corms and bulbils; Seeds in Spring.
Control time: Autumn – Winter.

African Thistle *Berkheya rigida*
Flowering time: All year, but mostly Spring – Summer.
Reproduction: Seeds and rhizomes.
Control time: All year.

Angled Pigface *Carpobrotus aequilaterus*
Flowering time: Spring – Summer.
Reproduction: Seeds .
Control time: Autumn. **Note:** Hybrids of this weed can also be found. Care must be taken with identification.

Forget-me not *Myosotis sylvatica*
Flowering time: Spring – Summer.
Reproduction: Seeds; late Spring – Summer.
Control time: All year.
Note: Avoid identity confusion with locally native species.

Gazania *Gazania linearis* (left), *Gazania rigens*
Flowering time: Spring – Summer.
Reproduction: Vegetatively, and by seed.
Control time: All year.

Kikuyu Grass *Pennisetum clandestinum*
Flowering time: Rarely, except cultivars in Summer.
Reproduction: Spreading stems.
Control time: September – February.

Montbretia *Crocosmia* x *crocosmiiflora*
Flowering time: Spring – Summer.
Reproduction: Seeds in Autumn, and corms.
Control time: August – September.

Pampas Grass species *Cortaderia* spp.
Flowering time: Summer – Autumn.
Reproduction: Seeds; Winter – Spring.
Control time: All year.
Note: *Cortaderia selloana* is a serious saltmarsh weed.

Panic Veldt Grass *Ehrharta erecta*
Flowering time: All year.
Reproduction: Seeds; all year.
Control time: All year.

Boxthorn *Lycium ferocissimum*
Flowering time: 2nd year of growth; usually Summer.
Reproduction: Seeds; all year.
Control time: All year.

Hottentot Fig *Carpobrotus edulis*
Flowering time: Most of the year.
Reproduction: Seeds.
Control time: All year. **Note:** Hybrids of this weed can also be found. Care must be taken with identification.

Paterson's Curse *Echium plantagineum*
Flowering time: Spring – early Summer.
Reproduction: Seeds; Summer.
Control time: September – October.

Quaking Grass *Briza maxima*
Flowering time: Winter – Spring.
Reproduction: Seeds; Spring – early Summer.
Control time: June – September.

Shade Crassula *Crassula multicava*
Flowering time: Winter – Spring.
Reproduction: Seeds; Spring – Summer.
Control time: All year.

Spear Thistle *Cirsium vulgare*
Flowering time: Winter.
Reproduction: Seeds; Spring.
Control time: April – December.

St John's Wort *Hypericum perforatum*
Flowering time: Summer.
Reproduction: Seeds; Autumn – Spring.
Control time: September – November.

Sweet Vernal Grass *Anthoxanthum odoratum*
Flowering time: All year.
Reproduction: Seeds; all year.
Control time: Winter – Spring.

Myrtle-leaf Milkwort *Polygala myrtifolia*
Flowering time: All year, but mostly Winter – Spring.
Reproduction: Seeds; Summer.
Control time: All year.

Sea Spurge *Euphorbia paralias*
Flowering time: Spring – Autumn.
Reproduction: Seeds.
Control time: All year.
Note: Its sap is an irritant.

TREES

Cape Wattle *Paraserianthes lophantha*
Flowering time: Winter.
Reproduction: Seeds; Summer.
Control time: All year.

Cedar Wattle *Acacia elata*
Flowering time: Summer.
Reproduction: Seeds; Autumn – early Winter.
Control time: All year.

Cherry Plum *Prunus cerasifera*
Flowering time: Winter – Spring.
Reproduction: Seeds within red, yellow or purple fruit; Summer.
Control time: September – April.

Cluster Pine *Pinus pinaster*
Flowering time: Not applicable.
Reproduction: Seed; all year.
Control time: All year.

Cootamundra Wattle *Acacia baileyana*
Flowering time: Winter.
Reproduction: Seeds; Spring – Summer.
Control time: All year.

Desert Ash *Fraxinus angustifolia* subsp. *angustifolia*
Flowering time: late Winter, early Spring.
Reproduction: Seeds; Summer.
Control time: September – April.

Alligator Weed *Alternanthera philoxeroides*
Flowering time: November to January.
Reproduction: Vegetative only.
Control time: All year (outbreaks must be reported).

Spiny Rush *Juncus acutus*
Flowering time: All year, but mostly Spring – Summer.
Reproduction: Vegetative, and seed; late Spring – Summer.
Control time: All year.

Early Black Wattle *Acacia decurrens*
Flowering time: Late Winter – early Spring.
Reproduction: Seeds; Summer.
Control time: All year. **Note:** Extra care must be taken with identification due to similarities with other Wattle species.

Karamu *Coprosma robusta*
Flowering time: Spring – Summer.
Reproduction: Seeds; Summer – Winter.
Control time: All year.

Monterey Pine *Pinus radiata*
Flowering time: Not applicable.
Reproduction: Seeds; All year.
Control time: All year.

Sweet Pittosporum *Pittosporum undulatum*
Flowering time: Early Spring.
Reproduction: Seeds; Autumn – Winter.
Control time: All year.
Note: As this is a Victorian native, removal requires a permit .

Tree of Heaven *Ailanthus altissima*
Flowering time: Spring.
Reproduction: Seeds; Summer.
Control time: September – April.

Willow species *Salix* spp.
Flowering time: Spring.
Reproduction: Seeds; Summer.
Control time: September – April.
Note: Only some Salix species are Noxious and/or W.O.N.S.

Creeping Buttercup *Ranunculus repens*
Flowering time: Spring – Summer.
Reproduction: Seeds; late Summer.
Control time: All year.
Note: Not confined to aquatic areas. Produces an irritant.

Salvinia *Salvinia molesta*
Flowering time: Not applicable.
Reproduction: Vegetative only.
Control time: All year (outbreaks must be reported).

A selection of serious COASTAL ZONE WEEDS present on the Peninsula

A selection of serious AQUATIC ZONE WEEDS present on the Peninsula