

Invasive Species

Guide for Households



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Cover image: Morning Glory (*Ipomaea indica*) by Mary Trigger



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Introduction

What are invasive species?

When a plant or animal invades and thrives in an area where they do not naturally occur, they are known as an invasive species.



Morning glory and Wandering creeper



Australia is famed for its unique and diverse plants and animals, with 80% found nowhere else in the world. However, the destruction and fragmentation of habitat and the impact of invasive plants and animals has had a substantial impact on our rich biodiversity. Australia now has the fastest rate of mammal extinction in the world and is number 10 for overall species extinctions.¹

Invasive plants can also be referred to as weeds, garden escapees or pest plants. They are a problem because they out-compete local plants for light, water and nutrients. In a short period of time they can replace local plants effectively removing the food source and habitat of the local fauna.

Invasive plants can include 'native' plants that refers to any plant found in Australia. Just like plants introduced from another country, native plants have the potential to become an invasive plant when grown outside their natural area. For example, the Bluebell Creeper (*Billardiera heterophylla*) from Western Australia

was sold as a popular 'native plant' that is now aggressively invading bushland around Victoria.

It is estimated that two-thirds of the established weeds in Australia are escaped garden plants.² We all have a role to play in removing invasive plants from our gardens and replacing them with non-invasive species.



Bluebell Creeper



Invasive animals can also be referred to as feral or pest animals. They prey upon indigenous fauna, compete with indigenous animals for resources such as food and shelter and graze on indigenous plant species.

Pic: Kate Leith

It is estimated that feral cats, for example, have had a significant role in the extinctions of Australian native birds and small mammals, with about 80 endangered and threatened species currently directly at risk from feral cat predation.³

This guide has been developed to identify some of the most common invasive plants and animals in the Shire and to provide control methods that will help in eradicating the significant threat of invasive species to our unique biodiversity. For more extensive information on invasive species in your area visit: **www.depi.vic.gov.au**

¹ International Union for Conservation of Nature (2013).

² World Wildlife Fund 'Jumping the Garden Fence Report' (2005).

³ Australian Environment Protection and Biodiversity Conservation Act (1999).

Methods of Dispersal

Many current invasive species were originally introduced to Australia, either accidentally or intentionally for horticulture, agriculture, forestry or the pet trade. They are successful because of their ability to disperse from many sources and processes. Some of the most significant factors include the:

- continued selling of invasive plants and animals
- dumping of garden cuttings and pets in bushland and waterways
- outdoor disposal of pet food containing viable seeds or plant material
- concealment in pot plants and containers
- dispersal by animals, birds and insects by consumption or attachment
- movement of contaminated soil and quarry products
- dispersal by wind or water
- disturbance of soil and vegetation
- movement of machinery and vehicles
- attachment to clothing and footwear
- occurrence of fire and drought which will impact on species establishment and expansion.



Dumped garden waste

Control Methods

Once you have identified an invasive species on your property you need to know what control techniques to apply and when. An integrated approach using different control techniques at different stages of a species lifecycle is most effective. For example, to control Sweet Pittosporum you need to hand pull seedlings, cut and paint juvenile plants and drill and fill adult plants. This guide will provide you with the appropriate control techniques and the timing of actions for each species listed on pp 10 to 57.

*An integrated approach
is most effective.*

Invasive plant control methods

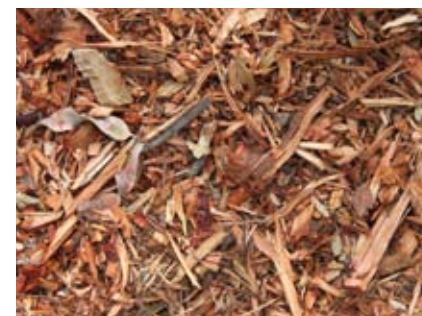
Hand pull: ensure that the whole plant, including the roots and bulbs, is removed. It is often easier and causes less disturbance after rain. A chisel or trowel is useful for some species. Effective for seedlings and small infestations of grasses.



Solarisation: cover the area with black plastic sheeting with buried edges for a 4-6 week period before removing the plastic. This allows the heat from the sun to kill off the plants underneath. Most effective in summer and for dense infestations of invasive grasses and herbaceous weeds.



Mulch: smother plants with a thick 10 cm layer of weed-free mulch to limit available light to plants. Take care when using organic mulch as it will increase nutrient levels, which can favour some weed species. Bush mulch is a good option. Suitable for invasive grasses and herbaceous weeds.



Deadhead: use secateurs or a brush cutter to remove the plant flower-head before it sets seed. Bag and dispose of appropriately.



Mower with catcher: plants cut before seeding if possible, but otherwise use a catcher on the mower to collect seeds as well as remove nutrient-rich material that can smother indigenous plants underneath it. Dispose of mown material appropriately. Suitable for invasive grasses and herbaceous weeds.



Spray: use a spray bottle, pack or wick wipe to apply herbicide to the leaves of weeds to the point where the leaves are wet but not dripping. Take care that the herbicide does not drift onto non-invasive species. Appropriate for young woody weeds, grasses and herbaceous weeds.



Cut and paint: cut the stem or trunk of the plant completely as close to the ground as possible. Immediately (within 20 seconds) paint the cut surface with a systemic herbicide. Appropriate for small plants.



Scrape and paint: similar to cut and paint but a knife is used to scrape away a section of the outside bark before the inner tissue is painted with systemic herbicide. Mainly used on vines and small shrubs.



Drill and fill: drill holes at an angle into the trunk of the plant to the moist wood below the surface bark. Create a ring of holes around 5-7cm apart as close to the base of the plant as possible. Immediately fill with systemic herbicide. Used especially on larger trees.



Herbicide use:

- Only use chemical control if non-chemical control is unsuitable.
- Do not spray in high temperatures or if rain is forecast within 24 hours.
- Always read the label on the product and following directions for appropriate rates, safety procedures, handling and storage.
- Some chemicals require a Chemical Users Permit.

Once you have identified an invasive species on your property you need to know what control techniques to apply and when.

Invasive animal control methods

In some situations fencing can be an effective means of keeping invasive animals from entering your property. Trapping is also an option for feral cats and Indian Mynas, while baiting is generally used for rabbits and foxes.

Invasive Plants of the Shire

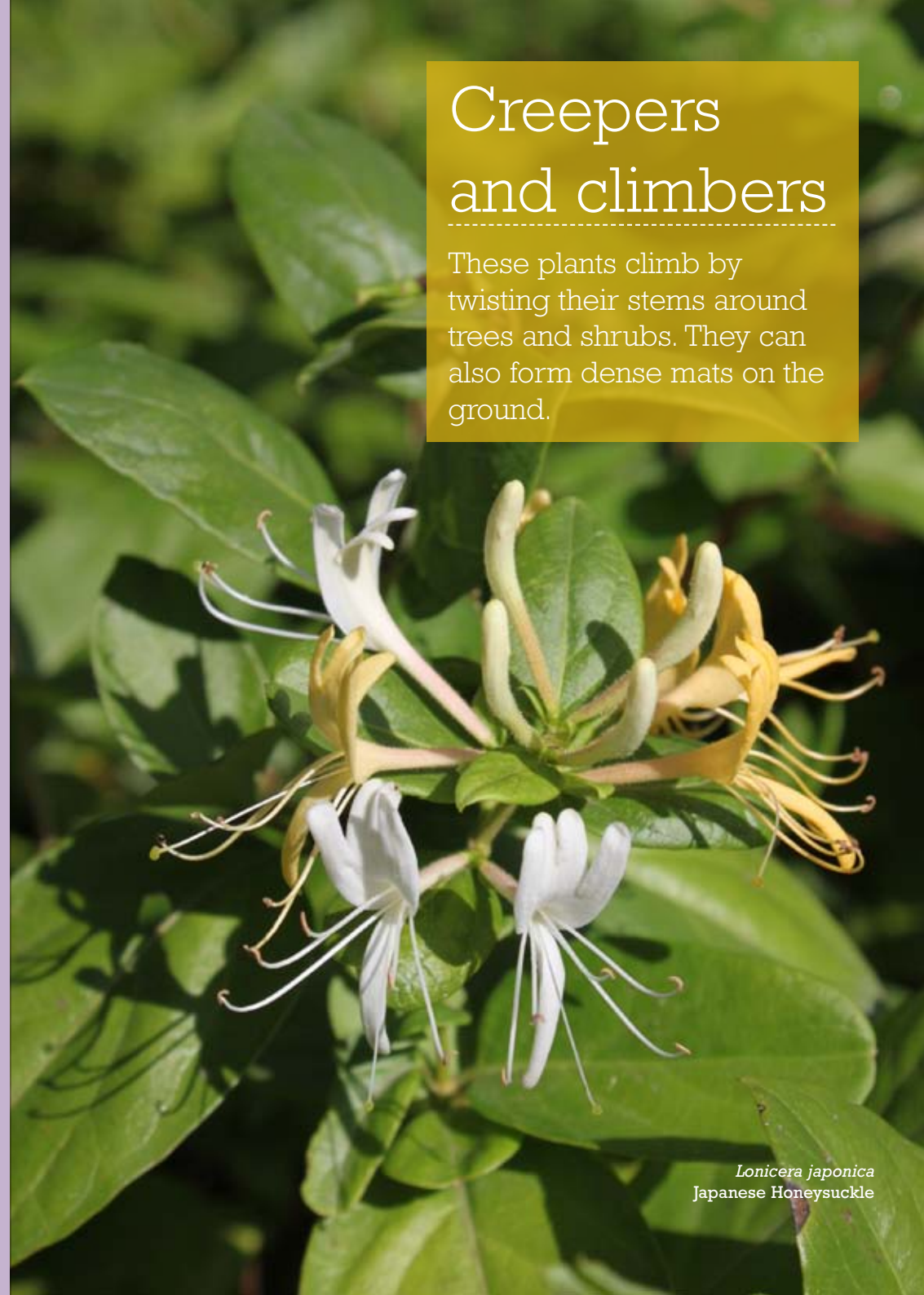
The following section provides a description of garden plants with the potential to escape into our natural environment. If you have any of these plants growing in your garden please consider removing and disposing of them in accordance with the appropriate control method.



Dolichos pea

Creepers and climbers

These plants climb by twisting their stems around trees and shrubs. They can also form dense mats on the ground.



Lonicera japonica
Japanese Honeysuckle



Bluebell Creeper
Billardiera heterophylla
(Formerly *Sollya heterophylla*)

Evergreen, twining climber capable of smothering other plants. Attractive blue flowers spring to summer, followed by green then black berries. Each fruit contains around 50 small black seeds.

Dispersal: Seeds spread by birds and foxes. Roots will reshoot if dumped or left in the soil. Seed germination promoted by soil disturbance.

Control: Small plants can be hand pulled using minimum soil disturbance. The entire root system needs to be removed to prevent regrowth. Larger plants can be controlled using either the Cut and Paint or the Scrape and Paint method. These methods are best applied in spring or early summer before the fruits develop. If the plant cannot be treated immediately, the severing of the vine will prevent seeding, however follow up work will be required.

Replacement species: Common Appleberry (*Billardiera scandens*)
Small-leaved Clematis (*Clematis microphylla*).



Cape Ivy
Delairea odorata

Vigorous perennial vine with succulent twining stems. Leaves are fleshy, lobed and hairless. Flowers are small, densely bunched, yellow, tubular, daisy-like and fragrant, occurring from autumn to spring. Produces many tiny seeds, each equipped with a small hairy parachute.

Dispersal: Seeds sail on wind or water. Dumped waste will regrow from stem fragments.

Control: Vines that have begun to climb can be cut at about 1 metre above the ground. The aerial stems can be left to dry out in the canopy. The bases left on the ground can be manually removed by hand, as they are generally shallow rooted. Ensure that all stem parts are removed as the plant can regrow from stem fragments. Follow up treatment should occur over the following 1-2 years.

Replacement species: Austral Clematis (*Clematis aristata*). Purple Coral-pea (*Hardenbergia violacea*).



Blue Periwinkle
Vinca major

A perennial creeper that forms dense, smothering mats from an extensive root system. Leaves smooth, dark green, semi-glossy above and paler underneath. Single blue-mauve flowers fused at the base. Flowers from May to December. Able to spread rapidly in heavily shaded conditions.

Dispersal: Stems root from nodes wherever they touch soil. Most commonly spread from dumped garden waste or contaminated soil. Can also be sold at markets and fetes.

Control: Small infestations can be removed by hand. Best after rain when the soil is soft. Be sure to remove out all roots and stems and dispose of plant material carefully. For larger infestations slash the plant in winter-early spring and then spray the regrowth.

Replacement species: Purple Coral-pea (*Hardenbergia violacea*)
Native violet (*Viola hederacea*).



Wandering Creeper
Tradescantia fluminensis

Rampant creeper that forms dense mats to 60cm deep. Evergreen, shiny green leaves 3-6cm long and 1-3cm wide. Stems succulent and brittle, branching and trailing. Small white flowers in spring and summer.

Dispersal: Dumped garden waste is the most common method of dispersal.

Control: Small infestations can be removed by hand, but care needs to be taken to collect and bag all root and stem fragments. Wear gloves as this plant can cause an allergic reaction. If in a thick mat it is possible to roll the weed on itself like a carpet using a rake. For large infestations it is more practical to spray during the active growing season. Spray the top layers of the weed and leave for 3-4 weeks. Return and spray the lower layers. You will need to repeat several times to kill all regrowth.

Replacement species: Wandering creeper (*Commelina cyanea*).
Nodding Saltbush (*Einadia nutans*).

Invasive animals of the Shire

The following section provides information on some of the most invasive or nuisance animals in the Shire. There are many actions we can all undertake to prevent their spread and control their distribution.



Indian Myna

Indian Mynas adapt easily to urban landscapes. They reduce biodiversity through predation and aggressive competition with native wildlife, particularly hollow-nesting birds and mammals. They are long lived and have two breeding season per year. They are territorial but roost communally.

The World Conservation Union has included the Indian Myna in the list of the '100 most invading species in the world' and have described them as an extreme threat to Australia.

Prevention: Indian Mynas thrive where there is easy access to food. Feed pets indoors. Don't put out birdfeeders. Ensure they cannot access exposed rubbish bins. They also like to roost in roof cavities and palm trees. Block any entry holes to your roof and keep palms trimmed back.

Control: Trapping and euthanizing Indian Mynas is legal. For further information contact the Yarra Indian Myna Action Group - www.yimag.org.au



Pic: Kate Leith

Feral Cat

Domestic cats in the wild are ferocious predators. They are highly adaptable with few natural predators. Not only are they responsible for the extinction of many native animals, but they can spread parasites and diseases such as toxoplasmosis that can affect humans and other animals.

The Australian Wildlife Conservancy estimates there are around 15 million feral cats in Australia and they kill an estimated 75 million native animals per night across the country.

Prevention: Ensure your pet cat has been desexed. Secure your cat, especially at night, so they don't prey on native animals. Either keep them indoors or in a pet enclosure. Collar bells on cats have limited success. Never dump unwanted pets in natural areas as it is not only cruel, but illegal.

Control: Humane traps are available for purchase or rent from animals shelters, local council, hardware and pet shops.

