



Garden Escapees & Other Weeds of Bushland & Reserves

A responsible gardening guide for Sydney



Sydney Weeds Committees

Sydney Central Regional Weeds Committee • South West Sydney Regional Weeds Committee
Sydney North Regional Weeds Committee • Sydney West-Blue Mountains Regional Weeds Committee



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The Problem

PLANTS escape from gardens in a variety of ways, but the main cause of spread from gardens is by green waste dumping in bushland and road reserves. This practice is harmful to the bush for many reasons, such as:

- introducing weeds (plant fragments, bulbs, roots, tubers, seeds, spores).
- smothering native plants.
- increasing nutrient loads.
- increasing fire risk by increasing fuel loads.
- dumping in bushland and reserves is illegal and can attract considerable fines.

GARDEN PLANTS may also spread into bushland reserves directly from gardens where they are planted. "Weedy" garden plants may be identified by:

- the ability to spread by vegetative means - bulbs, corms, tubers, root parts, stem fragments (e.g. Madeira Vine, Glory Lily, Coral Tree, Trad).
- berries that can be eaten by birds and animals (e.g. Chinese Celtis, Asparagus Fern, Cotoneasters, Olives, Camphor Laurel, Blackberry, Hawthorn).
- production of large amounts of seed that is easily distributed by wind, animals, water etc. (e.g. Formosa Lily, Longleaf Willow Primrose, Balloon Vine, Moth Vine, Narrow Leaf Cotton Bush).
- longevity of seed.
- a general ability to survive under extreme conditions.
- a history of weediness in similar climates.

What is a weed?

WEEDS are plants that don't belong where they are. They can include plants from other countries but area also some -times from other parts of Australia. They damage human and animal health and the ecology and appearance of bushland areas.

Environmental weeds often grow faster than native plants and out-compete them to become dominant. The natural pests or diseases that would otherwise control their growth are lacking as they have been introduced from somewhere else.

They replace the native plants that native creatures need for shelter, food and nesting. If left uncontrolled they will, in most cases, destroy ecosystems and choke watercourses.

The classification of plants as noxious weeds is constantly changing and will continue to do so as climate change alters the way different plants behave. For this reason we have not included the current classification of various plants as it could change at any time. It is better to replace any of the plants in this booklet with identified safe native alternatives.

Some plants are so invasive with such a serious potential for damage to human health, agricultural production or the environment that they are classified as **Weeds of National Significance**. Where a plant is listed as a **WONS** it will have the symbol:



The potential of a plant to spread throughout Australia can determine its classification as a WONS. Many of the plants in this book would not spread so far but their impact on the local (Sydney) environment might nevertheless be just as serious as that of a Weed of National Significance.

Manual weed control methods

Weed control should be coordinated so as to avoid seed setting, i.e. prior to, or during flowering time. Any section of the plant capable of reproducing (e.g. seeds, fruits, tubers/roots, some shoots) should be bagged, removed from the site and disposed of by deep burial at a waste management centre. Other vegetative matter can be mulched on site or taken to a waste management centre and disposed of in green waste. Personal Protective Equipment (PPE) must always be used when working with weed control or in the garden. Always wash hands after conducting weed control duties.

1. Hand pull/dig method

- Rake back leaf litter.
- Cut down along side plant.
- Grasp stem or leaves at ground level and pull firmly while loosening soil from roots with knife/trowel.
- Shake excess soil from roots and bag for removal or place plant on rock/log to die.
- Replace leaf litter.
PPE: hat, nitrile gloves, longsleeves/pants, boots, sunscreen and insect repellent.



2. Crown cut method

- Only the underground growing heart of the plant needs to be removed.
- Rake back leaf litter.
- Grasp plant at ground level, gathering stems together, insert knife and cut in a circular motion to remove crown.
- Replace disturbed soil/leaf litter and pat down
PPE: hat, nitrile gloves, long sleeves/pants, boots, sunscreen and insect repellent.



Herbicide use

Always read the label and Material Safety Data Sheets before using herbicides. At the time this publication was prepared an off label permit exists PER9907 for the use of certain herbicides to control noxious and environmental weeds. Go to <http://www.apvma.gov.au> for details. Personal Protective Equipment (PPE) must always be used when handling herbicides. Always wash hands after use.

1. Skirting (using secateurs and herbicide)

- Cut all vines low down around trees.
- Apply herbicide IMMEDIATELY (within 10 seconds of cutting) to ground cut stems first, then aerial stems.
- Check for reshooting within 6 weeks, retreating where necessary.
Note: NOT suitable for vines with aerial tubers e.g. Madiera Vine.
PPE: hat, nitrile gloves, long sleeves/pants, boots, sunscreen and insect repellent.



2. Stem scrape (using knife and herbicide)

- Working close to ground, scrape along the stem of the plant for about 15-30cm to expose vascular tissue.
- Apply herbicide to exposed vascular tissue IMMEDIATELY (within 10 seconds of scraping).
- Take care not to ring bark entire stem.
- Leave plant *in situ* until completely dead, and re-treat if necessary.
PPE: hat, nitrile gloves, long sleeves/pants, boots, sunscreen and insect repellent.



Herbicide use (cont.)

3. Cut and Paint (using saw and herbicide)

- The plant should not have aerial tubers.
- Appropriate on woody weeds up to 10cm basal stem diameter.
- Cut stem horizontally close to ground, below any branching stems or side shoots.
- Apply herbicide to cambium layer IMMEDIATELY within 10 seconds of making cut.



PPE: hat, *nitrile* gloves, safety glasses, long sleeves/pants, boots, sunscreen and insect repellent.

4. Foliar spraying (knapsacks & pressure sprayers)

- The use of herbicide diluted with water at a specific rate.
- Most suited for use on certain shrubs, grasses and dense vines.
- Foliage should be sprayed to the point of runoff (until wet but not dripping).
- Do not make up more dilute than required for the job and do not store diluted herbicide as it may breakdown and become inactive.
- Always use fresh clean water for mixing not ground or dam water as herbicide may breakdown and become inactive.



PPE: hat, *nitrile* gloves, safety glasses, long sleeves/pants, boots, respirator, sunscreen and insect repellent.

Various spraying regimes and herbicides are available for use on particular weeds. The Department of Primary Industries has developed a Management guide entitled "Noxious and Environmental Weed Control Handbook" that is available online from <http://www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds>. Contact the noxious weeds or bushland officer at your local Council.

Responsible Gardening

You can make a difference by what you do in your garden.

We suggest that you:

- **REPLACE** invasive plants in your garden with safe and preferably native alternatives.
- Regularly **PRUNE** your garden plants after flowering. Not only will this prevent seed set, it will also promote healthy and vigorous growth.
- Dispose of garden waste **RESPONSIBLY**, never dump it over the back fence, on roadsides or in bushland. Contact your local council to find a group in your area. Most councils will have a bushcare officer.
- Dispose of plant bulbs, tubers and seed heads in your **GENERAL WASTE** bin not green waste.
- **COVER** your trailer when taking garden waste to landfill to stop weeds and seeds from blowing off and invading roadside and bushland areas.
- Buy a mulcher and **MULCH** appropriate garden waste on site, then use it in the garden or compost it!
- Actively **REPORT** any illegal dumping in your neighbourhood.
- **JOIN** your local bushcare group and help clean up the public reserves and bushland areas in your neighbourhood. Contact your local Council to find a bushcare group. Most councils will have a bushcare officer.

Vines & Scramblers

Vines, scramblers or climbing plants can trail or creep along the ground but generally require the support of other plants to grow because their stems, in most cases, lack the central thickening which imparts rigour to trees and shrubs. Their stems are usually supple and can twist and contort in erratic convolutions without affecting the transport of water and nutrients that are essential to their survival.

This category of plants includes some of the most damaging environmental weeds in the Sydney region. It is recommended that all species listed be eradicated from gardens and replaced with less invasive species.

It is impossible to estimate the number of species of plants in the world's flora which have adopted the climbing growth habit. Botanists tend to categorise plants according to their floral features rather than growth habits and it is therefore difficult even to arrive at an estimate. Certainly the number is in the tens of thousands, and because climbers tend to be a neglected group of plants, it is almost certain that new weed species await discovery and description.

The main weed species are featured on their own pages but below is a list of:-

Other Problematic Vines & Scramblers

| Common Name | Botanical Name |
|----------------------|--|
| Aerial Yam | <i>Dioscorea bulbifera</i> |
| Blackberry | <i>Rubus fruticosus</i> agg. spp. (Noxious - WoNS) |
| Blue Trumpet Vine | <i>Thunbergia grandiflora</i> |
| Bridal Creeper | <i>Asparagus asparagoides</i> (see bulbous plants) |
| Cape Honeysuckle | <i>Tecomaria capensis</i> |
| Climbing Cineraria | <i>Senecio tamoides</i> |
| Crabs Eye Creeper | <i>Abrus precatorius</i> |
| Cup and Saucer Vine | <i>Cobaea scandens</i> |
| Creeping Groundsel | <i>Senecio angulatus</i> |
| Dutchmans Pipe | <i>Aristolochia elegans</i> |
| English Ivy | <i>Hedera helix</i> vars. |
| Flame Vine | <i>Pyrostegia venusta</i> |
| Moon Flower | <i>Ipomoea alba</i> |
| Mysore Thorn | <i>Caesalpinia decapetala</i> |
| Pie Melon | <i>Citrullus lanatus</i> |
| Purple Morning Glory | <i>Ipomoea purpurea</i> |
| Rubber Vine | <i>Cryptostegia grandiflora</i> |
| Silverleaf desmodium | <i>Desmodium uncinatum</i> |
| Siratò | <i>Macroptilium atropurpureum</i> |
| Snail Creeper | <i>Phaseolus caracalla</i> |
| Star of Bethlehem | <i>Ipomoea quamoclit</i> |
| Turkey Rhubarb | <i>Acetosa sagittata</i> |

Balloon Vine

Cardiospermum grandiflorum

Seedlings germinate most of the year. Plants spread over ground or climb trees and shrubs. Common in moist gullies along the warm temperate to tropical coast of Qld and NSW.

Family: Sapindaceae

Origin: Tropical America, West Indies and Africa

Habit: Herbaceous perennial climber with stems to more than 10m long.

Leaves: 6-16cm long, on a leaf stalk 2-10cm long, with 3 leaflets each further divided into 3; margins of leaflets irregularly toothed.

Flowers: White, 4 petals. in clusters, stalk of the flowerheads end in a pair of tendrils. Flowers for most of the year.

Fruit: Inflated membraneous capsule, 6-ribbed, 4-8cm long, covered with short stiff hairs. each containing 3 blackish, round seeds, about 7mm wide.

Roots: Shallow and fibrous, fragments re-root readily.

Dispersal: Seeds spread by wind, water and contaminated soil (earthmoving equipment, car tyres etc)

Control: Hand pull/Dig, Scrape and Paint, skirting, foliar spraying.



Black Eyed Susan

Thunbergia alata

Colour variation of flowers is encountered with plants grown from seedlings, including yellow or white, often lacking the dark central blotch. Very fast and erratic twiner.

Family: Acanthaceae

Origin: Tropical Africa

Habit: A delicate herbaceous and persistent twining or scrambling vine that will readily re-root from fragments and nodes.

Leaves: Thin-textured, heart-shaped or triangular.

Flowers: Bright orange to yellow some times white with a distinct black centre on a single stalk. Base of flower enclosed in pair of green sepals. Summer-Autumn.

Fruit: The papery sepals remain to cover the beaked capsule containing few seeds.

Roots: Tap and fibrous, will actively seek and block water/septic pipes.

Dispersal: Vegetation and seed will spread by water, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping.

Control: Hand Dig, Foliar spray.



Brazilian Nightshade

Solanum seafortianum

Also known as Blue Potato Vine, this plant has become naturalised in rainforests and is widely distributed from N.E. Qld to N.E. NSW.

Family: Solanaceae

Origin: South America

Habit: Perennial shrub or twining climber to 6m.

Leaves: Green deeply 3-9 lobed, hairless except edges and veins on under surface.

Flowers: Mauve-blue, 2-3cm across in groups of up to 50 in Spring-Autumn.

Fruit: Green berry up to 1cm across, ripening to bright red.

Roots: Shallow and fibrous.

Dispersal: Seed is spread by water, animals, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping.

Control: Hand Dig, Scrape and Paint, Skirting, Foliar spray.



Cape Ivy

Delairea odorata

Also known as *Senecio mikanioides* Cape Ivy is naturalised in coastal parts of NSW and rapidly grows to blanket and smother surrounding vegetation.

Family: Asteraceae

Origin: South Africa

Habit: A climbing and trailing perennial, non-woody vine that smothers vegetation to heights of 10m. Stems break easily.

Leaves: Ivy or star shaped with 5-7 lobes, fleshy, glossy green above, silvery below, often with a purple tinge.

Flowers: Strongly scented on warm days, yellow and daisy-like in dense clusters lacking ray florets (petals). Autumn-Spring.

Fruit: Small, reddish-brown with a 'parachute' of fine hairs (pappus). A mature plant can produce up to 4000 seeds annually.

Roots: Shallow and fibrous, fragments re-root readily.

Dispersal: Vegetation and seed is spread by wind, water, animals, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping.

Control: Hand Dig, Skirting, Foliar spray.



Cats Claw Creeper

Macfadyena unguis-cati

Stems in established stands of Cats Claw Creeper have been recorded as being up to 250mm in diameter. Diameter growth of Cat's Claw stems is slow, but the vines are long-lived, nearly as long as the trees that they climb for support.

Family: Bignoniaceae

Origin: Mexico to Uruguay

Habit: Vigorous, blanketing climber in excess of 30m with distinctive three-pronged claws along the growing portion of the plant. The weight of the vine's mass often collapses the supporting trees branches and may even cause mature trees to fall. Mature stems can become very woody to 20cm in diameter.

Leaves: Leaflets are dark green and formed in opposite pairs along the vine. New leaves and tips are a showy red/brown colour.

Flowers: Attractive bright yellow forming a bell shape when fully open and only occur on mature plants. Winter-Spring.

Fruit: Long dark brown seed pods are formed which split open when mature exposing numerous hard brown seeds.

Roots: Deep underground tuberous roots are profuse suckering readily.

Dispersal: Seed and tubers spread by wind, or water such as along rivers in floods, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping.

Control: Hand Dig, Scrape and Paint, Foliar spray.



German Ivy

Senecio macroglossus

A popular plant for hanging baskets, German Ivy has escaped cultivation and found its way into shaded areas on the verges of rainforests.

Family: Asteraceae

Origin: South Africa

Habit: Evergreen light or slender, twining herbaceous perennial.

Leaves: Bright green, fleshy, triangular or five-pointed ivy-like.

Flowers: Large, conspicuous pale yellow daisy flowers about 6cm across and carried singly on long slender stalks are borne just about all year round, but mainly during the summer months.

Fruit: The seeds are small and stick-like with a tuft of greyish-white bristles at one end (pappus). Dandelion-like tufty balls.

Roots: Shallow and fibrous, fragments re-root readily.

Dispersal: Seed is spread by wind, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping.

Control: Hand Dig, Skirting, Foliar spray.



Japanese Honeysuckle

Lonicera japonica

A popular garden plant of yesterday that has become a widespread rampant weed throughout many areas of eastern Australia from Qld to SA. In colder climates it may become deciduous.

Family: Caprifoliaceae

Origin: China & Japan

Habit: A robust climbing or scrambling shrub to 8m high. Young stems covered with short hairs. Older stems woody and hairless.

Leaves: A robust climbing or scrambling shrub to 8m high. Young stems covered with short hairs. Older stems woody and hairless.

Flowers: Paired, long and tubular (3-4cm), very sweetly scented. White, ageing cream to yellow or pale orange. Flowers Autumn-Spring.

Fruit: Globe-shaped berry, 4-10mm long, glossy black.

Roots: Fibrous initially, becoming a dense, extensive and woody crown with age.

Dispersal: Seed mostly spread by birds, but also humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping.

Control: Hand Dig, Skirting, Foliar spray.



Kudzu

Pueria lobata

Family: Fabaceae

Origin: South America

Habit: Perennial climber with twining stems to 6m on supporting vegetation.

Leaves: Oblong – triangular leaves, with finger-like glands on the upper surface, grow at right angles to the stalk.

Flowers: Perfumed tubular white flowers late spring to autumn. Sap a milky, sticky latex.

Fruit: Leaves and pear-shaped fruit pods are greyish, covered in fine hairs. When the pods turn brown and split, they release thousands of tiny black seeds with a tuft of silky white hairs.

Roots: Expansive root system with crowns and deep tap root.

Dispersal: Stolons root at the nodes to form new plants by rhizomes. Also seeds in pods.

Control: Vital to dig out all tubers; also use skirting technique.

This plant has taken over entire towns in America. We have had only one known reporting as of 2008. It is one of the most critical potential threats to Sydney riparian zones and bushland. Extremely difficult to remove once established with hardy tubers and rapid growth rate. Beware of this plant.

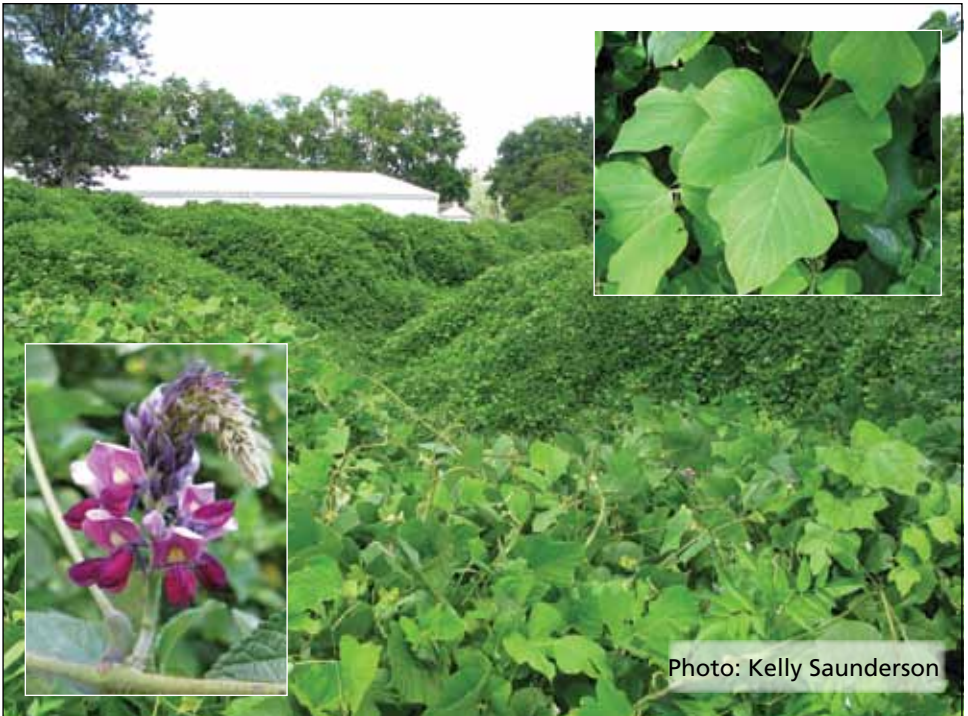


Photo: Kelly Saunderson

Madeira Vine

Anredera cordifolia

Madeira Vine is a devastating weed capable of smothering host vegetation in a relatively short period of time. The masses of fleshy leaves become very heavy and can break branches in large trees destroying the upper canopy.

- Family: Basellaceae
- Origin: South America
- Habit: Vigorous, robust fleshy and extensive twining, hairless, perennial climber in excess of 30m.
- Leaves: Fleshy broadly egg or heart shaped, alternately arranged and bright green.
- Flowers: Small, fragrant, creamy white coloured and numerous in drooping clusters to 20cm long. Separate flowers on stalks evenly spaced along a central stem. Spring-Summer.
- Fruit: Rarely fruits.
- Roots: Fleshy and tuberous. Tubers are capable of sprouting even after being pulverised.
- Dispersal: Spread and tubers transported by contaminated soil (earthmoving equipment, car tyres etc), garden refuse dumping and water, such as along rivers in floods. Aerial tubers will be shed from stems if the vine is cut, and remain viable in soil from 5 to 10 years.
- Control: Hand Dig, Scrape and Paint, Foliar spray. *Never Cut and Paint.



Morning Glory

Ipomoea indica (blue)

Ipomoea cairica (coastal)

Family: Convolvulaceae

Origin: South America

Habit: Robust and extensive twining perennial vine to 10m.

Leaves: Blue: Dark green; variably heart-shaped or 3-lobed, 20-180mm long. Coastal: Light green; hairless, 5-7 lobed, star shaped leaves to 90mm long.

Flowers: Trumpet/funnel shaped flowers 50-80mm diameter; Purplish-blue (Blue), mauve to pale pink/red/white (Coastal). Spring-Autumn.

Fruit: *Ipomoea cairica*: 4-valved brown capsule containing 4-6 seeds, which have parachute-like attachments. No seed set in *Ipomoea indica*.

Roots: Fibrous initially, becoming dense, extensive and crown-like with age. Will set root from stem fragments when in contact with the soil.

Dispersal: Seed is spread by wind, water, animals, humans, contaminated soil (earthmoving equipment, car tyres etc) and garden refuse dumping. (particularly *I.indica*).

Control: Hand Dig, Skirting, Scrape and Paint, Foliar spray.

Ipomoeas can readily be seen spreading along road edges and favour disturbed and open areas. They are capable of totally engulfing host trees in a relatively short period of time.



Moth Vine

Araujia sericifera

Garden escape that smothers shrubs and small trees, depressing their growth. Weed of wasteland and forests adjoining settlement, mainly in coastal higher rainfall areas.

- Family: Asclepiadaceae
- Origin: Southern Brazil, Paraguay and Uruguay
- Habit: Twining perennial climber reaching up to 6m on supporting vegetation. Milky latex exuded from damaged stems and leaves
- Leaves: Opposite, oblong to triangular, 3-11cm long, 1-6cm wide, dark green above, grey-green below.
- Flowers: Fragrant, tubular, 0.8-1.4 cm long, 5-lobed, 5-stamens, white to pale pink in groups of 2-5. Flowers late spring to autumn.
- Fruit: Grey-green choko shaped pod, turning brown and woody with age, opening to release numerous black seeds approx. 4mm long each possessing a tuft of white silky hairs that aid its spread by wind.
- Roots: Shallow and fibrous.
- Dispersal: Seeds spread by wind, water and contaminated soil (earthmoving equipment, car tyres etc)
- Control: Hand pull/Dig, Scrape and Paint, skirting, foliar spray for seedlings.



Pampas Lily of the Valley

Salpichroa origanifolia

Pampas Lily grows in full shade or sun, sand or wetlands, and tolerates long dry periods. It grows rapidly and can completely smother other vegetation. Once established, the plant is difficult to remove.

Family: Solanaceae

Origin: South America

Habit: A scrambling or climbing perennial herb.

Leaves: Oval shaped leaves are unequal in size, shortly hairy, with leaf stalks about the same length as the leaf blades.

Flowers: Bell-shaped whitish flowers 6-8mm long, form at the leaf axils.

Fruit: Smooth yellow berry when ripe, containing about twenty brown to pale yellow flattened seeds. The plant has a thick, woody, extensive mostly horizontal root system, which can be up to 1 metre deep.

Roots: Extensive horizontal woody root system (up to 1m depth)

Dispersal: Reproduces from seed and root segments, which are spread by birds and machinery.

Control: Seedlings can be removed by hand. Mature plants have horizontal roots up to 3m long and 1m deep. They can be removed by persistent digging over several seasons. Fruit should be cut and bagged. Permits to use chemicals are being sought.



Passion Flower/Fruit

Passiflora subpeltata, *P. edulis*,
P. foetida, *P. suberosa*, *P. mollissima*

Family: Passifloraceae

Origin: Chiefly tropical South America

Habit: Vigorous climber with tendrils.

Leaves: Varying with species; from 10mm up to 150mm long; generally 3-lobed some times ovate; pale green with powdery film and blunt tips to dark green with pointed tips.

Flowers: Passion flowers are very distinctive in shape. They range from 1-5cm across with colours from plain white to white blotched purple, pinks and reds; 5-10 petals; numerous cream/yellow stamens and a prominent divided stigma. Spring-Summer.

Fruit: Globe-shaped drupe, generally pulpy 15-50mm long, glossy, yellow, green, red or purple/black.

Roots: Lateral roots form at right angle to stem, break easily when pulled, re-shoot from remnant root stock.

Dispersal: Seeds spread by humans, water, animals and garden refuse dumping.

Control: Scrape and Paint, Cut and treat root system, Foliar spray with penetrant.

Even the popular edible Passion fruit spp. have become problematic weeds of bushland, mainly because of human negligence discarding unwanted fruit or merely failing to harvest.



Photo: Isabelle Strachan