



1. Infestation smothering she-oak trees along Wolston Creek in Riverhills. 2. Immature and mature fruit. 3. Leaves and coiled tendrils. 4. Habit growing on a fence.



Ivy gourd (*Coccinia grandis*)

Introduced

Not Declared

Ivy gourd is an invasive vine thought to be native to the tropical parts of Africa and Asia. This member of the Cucurbitaceae plant family is occasionally grown as a vegetable and is also known as scarlet-fruited gourd or little gourd. It has become a serious weed on several Pacific islands and in south-eastern USA.

Distribution

Ivy gourd is occasionally cultivated as a garden vegetable in the tropical and sub-tropical regions of the world and was probably introduced to the Northern Territory prior to European settlement. Small populations are scattered throughout the northern coastal parts of Queensland, the Northern Territory and Western Australia. However, an infestation was reported from riparian vegetation along Wolston Creek in the western suburbs of Brisbane in February 2011, well outside the previously known range of this species in Australia. Since then it has been spotted spreading from gardens in other parts of Brisbane (e.g. at Boondall and Sunnybank).

Description

This long-lived scrambling or climbing vine grows up to 13 m in height and can form a very dense cover over vegetation. Its younger stems are slender, green, and smooth but as they age they become swollen and semi-succulent in nature. These stems develop roots where their joints come into contact with the soil and the roots can also become thick and somewhat tuberous in nature. The alternately arranged leaves are borne on stalks 1-3 cm long and coiled tendrils are often produced in their forks. These slightly to prominently lobed leaves are somewhat ivy-shaped in nature (3.5-9 cm long and 4-9 cm wide) and usually have tiny teeth spaced along their margins.

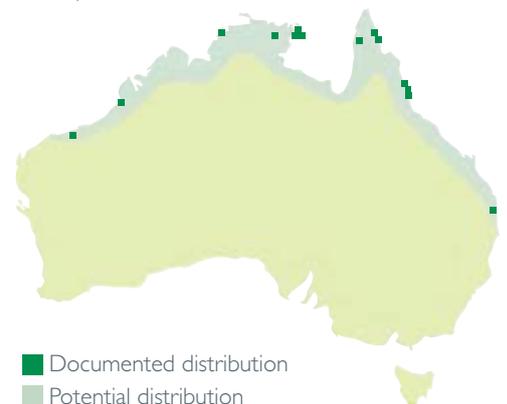
This species produces separate male and female flowers on separate plants. These white, tubular flowers are borne singly in the leaf forks on stalks 1-5 cm long. They have five small narrow sepals (6-8 mm long) that are joined together at the base and usually have five spreading petal lobes with pointed tips. In the short tube at the centre of the male flowers are three convoluted stamens, while the centre of the female flowers usually bears three hairy stigmas. The immature fruit resembles a small dark green cucumber with paler stripes. These fleshy fruit (2.5-6 cm long and up to 3.5 cm wide) turn bright scarlet red as they mature and contain numerous tan-coloured seeds (6-7 mm long).

Quick Facts

- > A rampant vine with ivy-shaped leaves that can completely smother other vegetation.
- > Stems become thick and somewhat succulent with age and produce roots where they contact soil.
- > White tubular star-shaped flowers which are either male or female.
- > Small cucumber-like fruit that turn scarlet red when mature.

Habitat

Ivy gourd commonly grows in dry rainforests of the monsoon zone of northern Australia. It also invades tropical and sub-tropical rainforests and riparian vegetation in coastal districts. Plants cultivated in gardens will quickly spread along fences and roadsides, up electricity poles, over nearby trees and into suburban bushland.





1. Close-up of female (left) and male (right) flowers. 2. Young plant with thick tuberous root beginning to develop.

Reproduction and Dispersal

This species reproduces by seed and also vegetatively via stem fragments. Seeds may be dispersed by birds and other animals that eat the fruit, while stem fragments can be spread by floods or in discarded garden waste. Long distance dispersal most commonly occurs by humans, as it is deliberately cultivated for its culinary uses.

Why is it an Emerging Threat?

This very aggressive vine climbs over and envelops shrubs and trees. It can totally smother riparian vegetation forming a dense canopy that impedes light penetration and prevents the growth and regeneration of native plants. Ivy gourd is already a significant environmental weed in Hawaii, where it smothers remnant native vegetation, and has also become invasive on other Pacific Islands (e.g. in Guam, Saipan and Fiji).

Control Methods

It is very difficult to control this plant physically, due to the fact that it will re-grow from its tuberous root system and any detached segments. Seedlings and small plants may be hand-pulled as long as care is taken to collect and remove all vegetative material. The fruit of larger plants can also be bagged and disposed of to prevent their spread, if they are within reach. In Hawaii, the aboveground parts of the plant are sometimes removed by hand to free up the native plant canopy, but the plants quickly re-grow and these methods can make the infestation worse by spreading plant fragments.

Chemical control can be more effective on larger plants, but follow-up is often required to kill off re-growth from any surviving tuberous underground parts. Basal bark applications of 2,4-D or triclopyr have been recommended in Hawaii, and usually need to be applied multiple times until the vine dies. Treated plants should be left in place to allow translocation of the herbicide and prevent the spread of fragments. Foliar applications of 2,4-D, glyphosate or metsulfuron are ineffective, except on young plants.

In Western Australia, cut-stump or foliar applications of products containing triclopyr (e.g. Garlon) or triclopyr + picloram (e.g. Grazon DS, Access or Tordon Double Strength) have been recommended for the control of Ivy gourd. In Queensland, these herbicides as well as others can be used to control environmental weeds such as Ivy gourd via the APVMA off-label permit number PER 11463 (<http://permits.apvma.gov.au/PER11463.PDF>). Unless otherwise stated in this permit, the use of the product must be in accordance with instructions on its label. Within other state boundaries, it is recommended that all managers consult any relevant permits or government legislation applicable to their region.

In Hawaii, three insect species (i.e. two weevils and an African vine moth) have been introduced as biological control agents for the control of Ivy gourd. These agents have been somewhat effective, but are unlikely to be introduced into Australia in the near future.

The control methods referred to in Weed Watch™ should be used in accordance with the restrictions (federal and state legislation and local government laws) directly or indirectly related to each control method. These restrictions may prevent the utilisation of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, Technigro does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

This information has been developed with the assistance of Dr Sheldon Navie. Photographs are courtesy of Sheldon Navie and Forest and Kim Starr, USGS. © Technigro Australia Pty Ltd 2011

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Look a-likes

The white flowers and bright scarlet-red fruit of this species are very distinctive when present. However, this species could be confused with other vines such as native bryony (*Diplocyclos palmatus*) and horned cucumber (*Cucumis metuliferus*). Native bryony has similar coloured flowers and fruit, but they are much smaller, while horned cucumber has hairy stems and smaller yellow flowers.



Top. Native bryony with smaller flowers and young fruit.

Bottom. Horned cucumber with small yellow flowers.