

*Cestrum parqui* [简体中文](#) [正體中文](#)

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Solanales	Solanaceae

**Common name** palqui (English), duraznillo negro (English), willow-leafed jessamine (English), duraznillo (English), duraznillo hediondo (English), green cestrum (English), mala yerba (English), palque (English), hediondilla (English), coerana (Portuguese), coeirana (English), quina del campo (Spanish), Chilean flowering jessamine (English), green poison berry (English), Chilean cestrum (English), willow jasmine (English)

### Synonym

**Similar species** *Cestrum nocturnum*, *Cestrum elegans*, *Cestrum aurantiacum*

**Summary** *Cestrum parqui* is a shrub of the Solanaceae family that is a toxic plant and has become an invasive weed. It prefers moist habitats but is commonly found along roadsides, and neglected, disturbed, and abandoned sites. This species exhibits vigorous growth and out competes most native vegetation. With its extensive, shallow root system *C. parqui* is extremely difficult to eradicate, however there are various control methods available. *C. parqui* is toxic and is responsible for the death livestock around the world annually. It is just as dangerous to humans.



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### Species Description

QDNRM (2005) states that, "*Cestrum parqui* is an erect, perennial shrub to 3m high, with one or more stems emerging from each crown. The young stems are whitish; older stems are darker, striated at the base and mottled above. The leaves are alternate, up to 12cm long and 2.5cm wide, and have an unpleasant odor when crushed. The greenish-yellow flowers are in clusters at the ends of branches. The flower tubes are up to 2.5cm long with five small terminal lobes. They have an unpleasant odor by day (similar to urine), but are fragrant at night. The fruit is a purplish-black, oval berry about 1cm long. The dark purple pulp contains one or two seeds of 3 to 4mm length, which have an irregular shape with sharp angles."

PIER (2005) details *C. Parqui* more descriptive characteristics as follows: "A shrub, generally 1-3m high. Petiole to 1cm long. Lamina 2-12-(14) X 0.5-3cm, lanceolate to narrow-ovate, minutely puberulent when young, otherwise glabrous; base attenuate or cuneate; apex acute to short-acuminate. Inflorescence paniculate, dense; branches more or less puberulent; flowers subsessile or with pedicels to 7mm long, fragrant nocturnally. Calyx 3-6mm long; lobes 1mm long, more or less triangular, obtuse to subacute; margins shortly villous. Corolla 1.5-2.3cm long, greenish yellow or pale brownish yellow; tube narrow-salverform, widening slightly above; lobes 3.5-6mm long, narrow-triangular, patent, shortly villous inside and on margins, acute or short-acuminate. Fruit 7-10 X 6-8mm, broad-ovoid to broad-ellipsoid, glossy, black or purplish black (Webb *et al.* 1988, in PIER, 2005)."

## Notes

McLennan and Kelly (1984) report that, "*C. parqui* poisoning is characterised by ataxia, depression, recumbency, convulsions and death. In controlled studies Calves have died within 48h of consuming just 30 g of plant/kg bodyweight. Doses of 11 and 17 g/kg caused only mild intoxication, with dullness and anorexia lasting 2 days. In natural and experimental cases the main lesion was hepatic periacinar necrosis. *C. parqui* poisoning in cattle is a primary hepatotoxicity." "Two alkaloids, parquine and solasonine, have been isolated from *C. parqui* and it is thought that these substances could be responsible for its toxic effects.. Time of death varies from mere hours to 3 days after consumption of the plant, and depends on the animal, time of year and amount of *C. parqui* eaten" (QDNRM, 2005).

## Lifecycle Stages

QDNRM (2005) states that, "*Cestrum parqui* germinate in autumn. Plants flower after two years and produce flowers for several months through summer and autumn. The plants are long-lived, producing new growth in spring. Seeds remain dormant in the soil for many years."

## Habitat Description

The Sydney Olympic Park Authority (2004) states that, "*C. parqui* is not particular about where it grows. It has been found in alluvial river flats, riverbanks, and remnant bushland on both shale and sandstone soils, anywhere with warm temperatures and high rainfall, like its subtropical home in Peru and Chile." Croft and Holding (2004) report that, "In its introduced range *C. parqui* has been observed invading moist habitats along drainage lines such as creek banks and wetland edges, and in disturbed edges of bushland pockets where thickets dominate, and growth and regeneration by native species is prevented." QDNRM (2005) reports that *C. parqui* is found along roadsides, and neglected and abandoned sites.

## Reproduction

The Sydney Olympic Park Authority (2004) states that, "During summer and autumn, *C. parqui* produces clusters of shiny black berries with finger staining dark purple pulp containing several wrinkled seeds. Birds love both the flower nectar and berries, and spread the seeds in their droppings. Seeds usually germinate in autumn but can remain dormant for years. Within two years, young plants can also produce flowers and berries. The roots also produce new plants from suckers."

## General Impacts

The Sydney Olympic Park Authority (2004) states that, "Because it is so adaptable to Australian conditions, *C. parqui* competes strongly with bush and pasture for living space. Cattle and dairy farmers don't like cestrum at all because when green feed is short, animals eat it and die a quick and painful death. It can also be toxic to other animals, even humans. Because of its vigorous regrowth and seed lifespan, *C. parqui* is extremely difficult to control. It can be cut down, dug out or pushed out but follow up work is essential to prevent regrowth. Herbicides are effective, but care has to be taken not to contaminate watercourses, or allow spray to reach desirable plants."

QDNRM (2005) states that, "*C. parqui* grows vigorously if neglected. On alluvial flats it has been known to outcompete most other vegetation. This species needs careful control because its extensive, shallow rooty system can produce many new plants from suckers, particularly after root disturbance or injury. *C. parqui* is toxic to animals including cattle, sheep, horses, pigs and poultry. Its effect on native fauna is unknown. Symptoms in cattle include fever, loss of appetite, increased thirst and eventually, general paralysis. Poultry develop acute kidney and liver damage. Post-mortem examination of poisoned animals usually reveals extensive internal haemorrhaging." Croft and Holding (2004) state that, "The presence of this plant on many properties and in backyards means that there is the potential for children to gain access to plant material, especially seeds."

## Management Info

**Preventative measures:** QDNRM (2005) suggests that, "Newly established plants should be destroyed before they flower and produce berries. Birds eat the berries, dispersing the seed to new areas. Do not plant green cestrum in gardens, as this acts as a potential point of dispersion. Roadside infestations should be controlled before road grading is carried out. The same recommendation applies in cultivation areas; control the cestrum first. Land which is overgrazed, and therefore has limited plant competition, should be regularly checked for new infestations."

A [Risk assessment of \*Cestrum parqui\*](#) for Australia was prepared by Pacific Island Ecosystems at Risk (PIER) using the Australian risk assessment system (Pheloung, 1995). The result is a score of 11 and a recommendation of: reject the plant for import (Australia) or species likely to be of high risk (Pacific).

**Mechanical:** Croft and Holding (2004) state that, "Mechanical control involves digging up plants by hand and removing all plant material including roots. Due to cestrum's ability to sucker from root fragments, follow up control is often required. Control using an application of mulch to cover and suppress seedling growth has been used. This method retains moisture in the soil and provides protection for native plants sown in conjunction with the mulching operation. It is used following chemical or mechanical control."

**Chemical:** Croft and Holding (2004) state that, "Chemical control involves spot-spray application of herbicides and is used in heavy infestations to knock down mature stands. Alternatively a basal bark application with a dropper bottle can be used on isolated plants. Timing of treatment is important and should be done prior to setting seed. Suckering and seedling growth may occur so follow up treatment will be required."

QDNRM (2005) has listed a variety of chemicals used to control *C. parqui* in a variety of ways. Picloram & triclopyr (Grazon DSR) can be applied late spring to early autumn and to thoroughly cover all leaves and stems. Triclopyr (Garlon 600R) can be applied if foliage is thoroughly sprayed when *C. parqui* growth is very active. Amitrole (Amitrole TR) can be used just prior to flowering and applications can be repeated if necessary until sufficient control is achieved. 2,4-D & picloram (Tordon 75-DR) can be used in spot treatment applications. And finally, Picloram & triclopyr-AccessR can be applied as a basal bark or cut stump application (QDNRM, 2005).

**Biological:** QDNRM (2005) states that, "*C. parqui* seedlings can be suppressed by vigorous competition from other plants. Control adult plants, then plant a vigorous pasture species or local native species, which will compete with seedlings. This method is not always practical on riverbanks and gravel beds. This species can be killed by digging out the plants completely. Care must be taken to remove all the yellow roots, otherwise regrowth will occur. It is preferable to burn the roots."

## Pathway

*Cestrum parqui* was/is promoted as suitable for gardens in 19th century in Australia (Sydney Olympic Park Authority, 2004). *Cestrum parqui* is said to have been brought direct to the Puhinui district in New Zealand by an Auckland visitor from Chile (Esler and Sandra, 1987).

**Principal source:** QDNRM, 2005. Green cestrum: *Cestrum parqui*

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## ALIEN RANGE

[9] AUSTRALIA

[2] ITALY

[1] SOUTH AFRICA

[1] GIBRALTAR

[2] NEW ZEALAND

[1] SPAIN

## [2] UNITED STATES

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[Varnham, K. 2006. Non-native species in UK Overseas Territories: a review. JNCC Report 372. Peterborough: United Kingdom.](#)

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**Summary:** An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals. Available from:

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