

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-leaved 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 jassamine (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 of livestock around the world annually. It is just as dangerous to humans.



[view this species on IUCN Red List](#)

Species Description

QDNR (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. Trichlopyr (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 Aucklander visiting Chile (Esler and Sandra, 1987).

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

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG) with support from the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme
[\(Copyright statement\)](#)

Review: Dr. Neil Mitchell. School of Geography and Environmental Science. Tamaki Campus, University of Auckland. New Zealand.

Publication date: 2006-04-04

ALIEN RANGE

[9] AUSTRALIA

[2] ITALY

[1] SOUTH AFRICA

[1] GIBRALTAR

[2] NEW ZEALAND

[1] SPAIN

[2] UNITED STATES

BIBLIOGRAPHY

22 references found for ***Cestrum parqui***

Management information

Croft, D., and Di Holding. 2004. A community approach: Green cestrum factsheet . Cooperative Research Center for Australian Weed Management.

[Csurhes S., and R. Edwards, 1998. Appendix C \(continued\): Potential environmental weed species that have histories as weeds overseas but are too widespread to be eradicated from Australia \(continued\). Queensland Department of Natural Resources.](#)

Summary: Available from: <http://www.deh.gov.au/biodiversity/invasive/publications/weeds-potential/appendix-c-c.html> [Accessed 10 June 2005]

[Eurobodalla Shire Council. 2004. Green cestrum \(Cestrum parqui\).](#)

Summary: Available from: <http://www.esc.nsw.gov.au/Weeds/Sheets/shrubs/S%20Green%20cestrum.htm> [Accessed 10 June 2005]

[European and Mediterranean Plant Protection Organization \(EPPO\), 2006. Guidelines for the management of invasive alien plants or potentially invasive alien plants which are intended for import or have been intentionally imported. EPPO Bulletin 36 \(3\), 417-418.](#)

[National Pest Plant Accord, 2001. Biosecurity New Zealand.](#)

Summary: The National Pest Plant Accord is a cooperative agreement between regional councils and government departments with biosecurity responsibilities. Under the accord, regional councils will undertake surveillance to prevent the commercial sale and/or distribution of an agreed list of pest plants.

Available from: <http://www.biosecurity.govt.nz/pests-diseases/plants/accord.htm> [Accessed 11 August 2005]

QDNRM (Queensland Department of Natural Resources and Mines). 2005. Green cestrum: *Cestrum parqui*. Document/Fact Sheet PP15.

[Royal New Zealand Institute of Horticulture \(RNZIH\), 2005. Green cestrum Cestrum parqui](#)

Summary: Available from: http://www.rnzih.org.nz/pages/nppa_044.pdf [Accessed 1 October 2005]

[Sydney Olympic Park Authority. 2004. Green Cestrum \(Cestrum parqui\).](#)

Summary: Available from: http://www.sydnelympicpark.com.au/education_and_learning/research/conservation_research/green_cestrum [Accessed 10 June 2005]

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

Summary: This database compiles information on alien species from British Overseas Territories.

Available from: <http://www.jncc.gov.uk/page-3660> [Accessed 10 November 2009]

General information

Bunn, K. 2004. Weeds of Hunter and Central Coast. Weeds of the Riparian Zone of Australia.

Esler, A. E., and J. Sandra. 1987. The naturalisation of plants in urban Auckland, New Zealand 2. Records of introduction and naturalisation. New Zealand Journal of Botany, 1987, Vol. 25: 523-537

[ITIS \(Integrated Taxonomic Information System\), 2005. Online Database Cestrum parqui](#)

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:

http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=30499 [Accessed March 2005]

McLennan, M. W., and W. R. Kelly. 1984. *Cestrum parqui* (green cestrum) poisoning in cattle. Aust Vet J. 1984 Sep;61(9):289-91.

Nel, J. L., D. M. Richardson, M. Rouget, T. N. Mgidi, N. Mdzeke, D. C. Le Maitre, B. W. van Wilgen, L. Schonegevel, L. Henderson, and S. Neser. 2004. A proposed classification of invasive alien plant species in South Africa: towards prioritizing species and areas for management action. South African Journal of Science 100, January/February 2004

[O Hara, S. A. Undated. Cestrum L. Solanaceae \(Nightshade Family\) Mediterranean Garden Society.](#)

Summary: Available from: <http://www.mediterraneangardensociety.org/plants/Cestrum.cfm> [Accessed 10 June 2005]

Peccenini, S. 1977. *Cestrum parqui*: New Record in Calabria. Informatore-Botanico-Italiano. 1977; 9(1): 39

[PIER \(Pacific Island Ecosystems at Risk\). 2005. Cestrum parqui L. Hör., Solanaceae](#)

Summary: Available from: http://www.hear.org/pier/species/cestrum_parqui.htm [Accessed 10 June 2005]

Sanz-Elorza, M., Dana, E.D. & Sobrino, E. 2001. Aproximación al listado de plantas alóctonas invasoras reales y potenciales en España.

Lazaroa 22: 121-131. The Unwanted Citizens : Plant Invaders in Spain.

[USDA-GRIN \(Germplasm Resources Information Network\). 2005. Cestrum parqui. National Genetic Resources Program \[Online Database\]](#)

[National Germplasm Resources Laboratory, Beltsville, Maryland.](#)

Summary: Available from: http://www.ars-grin.gov/cgi-bin/npgs/html/tax_search.pl?Cestrum+parqui [Accessed 10 June 2005]

[USDA-NRCS \(Natural Resource Conservation Service\). 2005. Cestrum parqui. The PLANTS Database Version 3.5 \[Online Database\] National Plant Data Center, Baton Rouge, LA.](#)

Summary: Available from: <http://plants.usda.gov/java/profile?symbol=CEPA9> [Accessed 10 March 2006]

Williams, P. A., A. Wilton, and N. Spencer. 2002. A proposed conservation weed risk assessment system for the New Zealand border. New Zealand Department of Conservation: Science for Conservation 208

World Wildlife Fund. 2004. National list of naturalized invasive and potentially invasive garden plants. WWF Australia.