

Hudson pear

Cylindropuntia pallida and *Cylindropuntia tunicata*



The name 'Hudson pear' refers to two species of cactus: *Cylindropuntia pallida* and *Cylindropuntia tunicata*. (The name *Cylindropuntia rosea* was previously misapplied to *Cylindropuntia pallida* in Australia).

Hudson pear can destroy grazing land and prevent most forms of outdoor recreation, including bushwalking, camping and make access on horse-back virtually impossible. The reverse-barbed spines can injure livestock, humans and native animals, reducing or preventing grazing activities and productivity.

Hudson pear is sometimes grown as ornamentals, despite their sharp spines and tendency to spread.

Possession, propagation and distribution of Hudson pear as an ornamental plant are not considered reasonable and practical measures to prevent or minimize the biosecurity risks posed by Hudson pear.

In Queensland it is illegal to sell Hudson pear on Gumtree, eBay, Facebook, at markets, nurseries or any marketplace.



**Queensland
Government**

Legal requirements

Hudson pear is a category 2, 3, 4 and 5 restricted invasive plant under the *Biosecurity Act 2014*. It must not be given away, sold, or released into the environment. The Act requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated with invasive plants under their control. This is called a general biosecurity obligation (GBO). This fact sheet gives examples of how you can meet your GBO.

At a local level, each local government must have a biosecurity plan that covers invasive plants in its area. This plan may include actions to be taken on Hudson pear. Some of these actions may be required under local laws. Contact your local government for more information.

Description

Hudson pear is a densely branched cactus that can grow up to 1.5 m high and 3 m wide. The stem segments are green to grey-green in colour, cylindrical, up to 90 cm long, 4 cm wide, whorled or sub-whorled and easily detached.

Tubercles are pronounced, elongate, to 3 cm long and about 1 cm wide. Areoles (depressions on segments) are elliptic, 3–7 mm long to about 3 mm wide, and wool/tan-coloured. The spines are arranged in groups of 4–8 per areole (to 20 or more on older stems) and are up to 4.5 cm long. Spines are enclosed in whitish, papery sheaths. The spines can penetrate boots and car tyres, and once lodged in skin are not easily removed (generally requiring pliers to dislodge).

Cylindropuntia pallida has pink-purple flowers and *Cylindropuntia tunicata* has yellowish-pink flowers, petal-like segments about 5 cm wide. Stamens have golden anthers, filaments are cream-coloured, becoming pinkish towards the anthers; and stigma is pale yellow. Fruit are obovoid, never in chains, 2–4.5 cm long. Older fruit have few spines and are much less spiny than younger fruit. Fruit appear to be sterile, despite occasional reports of seeds being found.

Hudson pear can sometimes be confused with other *Cylindropuntia* in Australia, especially *Cylindropuntia imbricata*, which has pink-purple flowers and more rope-like segments. Other similar species are *Cylindropuntia kleiniiae*, *Cylindropuntia prolifera* and *Cylindropuntia spinosior*. In Queensland, *Cylindropuntia pallida* is occasionally confused with harrisia cactus.

Life cycle

Hudson pear reproduces by seed and vegetatively via stem segments. Vegetative reproduction has been reported to be the most prevalent type of spread. Flowering occurs mostly in late spring into summer.

Methods of spread

Hudson pear can spread by small stem segments that become dislodged from the parent plant whenever an animal, person, vehicle or machinery brushes against it. The segments take root where they make contact with the ground.

Habitat and distribution

Native to Mexico, Hudson pear is a major pest around Lightning Ridge in New South Wales, where it has formed an extensive wild population. Smaller infestations are found in Western Australia, Northern Territory, South Australia and Queensland.

Currently, Hudson pear is sparingly naturalised in Queensland, with four sites recorded to date—one site discovered in 1973, one site found north of Cooladdi in 2010, one small site near Emerald and an area around Cracow. *Cylindropuntia tunicata* was found near Munduberra (in south-eastern Queensland) in 2008.

Hudson pear prefers semi-arid shrub land and rocky outcrops across western and central Queensland.

Control

Managing Hudson pear

The GBO requires a person to take reasonable and practical measures to minimise the biosecurity risks posed by Hudson pear. This fact sheet provides information and some options for controlling Hudson pear.

The best control for Hudson pear incorporates integrated management strategies, including herbicides, mechanical, physical and biological methods. It can be costly and time-consuming to control.

Physical control

Dig out plants completely and burn. Ensure that all tubers that can grow are removed and destroyed. Ploughing is not considered an effective means of control unless followed by annual cropping.

For advice on disposal options, contact your local government office or Biosecurity Queensland on 13 25 23.

Mechanical and fire control

Mechanical control using machinery is difficult because stem segments can easily re-establish. A hot fire is an effective control method for dense infestations. Check after burning to ensure there are no green parts of the plant left as they may regrow. Before burning, consult Biosecurity Queensland to see if this practice is suitable for your pasture and land management practices.

Biological control

A cochineal *Dactylopius tomentosus* (californica var. parkeri biotype) has recently been approved for release. In laboratory trials it appeared to be very effective against Hudson pear. However, it should be noted that this biotype of the insect is not as effective on other species of *Cylindropuntia*. In addition, other *Dactylopius* species/ biotypes of the cochineal are not as effective on Hudson pear, so their utilization should be discouraged.

Once established on individual plants, the adults provide a continuous supply of new insects to attack new growth and surrounding plants. Cochineal insects are wind-borne and spread to new plants, relies on individuals landing on suitable plants. However, control and spread can be enhanced if the cochineal is manually transferred to new plants.

How to distribute cochineal

Spreading cochineal insects simply involves the manual transfer of cochineal-infested segments, like the one in the photo, onto plants that do not contain cochineal insects.

To assist in the distribution and spread of cochineal, physically move infected stem segments and place on isolated plants (>50 m away). Collect infected stem segments from existing Hudson pear plants using tongs and a knife. To transport stem segments, use plastic tubs with lids. Don't leave cochineal in direct sunlight or hot vehicles.

Herbicide control

Four permits allow the use of several herbicides and application methods to control Hudson pear as an invasive plant in various situations.

See Table 1 for treatment options allowed by the permits.

Prior to using the herbicides listed under the permits (PER90719, PER92459, PER92465 and PER92475), you must read or have read to you and understand the conditions of the permits. To obtain a copy of these permits visit apvma.gov.au.

Landholders and contractors should check if the property is in a hazardous area as defined in the *Agricultural Chemicals Distribution Control Act 1966* prior to spraying.

More information

For more information contact your local government or visit biosecurity.qld.gov.au.

Table 1. Herbicides for the control of Hudson pear

Situation	Herbicide	Rate	Method
Agricultural non-crop areas, commercial and industrial areas, fence lines, forestry, pastures and rights-of-way	Triclopyr 240 g/L + Picloram 120 g/L (e.g. Access)	1 L/60 L diesel	Foliar spray Apply as an overall spray APVMA permit PER92465 (expires 30/11/2024)
	Triclopyr 600 g/L (e.g. Garlon)	3 L / 100 L water	
Pastures, non-crop areas, commercial and industrial areas, domestic and public service areas and rights-of-way	Aminopyralid 8 g/L + picloram 100 g/L + triclopyr 300 g/L (e.g. Grazon Extra)	500 mL/100 L water	Foliar spray APVMA permit PER90719 (expires 31/02/2024)
Pastures, roadsides, rights-of-way, bushland/native forests, agricultural non-crops areas, commercial and industrial areas, domestic and public service areas, vacant lots, wastelands	Triclopyr 200 g/L + Picloram 100 g/L + Aminopyralid 25 g/L (e.g. Tordon RegrowthMaster)	Undiluted	Stem injection Apply 2 mL solution per 10 cm cut APVMA permit PER92459 (expires 31/08/2025)
	Glyphosate 360 g/L (e.g. Roundup)	Undiluted to 1:1 in water	
	Amitrole 250 g/L + Ammonium thiocyanate 220 g/L (e.g. Amitrole T)	Undiluted	Stem injection 1 mL injected into cuts at 3 cm spacing APVMA permit PER92459 (expires 31/08/2025)
Non-crop areas, including native vegetation, conservation areas, gullies, reserves and parks	Aminopyralid 4.47 g/L + picloram 44.7 g/L (e.g. Vigilant II)	Undiluted	Cut stump 3–5 mm thick layer over cut surface APVMA permit PER92475 (expires 30/11/2024)

Note: Refer to the permits for more herbicide options. Read the label carefully before use and always use the herbicide in accordance with the directions on the label.



Hudson pear can be spread by footwear



Bird caught in Hudson pear spines



Cylindropuntia pallida spines



Cylindropuntia tunicata spines



Cylindropuntia tunicata flower



Cylindropuntia pallida fruit



Cylindropuntia pallida infestation



Cylindropuntia pallida and Cylindropuntia tunicata growing side-by-side



Cylindropuntia rosea plant form



Cylindropuntia tunicata plant form

Fact sheets are available from biosecurity.qld.gov.au. The control methods recommended 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 use 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, the department does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

