

Brown-spined Hudson pear

Cylindropuntia tunicata



Brown-spined Hudson pear has greenish-yellow flowers tinged with red. (Photo: John Hosking NSW DPI)

· This plant must not be sold anywhere in NSW

Profile

How does this weed affect you?

Brown-spined Hudson pear has spines up to 7 cm long that:

- · cause painful injuries to people, livestock, working dogs and pets
- injure and sometimes kill wildlife that get trapped in the spines
- devalue wool and hides and prevent shearing
- get stuck around the mouth of lambs or calves and prevent them from feeding
- · damage tyres on vehicles.

Brown-spined Hudson pear outcompetes native plants, reducing food and shelter for native animals. It also forms dense thickets that prevent movement of animals and people. This means that:

· livestock may not be able to access feed

- mustering is difficult
- · access to watering points is reduced
- · recreational activities such as bushwalking and camping are restricted.

What does it look like?

Brown-spined Hudson pear is a densely-branched, low growing cactus. It is usually 30-60 cm tall.

Stems (also called pads or cladodes) are:

- · cylindrical, fleshy and spiny
- pale grey-green to green
- 5-25 cm long and 1.5-3 cm in diameter
- · lumpy or corrugated.

Cacti pads have small areas on the surface called areoles. Spines, barbed bristles (glochids), leaves, flowers, fruit, roots and new shoots all grow out of the areoles.

Spines are:

- 3-7 cm long
- · red-brown to pale brown or yellow
- loosely covered in a yellow to tan or brown papery sheath
- in groups of 4–12 per areole.

Also growing from the areoles are tufts of pale yellow barbed bristles that are 0.5–1.2 mm long.

Flowers are:

- yellow to yellow-green
- up to 2 cm long
- mostly present in spring.

Fruit are:

- · greenish-yellow, often tinged red
- fleshy and club-shaped
- 2.5–5 cm long and up to 1.5 cm wide
- · spineless or sometimes with a few spines.

Seeds are:

- yellow to light brown
- oval shaped
- up to 2.5 mm long
- · smooth.

Most fruit are sterile. It is not known if any viable seeds are produced.

Roots are:

- fibrous
- shallow.

Similar looking plants

Brown-spined Hudson pear looks very similar to:

- Hudson pear (*Cylindropuntia pallida*), which has larger pink to purple flowers, white spines and the fruit are green when ripe.
- Jumping cholla (*Cylindropuntia prolifera*), which can grow taller (up to 2 m), has shorter spines (up to 2 cm long) and has rose to magenta coloured flowers.
- Rope pear (*Cylindropuntia imbricata*), which can grow much taller (up to 3 m), has longer stems (up to 40 cm) and larger flowers that are dark pink to purple.

Where is it found?

Brown-spined Hudson pear has been found in the North West region of NSW.

This weed is native to Mexico and southern parts of the USA.

What type of environment does it grow in?

Brown-spined Hudson pear can tolerate a wide range of soil types including sandy or stoney soils, loams and heavy clays.

How does it spread?

By plant parts

Stem segments can easily break off from the main plant. New plants can grow from the fruit or small segments of the plant when they make contact with the soil. The plant parts are spread by:

- · attaching to wool or fur on animals
- sticking to footwear or clothing
- attaching to tyres or machinery
- flowing water
- · people dumping plant material from gardens.

By seeds

It is not known if the seeds of brown-spined Hudson pear are viable.

References

Harvey, K.J., McConnachie, A.J. Sullivan, P. Holtkamp, R. & Officer, D. (2021). *Biological control of weeds: a practitioner's guide for south east Australia*. New South Wales Department of Primary Industries, Orange.

PlantNET (The NSW Plant Information Network System). Royal Botanic Gardens and Domain Trust, Sydney. Retrieved 03/02/2023 from https://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl?page=nswfl&lvl=sp&name=Cylindropuntia~tunicata

Sheehan, M. R., & Potter, S. (2017). *Managing Opuntioid Cacti in Australia: Best Practice Control Manual for Austrocylindropuntia, Cylindropuntia and Opuntia Species*. Department of Primary Industries and Regional Development.

Identic and Lucid (2016) Weeds of Australia Fact sheet Cylindropuntia rosea (DC.) Backeb. and Cylindropuntia tunicata (Lehm.) F.M.Knuth Retrieved 03/03/2023 from: https://keyserver.lucidcentral.org/weeds/data/media/Html/cylindropuntia_rosea_and_c._tunicata.htm

More information

- PlantNET NSW FloraOnline, Cylindropuntia tunicata. Royal Botanical Gardens and Domain Trust. (https://plantnet.rbgsyd.nsw.gov.au/cgi-bin/NSWfl.pl? page=nswfl&lvl=sp&name=Cylindropuntia~tunicata)
- Weed futures: Determining current and future weed threats in Australia, Cylindropuntia tunicata. Macquarie University. (http://www.weedfutures.net/species.php?id=2049)
- Managing Opuntioid Cacti in Australia (https://www.agric.wa.gov.au/invasive-species/opuntioid-cactibest-practice-control-manual)
- Biological control of weeds: A practitioner's guide for south-east Australia (https://www.dpi.nsw.gov.au/biosecurity/weeds/weed-control/biological-control/biological-control-of-weeds-manual)

Control

Successful weed control relies on follow up after the initial efforts. This means looking for and killing regrowth or new plants.

Wear protective clothing, including gloves, boots, thick clothing and eyewear to stop injuries from spines.

Prevention

Do not grow brown-spined Hudson pear in gardens or pots. Do not take cuttings of unknown cactus plants to grow out or share with others.

Stop the spread of brown-spined Hudson pear into new areas by checking clothing, vehicles and equipment for plant parts before leaving an area that has cacti.

Physical removal

By hand

Seedlings and small plants that have not developed obvious spines can be hand-pulled with a gloved hand. Use tools to remove small to medium-sized plants. Take care to remove the whole plant and any parts that have fallen off. Dispose of all parts as they will regrow if they contact the soil.

Disposal

To dispose of cactus bury them at 1 m deep or burn in a hot fire. Check disposal sites regularly. Alternatively contact your local council for disposal advice. When treating large areas, using a dye can help show which plants have already been sprayed.

Chemical control

Spot spraying

Apply herbicide to actively growing plants. Re-treatment may be necessary, particularly with large clumps of cacti. Adding an oil or surfactant to the spray mix will make the herbicide treatment more effective.

Biological control

The cochineal bug *Dactylopius tomemtosus* acanthacarpa var. echinocarpa linage provides effective control of brown-spined Hudson pear. There are several species of *Dactylopius* that look similar but they each control different species of cactus. It is important to use the correct species of cochineal for each species of cactus. Contact your local weeds officer for information about using cochineal to control brown-spined Hudson pear.

Herbicide options

WARNING - ALWAYS READ THE LABEL

Users of agricultural or veterinary chemical products must always read the label and any permit, before using the product, and strictly comply with the directions on the label and the conditions of any permit. Users are not absolved from compliance with the directions on the label or the conditions of the permit by reason of any statement made or not made in this information. To view permits or product labels go to the Australian Pesticides and Veterinary Medicines Authority website www.apvma.gov.au

See Using herbicides (http://www.dpi.nsw.gov.au/biosecurity/weeds/weed-control) for more information.

Picloram 100 g/L + Triclopyr 300 g/L + Aminopyralid 8 g/L (Grazon® Extra)

Rate: 500 mL per 100 L of water.

Comments: Follow the label instructions as per Prickly pear (common), smooth tree pear. Spray actively growing plants. Thoroughly cover all of the plant with herbicide mix to the point of runoff. Regrowth may occur, so a follow-up application may be necessary. To improve uptake add a paraffinic oil at the rate of 500 mL per 100 L of water.

Withholding period: Where product is used to control woody weeds in pastures there is a restriction of 12 weeks for use of treated pastures for making hay and silage; using hay or other plant material for compost, mulch or mushroom substrate; or using animal waste from animals grazing on treated pastures for compost, mulching, or spreading on pasture/crops.

Herbicide group: 4 (previously group I), Disruptors of plant cell growth (Auxin mimics)

Resistance risk: Moderate

Triclopyr 300 g/L + Picloram 100 g/L (Various products)

Rate: 500 mL per 100 L of water.

Comments: Follow the label instructions as per prickly pear common. To improve uptake of add a paraffinic oil at the rate of 500 mL per 100 L of water.

Withholding period: Nil.

Herbicide group: 4 (previously group I), Disruptors of plant cell growth (Auxin mimics)

Resistance risk: Moderate

Triclopyr 600 g/L (Garlon® 600)

Rate: 1 L per 75 L of diesel

Comments: Follow the label instructions as per common prickly pear (Opuntia spp.). Spray actively growing

plants. Thoroughly cover all of the plant.

Withholding period: Not required when used as directed. If use is off-label check permit. Herbicide group: 4 (previously group I), Disruptors of plant cell growth (Auxin mimics)

Resistance risk: Moderate

Triclopyr 600 g/L (Garlon® 600)

Rate: 3 L per 100 L of water.

Comments: Follow the label instructions as per common prickly pear (Opuntia spp.). Spray actively growing plants. Thoroughly cover all of the plant to the point of runoff. To improve uptake, add a paraffinic oil at the rate of 500 mL per 100 L of water.

Withholding period: Not required when used as directed. If use is off-label check permit. Herbicide group: 4 (previously group I), Disruptors of plant cell growth (Auxin mimics)

Resistance risk: Moderate

Biosecurity duty

The content provided here is for information purposes only and is taken from the *Biosecurity Act 2015* and its subordinate legislation, and the Regional Strategic Weed Management Plans (published by each Local Land Services region in NSW). It describes the state and regional priorities for weeds in New South Wales, Australia.

Area	Duty
All of NSW	General Biosecurity Duty All pest plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.
All of NSW	Prohibition on certain dealings Must not be imported into the state, sold, bartered, exchanged or offered for sale.
Central Tablelands	Regional Recommended Measure Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.
Hunter	Regional Recommended Measure Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant.
Murray	Regional Recommended Measure Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.

Area

Duty

North West

Whole of Region, excluding Core infestations within Walgett shire

Regional Recommended Measure

Whole of region: Land managers mitigate the risk of new weeds being introduced to their land. Within exclusion zone: Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found. Within core infestation: Land managers should mitigate spread of the plant from their land. A person should not buy, sell, move, carry or release the plant into the environment. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.



Brown spined Hudson pear spines are up to 7 cm long. (Photo: John Hosking NSW DPI)



Brown spined Hudson pear has cylindrical stems covered in spines. (Photo: John Hosking NSW DPI)

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