

# Cactus Quarterly

SPRING 2020

## LATEST NEWS

### AQF training for Hudson pear infested area

The last of the AQF3 training under the *Releasing the Hounds* project was run at Grawin on Friday 28 August and in Lightning Ridge on Saturday 29 August. It was great to see both courses booked out with a total of 30 participants enjoying the course.

With great weather it allowed both groups to get outside and enjoy the sunshine while learning how to use a GPS and how important it is to collect this data, map it and feed it back into a central database.

Collecting data creates an evidence-based platform to inform Government agencies and other organisations on what is happening on the ground, how to direct research and create projects that can be effective in the community.

A huge thank you to all the participants who have attended any of the AQF3 training over the past couple of years. We hope that you continue to use your qualifications in tackling Hudson pear around your claim, property or workplace.

### Moree Koala Habitat Enhancement Project and Tiger pear

**The issue:** Moree is situated in Northern New South Wales. It is located on the banks of the Mehi River and is known for its koala population.

Northern Slopes Landcare Association were approached by Department of Planning, Industry & Environment as part of the Saving our Species Program to work with Moree Landholders to improve koala habitat and community awareness.

Previous surveys and studies conducted in the Moree area by Ecologist Phil Spark identified that Tiger pear and African Box Thorn are widespread in the core koala habitat, they often grow around the base of trees, restricting access for koalas. Tiger pear thorns have also been known to embed in koalas' paws causing pain and preventing them from climbing.

**The solution:** The aim of the project was to engage local landholders and community members to raise awareness in the community and identify landholders where koalas and threatening processes (Tiger pear and African Box Thorn) have been discovered on their property.

A community workshop was held in Moree attended by local landholders and community members. The workshop included educational talks from the Saving our Species Program John Turbill, Phil Spark (ecologist), local Council

## IN THIS ISSUE

### Latest News

- AQF Training Hudson pear
- Moree Koala Habitat
- Hudson pear biocontrol agent now available
- Priority cactus near you

### Priority Cactus - Snake Cactus

### Cacti Resources

### Events

### Networks

### Weed Officer contacts

### Further Information



weeds officer Ian Schwartz and North West Cacti Control Coordinator Jo-Anna Skewes. Information included actions that can be taken to enhance koala's habitat including watering points, weed control and identifying sick koalas.

Participating landholders are being supported to control Tiger pear and African Box Thorn on their properties with a contract spray operation being undertaken.

The project also delivered an awareness guide called "Planting Native Vegetation for Koalas in Moree".

**The impact:** The community awareness for the local koala population has increased. The severity of the drought increased koala sightings as they were looking for water. As well as the control of weeds in the koala habitat, landholders were also educated in the need for watering points for koalas.

Julie Reddan, Local Landcare Coordinator (NSLA).

## Priority cactus near you

Have you visited the Department of Primary Industries WeedWise site lately?

You can now view priority weeds and where incursions are. Check out what weeds are popping up in your area and what you should be looking out for in your backyard, paddocks, or mining claim.

It's also a great way to help you identify that 'strange looking plant that you've never seen before' or if you just can't seem to control that re-occurring weed. WeedWise has a list of control options and methods that might just do the job. It also has a new feature that allows users to search known incursions on a map.

Narrabri Shire Council weed officers have been busy with a new incursion of *Harrisia* cactus and would like to know if you have seen it near you or would like some advice on how to best control it if you do have it. Below is a map, as seen on the WeedWise site, of the *Harrisia* cactus incursions in the Narrabri Shire.

Please contact Clare Felton-Taylor on 0427 294 771 or email her at [claref@narrabri.nsw.gov.au](mailto:claref@narrabri.nsw.gov.au) or Chris Watkins on 0429 202 205 for any further information or to answer any questions that you might have.

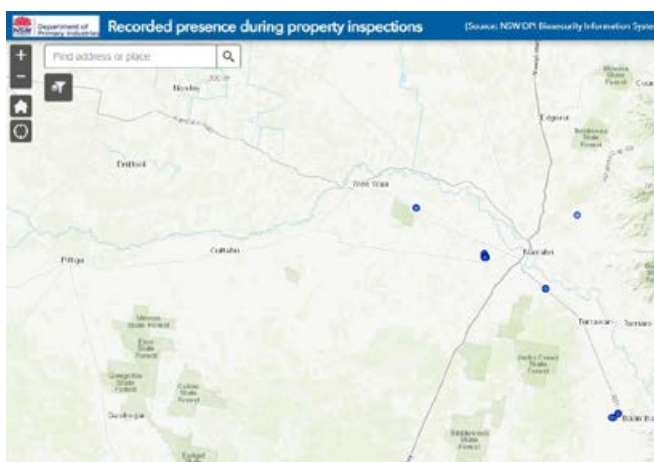


Image credit: WeedWise, <https://weeds.dpi.nsw.gov.au/Weeds/HarrisiaCactus>.

Scroll down to Maps and Records - [Recorded presence of \*Harrisia\* cactus during property inspections](#) (Map: Biosecurity Information System - Weeds, 2017-2020)



Hudson pear, *Cylindropuntia pallida*, Michael Whitney (Authorised Officer, LPSC)

## Hudson pear biocontrol agent available at Lightning Ridge mass-rearing facility

Do you have Hudson pear on your property or mining claim?

Come and get your cochineal! The new biocontrol mass-rearing facility at Lightning Ridge is fully stocked with the Hudson pear cochineal, and they are ready to be released.

Your friendly weeds officers, Mat Savage and Dave Ryan, will be only too happy to help you access your plastic tub for collecting clean Hudson pear segments. Then, all you have to do is swap your tub of clean segments for a tub of cochineal-infected segments. Mat and Dave will guide you through the process of how to release the cochineal and record the release information.

The biocontrol agent for Hudson pear (*Cylindropuntia pallida*), a cochineal bug (*Dactylopius tomentosus* 'californica var. parkeri' lineage) is one of six lineages which are being used to manage the eight invasive *Cylindropuntia* spp. in Australia.

Through collaboration between Department of Primary Industry Senior Research Scientist Andrew McConnachie, Walgett Shire Council Weed Officers Mat Savage and Andrea Fletcher, North West Local Land Service Regional Weed Officer Pete Dawson and

Northern Slopes Landcare NW Cacti Control Coordinator Jo Skewes, a program has been created that delivers an effective on-ground weed management approach. This is just another tool in the toolbox to help control the core infestations of Hudson pear.

Resources have also been developed to help guide the community to correctly identify the invasive Hudson pear, create awareness around how to travel through the area without spreading it, and how to integrate the various control tools (chemical, biocontrol and manual removal) on their mining claim or property. Check out the Northern Slopes Landcare website for more details.

To find out more about getting your hands on the biocontrol agent for Hudson pear, contact Walgett Shire Weed Officer Mat Savage on 0427 253 463 or more on the resources available contact NW Cacti Control Coordinator Jo Skewes on 0402 014 769.

'Releasing the Hounds on Hudson pear - a Community Biological Control Management Program', is funded through the NSW Governments Office for Environment and Heritage and the Department of Regional NSW. The research arm of the program is supported by AgriFutures Australia (Rural Industries Research and Development Corporation), through funding from the Australian Government Department of Agriculture, as part of its Rural R&D for Profit program (PRJ-012378).



*Dactylopius tomentosus* ('californica var parkeri' lineage), Dr Andrew McConnachie (Senior Research Scientist, NSW DPI)



Snake Cactus *C. spinosior*, Jo-Anna Skewes (NW CCC, NSLA)

## PRIORITY CACTUS

### Snake Cactus *Cylindropuntia spinosior*

#### Where did it come from and where is it now?

Snake cactus is native to the North American deserts, including Arizona, New Mexico and Chihuahua and Sonora in Mexico.

*Cylindropuntia spinosior* can be found in South Australia, Queensland and in the north and eastern regions of New South Wales.

Credit: Atlas of Living Australia

#### What does it look like?

Erect shrub 1 - 3 m tall. May develop a trunk and can be found in patches several metres wide.

#### Cladodes

- Mid-grey to green
- 1.5 - 3 cm in diameter
- 10 - 24 cm long
- Prominent tubercles

#### Spines

- 6 - 24 spines per areole
- 0.8 - 1.5 cm long, interlacing
- White to grey
- White sheath

#### Flowers

- Rose-purple
- 3 - 7.5 cm diameter

#### Fruit

- Fleshy, cylindrical to egg-shaped
- 4 cm long
- Yellow, sometimes green

Credit: Invasive Field Identification Guide – North West NSW



*C. spinosior* distribution, Atlas of Living Australia



## How does it spread?

Like most cacti species the cladodes can be dispersed through human and animal movement, as well as vehicles and other machinery. The fruit is consumed by both native wildlife and pest animals which do help disperse the seeds.

Credit: Invasive Field Identification Guide – North West NSW

## How do you control it?

### Biological Control

Cochineal - *Dactylopius tomentosus* ('bigelovii' lineage)  
Order: Hemiptera  
Family: Dactylopiidae  
Genus: Dactylopius  
Species: tomentosus  
Lineage: bigelovii

Place infected cladodes on the top of the shrub to encourage the cochineal to transfer onto the healthy plant. It also aids in protection of the cochineal until the conditions are right for the cochineal to move around.

### Chemical Control

For information on how to control *Cylindropuntia spinosior* please search APVMA <https://portal.apvma.gov.au/home> to find the correct permit and instructions for use. Alternatively, please contact your local Weeds

Officer for further advise on identification and control (see page 7 for contact details).

## Biosecurity Duty

### General Biosecurity Duty

All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise and 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

**State Priority Weed Objective – ASSET PROTECTION (Whole of State)**

### Prohibition on dealings

*Must not be imported into the State or sold*

### North West

**Biosecurity Act requirements & Strategic Response in the region**

Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): *A person must not import into the State or sell.*

Credit: North West Regional Strategic Weed Management Plan 2017-2022

## What's the difference?

### Snake Cactus (*C. spinosior*) versus Jumping Cholla (*C. prolifera*)

#### Snake Cactus

##### Cladodes

- Mid-grey to green
- 1.5 - 3 cm in diameter
- 10 - 24 cm long
- Prominent tubercles

##### Spines

- 6 - 24 spines per areole
- 0.8 - 1.5 cm long, interlacing
- White to grey
- White sheath

##### Flowers

- Rose-purple
- 3 - 7.5 cm diameter

##### Fruit

- Fleshy, cylindrical to egg-shaped
- 4 cm long
- Yellow, sometimes green



Images: *C. spinosior*,  
Jo-Anna Skewes (NSLA)

#### Jumping Cholla

##### Cladodes

- Greenish-grey
- 4 - 15 cm long
- 4 - 5 cm diameter
- Easily detached
- Prominent tubercles

##### Spines

- 7 - 11 spines per areole
- 1 - 2 cm long
- Light to dark brown, interlacing
- White to tan sheath firmly attached

##### Flowers

- Rose to magenta

##### Fruit

- Top shaped, 2 - 5 cm long
- Green
- Can form chains
- Usually sterile



Images: *C. prolifera*,  
Jo-Anna Skewes (NSLA)

## TOURISM

### Help prevent the spread of invasive cacti

Check out the latest edition of **Caravanning Australia** and flip to page 139 in the New South Wales section, to find out how we can work together to help prevent the spread of invasive cacti.

You could also win a 12 months subscription to Caravanning Australia, Australian Traveller or Camp 10 by participating in our online survey. Just scan the QR code or visit [www.northernslopeslandcare.com.au/cacti/take-our-survey](http://www.northernslopeslandcare.com.au/cacti/take-our-survey) to enter.

Good luck!



**NORTH WEST**  
**No Space for Weeds**

**Let's work together to prevent the spread of invasive cacti** *We need your help!*

You can help us develop a better understanding of how we can combat the movement of cacti species across the landscape. As travellers, your unique perspective on how we can work with the community is invaluable. By completing a quick online survey, you can help us identify what motivates travellers to help stop the spread of invasive cacti.

**COMPLETE OUR ONLINE SURVEY**  
Scan the QR code or visit: [www.surveymonkey.com/r/cacti](http://www.surveymonkey.com/r/cacti) or [www.northernslopeslandcare.com.au/cacti/take-our-survey](http://www.northernslopeslandcare.com.au/cacti/take-our-survey)

**Great prizes to be won**

- 12 month subscription to **Caravanning Australia**
- 12 month subscription to **Australian Traveller**
- 2019 edition of **Camps 10**

NW Cacti Control Coordinator program is a collaboration between NSW Local Land Services and Northern Slopes Landcare.



## NETWORKS

### NSW Weed Biocontrol Taskforce

The Taskforce comprise of a voluntary collaboration of members from a number of like-minded agencies responsible for managing weeds. The role of the Taskforce includes:

- obtaining and facilitating commitment and investment,
- mass-rearing and establishment of agents
- monitoring
- training
- prioritising agents for action in NSW
- and communication of research progress
- bi-annual meetings involve updates, training, field visits and demonstrations.

The Taskforce funds and promotes biocontrol research alongside rearing, release, and monitoring programs (implementation activities) through a shared investment commitment.

This has enabled the setting of priorities and pooling of resources linking local, state and national collaborators. This pilot is proving highly successful and is laying the ground work for further co-investment in a coordinated, collaborative effort.

To learn more about, or participate in, the NSW Weed Biocontrol Taskforce and its collaborative biocontrol programs request a copy of the prospectus at <https://www.dpi.nsw.gov.au/biosecurity/weeds/weed-control/biological-control/nsw-weed-biocontrol-taskforce>



## EVENTS

### Mass-rearing facility, Lightning Ridge

Come and get your cochineal! The new biocontrol mass-rearing facility at Lightning Ridge is fully stocked with the Hudson pear cochineal and they are ready to be released.

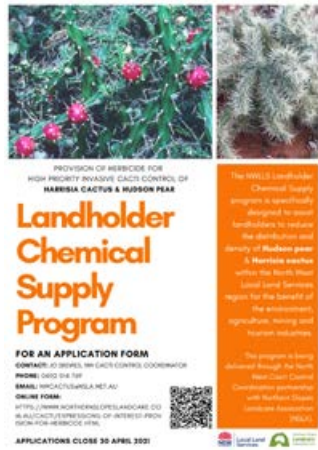
Your friendly weeds officers, Mat Savage and Dave Ryan, will be only too happy to help you access your plastic tub for collecting clean Hudson pear segments. Then all you have to do is swap your tub of clean segments for a tub of cochineal-infected segments. Mat and Dave will guide you through the process of how to release the cochineal and record the release information.

To find out more about getting your hands on the biocontrol agent for Hudson pear, contact Walgett Shire Weed Officer Mat Savage on 0427 253 463 or more on the resources available contact NW Cacti Control Coordinator Jo Skewes on 0402 014 769.

### Landholder Chemical Supply Program

Do you have harrisia cactus or Hudson pear on your property? The NWLLS Landholder Chemical Supply program is specifically designed to assist landholders to reduce the distribution and density of Hudson pear and Harrisia cactus within the North West Local Land Services region for the benefit of the environment, agriculture, mining and tourism industries.

Submit an expression form online at <https://www.northernslopeslandcare.com.au/cacti/expressions-of-interest-provision-for-herbicide.html> or contact Jo Skewes, NW Cacti Control Coordinator at [nwcaactus@nsla.net.au](mailto:nwcaactus@nsla.net.au) for a form or for further information.



## CACTI RESOURCES

### Northern Slopes YouTube Channel Hudson pear, *Cylindropuntia pallida* playlist

Check out the newest addition to cacti resources. Subscribe to the Hudson pear, *Cylindropuntia pallida* playlist on YouTube to learn about the new biocontrol for Hudson pear. The informative videos are a visual guide on; what is Hudson pear; what cochineal look like; where to collect cochineal; how to collect, transport and collect cladodes; how to release cochineal and further integrated control options.

You can check the video out online at <https://www.youtube.com/playlist?list=PLmSrgp-UIktRkaObd2twzqzkuYIRtu4W>

### Resources to download

Seen this plant? Hudson pear

Biocontrol of Hudson pear

*Using the cochineal Dactylopius tomentosus (californica var. parkeri)*

**Invasive Cacti Field Guide: Identification and control of invasive cacti – North West NSW**



The above resources can be found under the cacti resources tab on the NSLA website at

<https://www.northernslopeslandcare.com.au/cacti/resources>



## NORTH WEST REGIONAL WEEDS OFFICERS

If you find any suspicious weeds please call your local council so their response team can work with you on identifying and controlling any state or regional priority weeds you might find on your property.

### GUNNEDAH SHIRE COUNCIL

*Senior Weeds Officer*

Lee Amidy | 0427 254 188

Neil Worboys | 0436 950 781

63 Elgin Street, Gunnedah NSW 2380

**Phone:** 02 6740 2100

**Email:** [council@infogunnedah.com.au](mailto:council@infogunnedah.com.au)

**Postal Address:**

PO Box 63, Gunnedah NSW 2380

### GWYDIR SHIRE COUNCIL

*Weeds Officer - Warialda*

Scott McLachlan | 0428 305 364

*Weeds Officer - Bingara*

Adrian Wood | 0448 181 321

**Postal Address:**

Locked Bag 5, Bingara NSW 2404

**Email:** [mail@gwydir.nsw.gov.au](mailto:mail@gwydir.nsw.gov.au)

BINGARA OFFICE

33 Maitland Street, Bingara NSW 2404

**Phone:** 02 6724 2000

WARIALDA OFFICE

52 Hope Street, Warialda NSW 2402

**Phone:** 02 6729 3000

### LIVERPOOL PLAINS SHIRE COUNCIL

*Authorised Officer - Weeds*

Mike Whitney | 0427 961 980

60 Station Street, Quirindi NSW 2343

**Phone:** 02 6746 1755

**Email:** [ipsc@ipsc.nsw.gov.au](mailto:ipsc@ipsc.nsw.gov.au)

**Postal Address:**

PO Box 152, Quirindi NSW 2343

### MOREE PLAINS SHIRE COUNCIL

*Senior Biosecurity Officer*

Ian Schwartz | 0427 044 521

*Biosecurity Officer*

Lachlan Biddle | 0408 204 577

Level 2, Max Centre

30 Heber Street, Moree NSW 2400

**Phone:** 02 6757 3222

**Email:** [council@mpsc.nsw.gov.au](mailto:council@mpsc.nsw.gov.au)

**Postal Address:**

PO Box 420, Moree NSW 2400

### NARRABRI SHIRE COUNCIL

*Senior Authorised Officer - Weeds*

Clare Felton-Taylor | 0427 294 771

*Authorised Officer - Weeds*

Chris Watkins | 0429 202 205

46-48 Maitland Street, Narrabri NSW 2390

**Phone:** 02 6799 6866

**Email:** [council@narrabri.nsw.gov.au](mailto:council@narrabri.nsw.gov.au)

**Postal Address:**

PO Box 261, Narrabri NSW 2390

### TAMWORTH REGIONAL COUNCIL

*Senior Weeds Officer*

Mal Stein | 0429 821 579

*Weeds Officer*

Robert Burr | 0419 271 593

Ray Walsh House

437 Peel Street, Tamworth NSW 2340

**Phone:** 02 6767 5555

**Email:** [trc@tamworth.nsw.gov.au](mailto:trc@tamworth.nsw.gov.au)

**Postal Address:**

PO Box 555, Tamworth NSW 2340

### WALGETT SHIRE COUNCIL

CASTLEREAGH MACQUARIE

COUNTY COUNCIL

*Senior Weeds Officer*

Andrea Fletcher | 0428 462 060

*Weeds Officer*

Mat Savage | 0427 253 463

*Weeds Officer*

David Ryan | 0401 835 563

77 Fox Street, Walgett NSW 2832

**Phone:** 02 6828 6100

**E-mail:** [admin@walgett.nsw.gov.au](mailto:admin@walgett.nsw.gov.au)

**Postal Address:**

PO Box 31, Walgett NSW 2832

### NORTH WEST LOCAL LAND SERVICES

MOREE OFFICE | 02 6750 9000

WARIALDA OFFICE | 02 6729 1529

NARRABRI OFFICE | 1300 795 299

TAMWORTH OFFICE | 02 6764 5900

WALGETT OFFICE | 02 6828 6400

GUNNEDAH OFFICE | 02 6742 9220

GOONDIWINDI OFFICE | 0428 432 784

Call 1300 795 299 to contact your Local Land Service office from Monday to Friday during business hours or online at <https://www.lls.nsw.gov.au/our-regions/north-west/contact-us>

*The safety of our customers and employees is our top priority and we are committed to taking important steps in reducing the spread of COVID-19.*

*From Tuesday 24 March, customer service centres of Local Land Services will be open by appointment only and all contact should be done online or via telephone.*

*Whilst these centres are closed to face to face contact, we are still here, working to keep you safe in these challenging times and you can continue to contact us.*

### DEPARTMENT OF PRIMARY INDUSTRIES

Biosecurity Helpline 1800 680 244

### WEED BIOCONTROL (WEED RESEARCH UNIT)

**Email:** [weed.biocontrol@dpi.nsw.gov.au](mailto:weed.biocontrol@dpi.nsw.gov.au)



## FURTHER INFORMATION

### Websites

**Atlas of Living Australia** - <https://www.ala.org.au/>  
**Australian Invasive Cacti Network (AICN)** - <http://www.aicn.org.au/>  
**Australian Pesticides and Veterinary Medicinal Authority (APVMA)** - <https://portal.apvma.gov.au>  
**Biological Control DPI** - <https://www.dpi.nsw.gov.au/biosecurity/weeds/projects/biological-control>  
**Department of Primary Industries (DPI)** - <https://www.dpi.nsw.gov.au/>  
**DPI Weeds** - <https://www.dpi.nsw.gov.au/biosecurity/weeds>  
**NSW Biocontrol Weeds Taskforce** - <https://www.dpi.nsw.gov.au/biosecurity/weeds/weed-control/biological-control/nsw-weed-biocontrol-taskforce>  
**NSW WeedWise** - <http://weeds.dpi.nsw.gov.au/>  
**North West Local Land Services (NW LLS)** - <https://northwest.lls.nsw.gov.au/>  
**North West Weeds** - <http://www.northwestweeds.com.au/>  
**PlantNET** - <http://plantnet.rbgsyd.nsw.gov.au/>  
**Weed Control and Identification** - <https://www.dpi.nsw.gov.au/biosecurity/weeds/weed-control>  
**Weeds of National Significance** - <http://weeds.ala.org.au/WoNS/>

### North West Landcare

**North West Plains Sustainability Group** - <https://www.facebook.com/northwestplainsgroup/>  
**Northern Slopes Landcare Association** - <http://www.northernslopeslandcare.com.au/>  
**Tamworth Regional Landcare Association** - <http://www.trla.org.au/>

### Resources

**Australian Weed Strategy** - <http://nrmonline.nrm.gov.au/downloads/mql:2307/content>  
**New South Wales Weed Control Handbook** - <https://www.dpi.nsw.gov.au/biosecurity/weeds/weed-control/management-guides/noxious-enviro-weed-control>  
**Invasive Cacti Field Guide: Identification and control of invasive cacti, North West NSW** - [https://www.northernslopeslandcare.com.au/images/Cacti/5537\\_Cacti\\_Booklet\\_VeryFINAL\\_WEB.pdf](https://www.northernslopeslandcare.com.au/images/Cacti/5537_Cacti_Booklet_VeryFINAL_WEB.pdf)  
**Opuntiod Cacti Best Practice Control Manual** - <https://www.agric.wa.gov.au/invasive-species/opuntiod-cacti-best-practice-control-manual>

### NSW Acts and Regulations

**Biodiversity Conservation Act 2016** - <https://www.legislation.nsw.gov.au/#/view/act/2016/63>  
**Biosecurity Act 2015** - <https://www.dpi.nsw.gov.au/about-us/legislation/list/biosecurity-act-2015>  
**EPA Pesticide Act 1999** - <https://www.epa.nsw.gov.au/licensing-and-regulation/legislation-and-compliance/acts-administered-by-the-epa/act-summaries#pa>  
**EPA Pesticide Regulation 2017** - <https://www.epa.nsw.gov.au/licensing-and-regulation/legislation-and-compliance/acts-administered-by-the-epa/regulation-summaries#PestReg>  
**Local Land Services Act 2013** - <https://www.legislation.nsw.gov.au/#/view/act/2013/51>

#### Cactus Quarterly – Contact

NW Cacti Control Coordinator  
Northern Slopes Landcare Association  
Email: [nwcactus@nsla.net.au](mailto:nwcactus@nsla.net.au)  
Phone: 0402 014 769

#### Cactus Quarterly – Sign up

Online: <http://eepurl.com/dH1wAv>

#### North West Local Land Services Feedback

Online: <https://rateitnow.com/northwestllsregion>



Northern Slopes  
**Landcare**  
Association Inc.

North West Cacti Control Coordinator program is a collaboration between North West Local Land Services and Northern Slopes Landcare.