



## SAVING OUR SPECIES

# Small Snake Orchid

2020-2021 annual report card

### Overall status\*

- **Populations at all sites are known to be on track.**
- Threat management is known to be on track at all sites, and population status is unknown at one or more sites.
- Threat management is known to be off track at one or more sites, and population status is unknown at one or more sites.
- Populations at one or more sites are known to be off track.

\* For SoS priority management sites (may not include all locations where the species occurs in NSW)

### Summary

<b>Management sites</b>	East of Guyra; Rigney Creek Travelling Stock Reserve (TSR)
<b>Action implementation</b>	4 (of 4) management actions were fully or partially implemented as planned for the financial year.
<b>Total expenditure</b>	\$12,375 (\$8,900 cash; \$3,475 in-kind)
<b>Partners</b>	Environment, Energy and Science



**Scientific name:**  
*Diuris pedunculata*

**NSW status:**  
Endangered

**Commonwealth status:**  
Endangered

**Management stream:**  
Site-managed species





Photo: Lachlan Copeland

# Priority management site: East of Guyra

**Local government area:**  
Armidale Regional

**Partners:**  
Environment, Energy and  
Science

## Population outcome

-  **On track**
-  **On track (inferred)**
-  **Not on track (inferred)**
-  **Not on track**

## Monitoring

*Species population monitoring by one or more methods indicates response to management over time and provides an outcome measure.*

<b>Monitoring metric</b>	Extent of occurrence
<b>Annual target</b>	Targeted surveys to confirm persistence of the sub-population with more than zero records after severe drought in previous years.
<b>Long term target</b>	Maintain population at or above 2018 levels (258 flowering plants).
<b>Monitoring result</b>	There were 29 flowering plants recorded compared to zero observed in 2019–20 and 258 observed in 2018–19.
<b>Scientific rigour of monitoring method</b>	Moderate
<b>Conducted by</b>	Environment, Energy and Science

## Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$3,350	\$600

## Management actions

*The following actions are those identified as being required in financial year 2020-2021 to secure the species in the wild.*

Threat	Management action	Implemented as planned?
Grazing and trampling by domestic stock.	Liaise with Local Land Services to ensure grazing is implemented appropriately.	Yes
Weed invasion.	Complete required weeding activities.	Yes

## Threat outcome

*Assessment on the status of critical threats at this site.*

Threat	Annual target	Threat status
Grazing and trampling by domestic stock.	Photo points confirm there is no negative impact from grazing and stock access at this site.	On track
Weed invasion.	Photo points show an annual reduction in the estimated percentage cover of weeds at the site, until levels are at or below 10% ground cover.	On track

## Site summary

The East of Guyra population recorded 29 flowering plants through targeted surveys in 2020, compared to zero in 2019 and 258 in 2018. The survey in spring 2020 found a large increase in the number of small snake orchids flowering plants in both populations compared to what was recorded in October 2019. This was to be expected given the severe drought conditions experienced at both sites in 2019 compared to relatively green conditions in 2020 following good rainfall earlier in the year. The East of Guyra site appears to still be recovering from the drought.

A visual comparison of photos from 2018, 2019 and 2020 photo points shows a clear decline in the abundance of flowering ox-eye daisy last year in the extreme drought conditions, followed by a recovery in 2020 with the return to a 'normal' season. The estimated percentage of aerial covers (within the 2 enclosures) also suggested a significant decline, with the cover halving for ox-eye daisy at both sites last year, but now back to where they were in 2018. The stock-proof enclosure appears to have been effective at keeping stock out, and there was no evidence of recent grazing within protected area.

# Priority management site: Rigney Creek Travelling Stock Reserve (TSR)

<p><b>Local government area:</b> Armidale Regional</p> <p><b>Partners:</b> Environment, Energy and Science</p>	<p><b>Population outcome</b></p> <ul style="list-style-type: none"> <li><span style="color: green; font-size: 1.2em; margin-right: 5px;">●</span> <b>On track</b></li> <li><span style="color: lightgreen; font-size: 1.2em; margin-right: 5px;">●</span> On track (inferred)</li> <li><span style="color: orange; font-size: 1.2em; margin-right: 5px;">●</span> Not on track (inferred)</li> <li><span style="color: red; font-size: 1.2em; margin-right: 5px;">●</span> Not on track</li> </ul>
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## Monitoring

*Species population monitoring by one or more methods indicates response to management over time and provides an outcome measure.*

<b>Monitoring metric</b>	Extent of occurrence
<b>Annual target</b>	Under ideal weather conditions, population is maintained at or above 1,060 individuals (75% of baseline count of 1,414).
<b>Long term target</b>	Maintain population at or above 2018 levels (1,414 flowering plants).
<b>Monitoring result</b>	There were 5,377 flowering plants observed in 2020 survey (increased from 587 recorded in 2019 and 1,414 in the 2018 survey).
<b>Scientific rigour of monitoring method</b>	Moderate
<b>Conducted by</b>	Environment, Energy and Science

## Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$5,550	\$2,875

## Management actions

*The following actions are those identified as being required in financial year 2020-2021 to secure the species in the wild.*

Threat	Management action	Implemented as planned?
Grazing and trampling by domestic stock.	Ongoing liaison required to manage grazing.	Yes
Weed invasion.	Implement required weeding activities.	Yes

## Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Grazing and trampling by domestic stock.	Photo points confirm there is no negative impact from grazing and stock access at this site.	On track
Weed invasion.	Photo points show an annual reduction in the estimated percentage cover of weeds at the site until levels are at or below 10% ground cover.	On track

## Site summary

There were 5,377 flowering plants counted in 2019–20, which is a significant increase from 587 recorded in 2019 and 1,414 in the 2018 survey. There were 1,202 flowering plants observed within the fenced enclosure, and an additional 4,175 plants were recorded outside of the enclosure. A visual comparison of the weed density of exotic perennial species was made from 2018, 2019 and 2020 photographs. The density of ox-eye daisy appeared to be similar to that observed in 2018, but much higher than 2019 when both sites were experiencing extreme drought conditions.

The main 3 threats to the small snake orchids at the Rigney Creek site are thought to be competition from perennial weeds (especially ox-eye daisy, cocksfoot (*Dactylis glomerata*) and scotch broom (*Cytisus scoparius*), overgrazing by cattle and site-disturbance from vehicles such as off-road 4WDs and possible roadworks. A site inspection revealed no evidence of recent grazing or damage to the site by off-road vehicles. The northern section of the fenced management area shows positive regeneration of native grasses and ground cover where there is limited competition from introduced grasses. Continued weed management is required across the site for continued protection of the population.

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Saving our Species 2020-2021 annual report card for Small Snake Orchid (*Diuris pedunculata*). For more information refer to the specific strategy in the Saving our Species program.