



SAVING OUR SPECIES

Pale Yellow Doubletail

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

Management sites	Burrell Creek; Killawarra; Tinonee; Wingham Bight
Action implementation	11 (of 11) management actions were fully or partially implemented as planned for the financial year.
Total expenditure	\$27,500 (\$9,500 cash; \$18,000 in-kind)
Partners	Environment, Energy and Science; Hunter Local Land Services; MidCoast Council; Participating landholders



Scientific name:
Diuris flavescens

NSW status:
Critically Endangered

Commonwealth status:
Critically Endangered

Management stream:
Site-managed species

Photo: Barry Collier





Priority management site: Burrell Creek

Local government area:
Mid-Coast

Partners:

Environment, Energy and Science; Hunter Local Land Services; Participating landholders

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.

Monitoring metric	Species abundance
Annual target	Census count results show a stable or increasing population set by the 2018 count of 675 plants, with the effects of rainfall prior to flowering considered.
Long term target	Maintain a stable or increasing population.
Monitoring result	The count of flowering plants was 976, compared to 675 in 2018. This count is reflective of the wet climatic conditions at the site.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$2,900	\$2,800
Hunter Local Land Services	\$0	\$1,750
Participating landholders	\$0	\$500

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?
Disturbance due to grazing by cattle, particularly during the flowering period.	Cattle grazing is excluded during the flowering period (1 September — 20 November).	Yes
Disturbance due to grazing by cattle, particularly during the flowering period.	Ongoing liaison with Hunter Local Land Services to ensure compliance with agreed grazing management.	Yes
Infestation by invasive exotic grasses and other weeds.	All weeds in known habitat treated with spraying, cutting or painting techniques.	Yes
Regrowth of eucalypts and other flora encroaching on and colonising open areas of suitable habitat.	All woody regrowth in known habitat treated for control.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Disturbance due to grazing by cattle, particularly during the flowering period.	Cattle grazing is excluded during the flowering period (1 September — 20 November).	On track
Infestation by invasive exotic grasses and other weeds.	Maintain weed densities at less than 10% cover.	On track
Regrowth of eucalypts and other flora encroaching on and colonising open areas of suitable habitat.	Native trees and shrubs are maintained at less than 10% ground cover.	On track

Site summary

The Burrell Creek *Saving our Species* site has been monitored each Spring from 2017 to 2020 by undertaking thorough searches of the site and counting every visible plant. The highest count of 675 plants was in 2018. However, in 2020 this number has increased significantly to 976 plants, which was aided by persistent wet weather leading up to the flowering period. With just 26 plants recorded during drought in 2019, the monitoring program clearly indicates that flowering is highly dependent on climatic conditions.

The monitoring also shows that this Critically Endangered species can co-exist with grazing, as long as livestock are removed in some years to enable flowering and seed production to occur. The annual control of weeds and prevention of regrowth of native woody plants over the 13 hectares of occupied habitat has helped to maintain the open grassland environment that is most suited to this species.





Priority management site: Killawarra

Local government area:
Mid-Coast

Partners:

Environment, Energy and Science; Hunter Local Land Services

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.

Monitoring metric	Species abundance
Annual target	Census count results show a stable or increasing population set by the 2018 count of 52 plants, with the effects of rainfall prior to flowering considered.
Long term target	Maintain or increase the population of 52 individuals.
Monitoring result	The count of flowering plants was 187, compared to 52 in 2018. This count is reflective of the wet climatic conditions at the site.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$2,000	\$2,100
Hunter Local Land Services	\$0	\$1,750

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?
Disturbance due to grazing by cattle, particularly during the flowering period.	Cattle grazing is excluded during the flowering period (1st September - 20th November).	Yes
Infestation by invasive exotic grasses and other weeds.	All weeds in known habitat treated with spraying, cutting or painting techniques.	Yes
Regrowth of eucalypts and other flora encroaching on and colonising open areas of suitable habitat.	All woody regrowth in known habitat treated for control.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Infestation by invasive exotic grasses and other weeds.	Maintain weed densities at less than 10% cover.	On track
Disturbance due to lessee activities on site.	Minimise any recreational impact or presence on the area of occupancy.	On track
Regrowth of eucalypts and other flora encroaching on and colonising open areas of suitable habitat.	Native trees and shrubs are maintained at less than 10% ground cover.	On track
Disturbance due to grazing by cattle, particularly during the flowering period.	Cattle grazing is excluded during the flowering period (1 September — 20 November).	On track

Site summary

Ongoing management and favourable wet weather at the Killawarra *Saving our Species* site resulted in the largest population yet recorded with 187 plants counted. This number is more than three times higher than the previous highest count from 2018 of 52 plants.





A barrier fence, which has been installed along the edge of the main internal track continues to protect a key area of habitat from accidental damage from people and vehicles encroaching into the area. The weed and native regrowth control program continues to maintain an open grassland habitat, which is the ideal environment for further population growth.

Priority management site: Tinonee

Local government area:
Mid-Coast

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.

Monitoring metric	Species abundance
Annual target	Census count results show a stable or increasing population set by the 2017 count of 221 plants, with the effects of rainfall prior to flowering considered.
Long term target	Maintain or increase the population of 221 individuals.
Monitoring result	The count of flowering plants was 569, compared to 221 in 2017. This count is reflective of the wet climatic conditions at the site.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$2,100	\$2,450

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?
Mowing of habitat during the flowering season.	Reaffirm the timing of slashing with landholder to avoid impacting the annual flowering events.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Current or potential future land management practices do not support conservation.	No areas of habitat are affected by degrading land use practises.	On track
Mowing of habitat during the flowering season.	Slashing of habitat is avoided during the flowering period (1 September — 20 November).	On track

Site summary

Ongoing management and favourable wet weather at the Tinonee *Saving our Species* site resulted in the largest population yet recorded with 569 plants counted. This number is more than double the previous highest count from 2017 of 221 plants. Notably, the entire population was affected by bushfire in the 2019—20 bushfires in November 2019. The results indicate that the orchid tubers can survive and benefit from the habitat being occasionally burnt.





The fire has maintained weeds at low levels, but has prompted the germination of some native shrubs. These shrubs may require controlling to maintain the open grassland and woodland habitat preferred by this species.

Priority management site: Wingham Bight

Local government area:
Mid-Coast

Partners:
Environment, Energy and
Science; MidCoast Council

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.

Monitoring metric	Species abundance
Annual target	Census count results show a population persisting within the site.
Long term target	Maintain or increase the population of 29 individuals.
Monitoring result	The count of flowering plants was five.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$2,500	\$3,150
MidCoast Council	\$0	\$3,500

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?
Infestation by invasive exotic grasses and other weeds.	Control weeds across 0.5 ha to maintain weed densities to <10% cover.	Yes
Mowing of habitat during the flowering season.	Liaison with council to ensure adherence to management plan.	Yes
Ongoing disturbance due to various activities by cemetery staff and visitors.	Monitoring of site management.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Mowing of habitat during the flowering season.	Mowing of habitat is avoided during the flowering period (1 September — 20 November).	On track
Infestation by invasive exotic grasses and other weeds.	Maintain weed densities at less than 10% cover.	On track
Ongoing disturbance due to various activities by cemetery staff and visitors.	Maintain low levels of disturbance and greater than 90% native grass cover.	On track

Site summary

The Wingham Bight *Saving our Species* site has been monitored each Spring from 2017 to 2020 by undertaking thorough searches of the site and counting every visible plant. The highest count of 29 plants was in 2017. However, in 2019 unanticipated soil disturbance affected part of the site. Coinciding with drought, no flowering plants were recorded in 2019.

The five plants recorded in 2020 indicates that the soil disturbance may have caused losses or affected the flowering plants. However, it shows that a population persists at the site and should recover.

Saving our Species 2020-2021 annual report card for Pale Yellow Doubletail (*Diuris flavescens*). For more information refer to the specific strategy in the Saving our Species program.