SAVING OUR SPECIES

Mittagong Geebung

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	Bargo State Conservation Area; Mt Alexandra, Welby and Jellore; Upper Nepean State Conservation Area
Action implementation	7 (of 7) management actions were fully or partially implemented as planned for the financial year.
Total expenditure	$21,134 ($6,000 cash; $15,134 in-kind)
Partners	Environment, Energy and Science; Wingecarribee Shire Council

Photo: Steven Douglas

Scientific name:
Persoonia glaucescens

NSW status:
Endangered

Commonwealth status:
Vulnerable

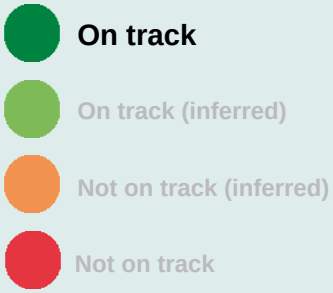
Management stream:
Site-managed species

Priority management site: Bargo State Conservation Area

Local government area:
Wingecarribee; Wollondilly

Partners:
Environment, Energy and Science

Population outcome



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	To survey and record a stable or increasing population of 100 plants in fixed quadrats.
Long term target	Maintain or exceed a population count of 100 individuals within the monitoring plots for the next 20+ years.
Monitoring result	During the 2020–21 annual monitoring, 257 plants were recorded in the 6 Bargo monitoring plots. Two hundred and seven were seedlings in December 2019–20 wildfires and 52 are adult, previously-tagged plants. Four monitoring plots were severely burnt and have no surviving adult plants. Regeneration was observed in all burnt plots, even the ones without adult plants.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	$2,000	$3,934

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?
Full extent of the species is unknown.	Undertake one further detailed survey and increase the number of individual records from 205.	Yes
Habitat disturbance during road use and maintenance including slashing / grading of the road.	Consult with NSW National Parks and Wildlife Service. Map species along roadsides.	Yes
Slashing associated with maintenance of powerline easement.	Liaise with NSW National Parks and Wildlife Service and stakeholders about significance and location of plants within the easement. Add any new records to BioNet.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Burning for hazard reduction and other unnatural ignitions have increased fire frequency and may threaten the species survival.	No significant impact (>10% plant deaths) from increased frequency or intensity of fire.	On track
Weeds encroaching on the species habitat including African lovegrass and whiskey grass.	Observe <5% weed density across all plots.	On track
The Mittagong Geebung is endangered due to its very low seed viability.	Undertake on additional seed collection.	On track
Full extent of the species is unknown.	Map population extent across the site.	On track
Slashing associated with maintenance of powerline easement.	No significant (>10% plant deaths) impact from power line maintenance.	On track
Habitat disturbance during road use and maintenance including slashing / grading of the road.	No significant impact (>10% plant deaths) from road side maintenance.	On track
Recreational users degrading species habitat.Trail bikes and 4WD causing physical damage to the species and habitat.	No significant impact (>10% plant deaths) from recreational users.	On track

Site summary

The majority of the population at this *Saving our Species* site was affected in the December 2019–20 bushfires. It was a moderate to hot fire with some canopy scorch throughout most of the population distribution. Four of the 6 monitoring plots recorded a 100% reduction, either from fire or firefighting-related disturbance (turning circle on plants).

The adult plant numbers fell by 18 plants across the 6 monitoring plots from 70 in 2019–20 to 52 in 2020–21. Two hundred and seven seedlings were recorded in a post-fire and drought germination event. Seedlings have been recorded in all plots, including the 4 plots where no adult plants survived. Reproduction has been observed at both burnt and unburnt plots.

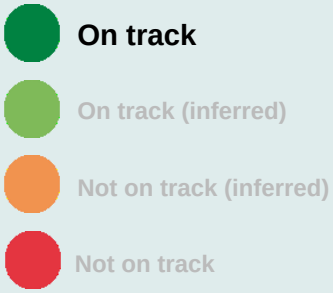
No impact was recorded from weeds, maintenance, fire and slashing.

Priority management site: Mt Alexandra, Welby and Jellore

Local government area:
Wingecarribee

Partners:
Environment, Energy and Science; Wingecarribee Shire Council

Population outcome



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	To survey and record a stable or increasing population of 69 plants in 4 fixed plots at Mt Alexandra. To survey and record a stable or increasing population of 33 plants recorded in 4 fixed plots at Jellore. To survey and record a stable or increasing population of 8 plants recorded in 2 fixed plots at Welby.
Long term target	The total number of monitored individuals remains stable (i.e does not decrease by more that 20%) or increases from 69 individuals over a 20 year interval.
Monitoring result	Two hundred and forty-one plants were recorded within the 4 monitoring plots at Mt Alexandra Reserve comprised of 199 seedlings and 42 adult plants. This is 194 more plants than 2019–20. Five hundred and forty-four plants were recorded in the 4 monitoring plots at Jellore comprised of 512 seedlings and 32 adult plants. This is 511 more plants than 2019–20. One hundred and fifty-one plants were recorded in the 2 monitoring plots at Welby comprised of 512 seedlings and 32 adult plants. This is 143 more plants than 2019–20.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	$2,000	$3,150
Wingecarribee Shire Council	$0	$5,600

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?
Burning for hazard reduction and other unnatural ignitions have increased fire frequency and may threaten the species survival.	Liaise with Wingecarribee Shire Council (WSC) and Rural Fire Service about known/predicted hazard reduction burns and give recommendations to enhance species outcomes.	Yes
Loss of habitat through clearing for urban and small-rural-lot development.	Provide WSC with information for landholders about *P. glaucescens* to add to the Land for Wildlife newsletter.	Yes
Recreational users degrading species habitat.Trail bikes and 4WD causing physical damage to the species and habitat.	Liaise with WSC to monitor and identify areas with high illegal access.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Burning for hazard reduction and other unnatural ignitions have increased fire frequency and may threaten the species survival.	No significant impact (<10% impact on the population) from increased frequency or intensity of fire.	On track
Weeds encroaching on the species habitat including African lovegrass and whiskey grass.	Low weed levels (<5%) recorded across site.	On track
Recreational users degrading species habitat.Trail bikes and 4WD causing physical damage to the species and habitat.	No significant impact (<10% impact on the population) from recreational users.	On track
Loss of habitat through clearing for urban and small-rural-lot development.	No significant impact (<10% impact on the population) from degrading land practices.	On track
Habitat disturbance during road use and maintenance including slashing / grading of the road.	No significant impact (<10% impact on the population) from roadside maintenance	On track

Site summary

Dramatic regeneration events have been observed across all 3 subsites. All of the 10 plots recorded regeneration ranging from 8 seedlings to 219 seedlings in a single plot.

Two hundred and forty-one plants were recorded within the 4 monitoring plots at Mt Alexandra Reserve, comprised of 199 seedlings and 42 adult plants. This is 194 more plants than 2019–20. Five hundred and forty-four plants were recorded in the 4 monitoring plots at Jellore comprised of 512 seedlings and 32 adult plants. This is 511 more plants than 2019–20. One hundred and fifty-one plants were recorded in the 2 monitoring plots at Welby comprised of 512 seedlings and 32 adult plants. This is 143 more plants than 2019–20. This regeneration event has come at the end of a prolonged drought. All plots except for one at Welby are not fire-affected and seedling germination seems to have been stimulated by ongoing rainfall events.

No significant impact has been recorded from weed invasion, illegal access, hazard reduction or track maintenance.

Wingecarribee Shire Council has been proactive when planning future hazard reduction burns and the proposed areas were thoroughly surveyed to ensure the species was adequately mapped and protected.

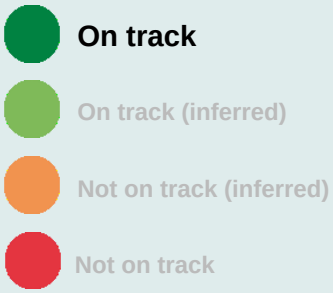
Low seed availability will determine seed collection in 2021–22. Additional records will be visited throughout the Southern Highlands to diversify the *ex situ* stored seed at Mt Annan PlantBank.

Priority management site: Upper Nepean State Conservation Area

Local government area:
Wingecarribee

Partners:
Environment, Energy and Science

Population outcome



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	To record a stable or increasing population of 86 (rolling average) individuals in 8 quadrats.
Long term target	The total monitored population (8 quadrats) size remains stable (i.e does not decrease by more than 20%) or increases in a 4-year interval.
Monitoring result	One hundred and two plants within the 8 monitoring plots. Forty-two seedlings and 60 adult plants.
Scientific rigour of monitoring method	High
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	$2,000	$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?
Burning for hazard reduction and other unnatural ignitions have increased fire frequency and may threaten the species survival.	Provide the NSW National Parks and Wildlife Service (NPWS) with up to date species location information and liaise with NPWS about potential hazard reduction burns, provide advice to increase species outcomes.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Burning for hazard reduction and other unnatural ignitions have increased fire frequency and may threaten the species survival.	No reduced recruitment or loss of adult condition resulting from anthropogenic fire.	On track

Site summary

This year's species monitoring recorded 94 more plants than the rolling average of 86 across the 8 monitoring plots.

In the 2019–20 period, only 2 seedlings were found in one of the burnt (2019 hazard reduction) plots. This year recruitment was recorded at 5 of the 8 plots. The germination event coincided with the break of drought conditions. This priority site is the only one to not have recruitment in 3 of the plots. This site has the second-highest number of adult plants but the lowest record of germination.

There was no significant harm recorded from any other activities.