



SAVING OUR SPECIES

Lasiopetalum joyceae

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	Berowra Valley; Marramarra National Park / Maroota Historic Site; Parr State Conservation Area
Action implementation	4 (of 4) management actions were fully or partially implemented as planned for the financial year.
Total expenditure	\$16,275 (\$13,500 cash; \$2,775 in-kind)
Partners	Environment, Energy and Science



Scientific name:

Lasiopetalum joyceae

NSW status:

Vulnerable

Commonwealth status:

Vulnerable

Management stream:

Site-managed species

Photo: Barry Collier

Priority management site: Berowra Valley

<p>Local government area: Hornsby</p> <p>Partners: Environment, Energy and Science</p>	<p>Population outcome</p> <ul style="list-style-type: none"> ● On track ● On track (inferred) ● Not on track (inferred) ● Not on track <p>The species population is inferred to be on track based on threat management being on track. The population trend is unknown at this time.</p>
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Monitoring

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

Baseline monitoring conducted.

Monitoring metric	Species abundance
Monitoring result	Baseline results were collected from 12 population monitoring transects established across known sub-populations in Berowra Valley National Park in December 2020. A total of 219 plants were recorded (average 18.25 per transect + 3.91 SE). 95% of plants were in a healthy condition, and 93% showed evidence of reproduction (including 23% fruiting).
Scientific rigour of monitoring method	Moderate
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$10,500	\$1,575

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?
Accidental damage from roadside maintenance, and slashing from powerlines.	National Parks and Wildlife Service (NPWS) to liaise with relevant stakeholders, including Rural Fire Service, energy agency, Hornsby Council and Transport for NSW, to determine species presence prior to road/trail maintenance works; and modify work to reduce impact of activities if required.	Yes
Competition from various weeds including <i>Lantana</i> .	Undertake targeted weed control around the Yallambee Place population. Undertake spot spraying along fire trails through Fire Access and Fire Trail (FAFT) funding at Oxley Trail, Arthur's Circle and Berkeley Trail.	Yes
Frequent hazard reduction burns could deplete the seedbank.	Keep species records and known and or predicted fire regime requirements up to date and maintained in appropriate databases. Liaise with National Parks and Wildlife Service or relevant agency to incorporate species requirements into the Flora Fire Response Database and Reserve Fire Management Strategy.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Competition from various weeds including <i>Lantana</i> .	Establish baseline monitoring of weed threat (species, extent of infestation) at 12 newly established population monitoring plots located across sub-populations.	Baseline data collection
Frequent hazard reduction burns could deplete the seedbank.	Maintain or reduce level of threat.	Not assessed
Accidental damage from roadside maintenance, and slashing from powerlines.	Establish baseline monitoring of direct disturbance threats (e.g. trampling, slashing) and their extent of impact at 12 newly established population monitoring plots located across sub-populations.	On track

Site summary

In 2020–21, 12 monitoring plots were established across known sub-populations in Berowra Valley National Park and baseline population results collected. A total of 219 plants was recorded (average 18.25 per transect + 3.91 SE). 95% of plants were in a healthy condition, and 93% showed evidence of reproduction. Comparison with 2017–18 distributional survey data from across the same sub-populations shows there were proportionally fewer juvenile plants (maximal stem length <25cm) in 2020–21. This suggests recruitment has declined since 2017–18. This may be attributable to below average rainfall conditions in 2018 and 2019, and/or an absence of disturbance in that period, which is understood to stimulate recruitment in this species.

Due to their close proximity to the urban interface, pedestrian tracks and/or creeklines, most sub-populations are prone to weed infestation, nutrient runoff and direct disturbance from fire trail maintenance. National Parks and Wildlife Service (NPWS) undertook both targeted weed control around the Yallambee Place population, and Fire Access and Fire Trail (FAFT) vegetation trimming (pruning, slashing) in proximity to Arthur's Circle, Oxley Trail and Berkeley Trail sub-populations. NPWS rangers maintain threatened species marker posts and ahead of contracted works, continue to routinely make contractors aware of the plant before entering the site, and flag individuals as a precaution.

Priority management site: Marramarra National Park / Maroota Historic Site

<p>Local government area: Hornsby</p> <p>Partners: None</p>	<p>Population outcome</p> <ul style="list-style-type: none"> ● On track ● On track (inferred) ● Not on track (inferred) ● Not on track <p>The species population is inferred to be on track based on threat management being on track. The population trend is unknown at this time.</p>
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Monitoring

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

Species population monitoring was not conducted at this site this financial year - funding issues.

Management actions

No management actions were planned at this site for the financial year.

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Accidental damage from roadside maintenance, and slashing from powerlines.	No damage to the species at the site.	On track

Site summary





No actions were implemented at the site during 2020–21 due to the reprioritisation of resources.

Priority management site: Parr State Conservation Area

Local government area:
Hawkesbury

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	At locations not impacted by wildfire, plants are healthy and exist in a range of age classes. At least 72% of mature plants show signs of reproduction. The average number of plants across plots is not significantly lower than the 2018–19 average of 11.83 (\pm 8.11 SE). At locations impacted by wildfire, healthy recruitment via seedlings and/or regrowth is present in a majority of plots.
Long term target	To ensure a range of size classes are present, 80–100% of plants are healthy, there are signs of reproduction on at least 72% of mature plants, and there is an average of 10.65 plants across plots after 10 years. Targets are set in the absence of fire.
Monitoring result	A total of 217 <i>Lasiopetalum joyceae</i> (93 adults; 124 juveniles) were recorded within the 12 monitoring plots in June 2021 (average of 18.08 plants per plot). Of the 93 adults, 40 (43%) individuals exhibited signs of breeding (buds, flowers, fruit).
Scientific rigour of monitoring method	Moderate
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$3,000	\$1,200

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?
Accidental damage from roadside maintenance, and slashing from powerlines.	Land manager advice and sign installation.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Frequent hazard reduction burns could deplete the seedbank.	At the majority of plots impacted by wildfire, healthy recruitment via seedlings and/or regrowth is present.	On track
Accidental damage from roadside maintenance, and slashing from powerlines.	The extent and severity of physical disturbance to habitat and target population is maintained at or improved to 'no damage' at sites. Approximately 13% of plants within plots are susceptible to disturbance from roadside maintenance and/or use.	On track

Site summary

Post-fire monitoring was undertaken at 12 monitoring plots in Parr State Conservation Area, 18 months after they were burnt in the 2019–20 bushfires. A total of 217 individuals (93 adults; 124 juveniles) were recorded within plots (average 18.08 per plot). Approximately 35% of the population was killed in the 2019–20 bushfires. Response of *L. joyceae* to fire at the site varied depending on fire severity. Regeneration of adult plants occurred in those plots that experienced cool-moderate burns, whereas plants in plots subject to a high-intensity burn did not survive the fire. Juvenile recruitment occurred only at sites that experienced low to moderate fire severity and was observed in 5 of the 12 plots (42%), with the majority of juveniles (117 individuals) occurring in only 2 plots. Of the 93 adults which had survived the fire, 40 (43%) exhibited signs of breeding. It is recommended that annual post-fire monitoring be undertaken to assess juvenile survivorship.

Damage to approximately 13% of plants in plots was recorded as a result of fire trail maintenance which is consistent with 2018–19 impacts. Closer liaison with National Parks and Wildlife Service staff and their contractors is required to ensure plant locations are well known ahead of management works.

Saving our Species 2020-2021 annual report card for *Lasiopetalum joyceae*. For more information refer to the specific strategy in the Saving our Species program.