



SAVING OUR SPECIES

Fragrant Pepperbush

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	Barrington Tops; Gloucester Tops; Point Lookout
Action implementation	4 (of 4) management actions were fully or partially implemented as planned for the financial year.
Total expenditure	\$221,770 (\$119,064 cash; \$102,706 in-kind)
Partners	Australian Government Bushfire Recovery Program; Conservation Volunteers Australia; Environment, Energy and Science; North Sydney Council; Saving our Species volunteers



Scientific name:

Tasmannia glaucifolia

NSW status:

Vulnerable

Commonwealth status:

Vulnerable

Management stream:

Site-managed species

Photo: Adam Fawcett

Priority management site: Barrington Tops





Local government area:

Dungog; Mid-Coast; Upper Hunter

Partners:

Australian Government Bushfire Recovery Program; Conservation Volunteers Australia; Environment, Energy and Science; North Sydney Council; Saving our Species volunteers

Population outcome

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

The species population is inferred to be off track based on threat management being off track. The population trend is unknown at this time.

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	Area of Occupancy (landscape wide using master grid).
Monitoring result	A total of 331 points were surveyed for baseline data across the master grid. <i>Tasmannia glaucifolia</i> was recorded at 88 of 331, or 27% of points surveyed. Of these 88 points, 74% had a count of 1–5 plants, 9% had a count of 6-10 plants, and 17% >10 plants. The recorded Area of Occupancy for the species is now a minimum of 501 ha.
Scientific rigour of monitoring method	Moderate
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Australian Government Bushfire Recovery Program	\$61,073	\$0
Conservation Volunteers Australia	\$0	\$1,750
Environment, Energy and Science	\$49,221	\$41,690
North Sydney Council	\$0	\$2,100
Saving our Species volunteers	\$0	\$54,096

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 feral horses and feral pigs.	Complete population assessment of horses in priority swamps.	Partial implementation - logistical delays
Susceptibility to dieback caused by root rot fungus (<i>Phytophthora cinnamomi</i>).	Finalise the <i>Phytophthora</i> Management Plan.	Partial implementation - dependent on other component
Weed invasion, particularly by scotch broom (<i>Cytisus scoparius</i>).	Conduct scotch broom control in <i>Tasmannia</i> habitat with a focus on fire impacted areas around Barrington and Edwards Swamps. Continue primary control of scotch broom at selected sites in Began Began if southern sites are inaccessible.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Weed invasion, particularly by scotch broom (<i>Cytisus scoparius</i>).	Reduce mature scotch broom to isolated plants <5% cover throughout 80% of the scotch broom infestation burnt in the 2020–21 bushfire.	On track
Susceptibility to dieback caused by root rot fungus (<i>Phytophthora cinnamomi</i>).	Maintain or reduce level of threat.	Not assessed
Grazing and trampling by feral horses and feral pigs.	Conduct baseline data collection using grid-based surveys across the swamps in bushland to the east and north of Began Began to determine the presence or absence of feral horse and pig damage.	Baseline data collection

Site summary

Targeted grid-based surveys were conducted at a total of 331 points across the master grid. *Tasmannia glaucifolia* was recorded at 88 of 331, or 27% of points surveyed. The recorded Area of Occupancy for the species is now a minimum of 501 ha.

Monitoring of feral herbivores found evidence of feral pigs at 44 of 88, or 50% of points surveyed where *Tasmannia glaucifolia* was present, and evidence of feral horses at 81 of 88, or 92% of points surveyed where *Tasmannia glaucifolia* was present.





Over 300 ha of scotch broom control was conducted in *Tasmannia* habitat with a focus on fire impacted areas around Barrington and Edwards Swamps. Virtually all remaining live mature scotch broom was removed from the burnt area. Eight volunteer events to remove scotch broom were held throughout the year with a total of 1288 volunteer hours contributed to the project.

Priority management site: Gloucester Tops

Local government area:
Dungog; Mid-Coast

Partners:
Environment, Energy and
Science

Population outcome

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

The species population is inferred to be on track based on threat management being on track. The population trend is unknown at this time.

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	Area of Occupancy (landscape wide using master grid); abundance (plot level); reproductive success & recruitment (plot level); infection rate (plot level)
Monitoring result	A total of 650 plants were recorded across the survey area. This is a significant increase to the population as less than 100 plants were recorded previously.
Scientific rigour of monitoring method	Moderate
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$5,670	\$820

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
Grazing and trampling by feral horses and feral pigs.	No increase in the pig activity across monitored swamps.	On track
Weed invasion, particularly by scotch broom (<i>Cytisus scoparius</i>).	Ensure the area remains free of scotch broom.	On track

Site summary

Targeted surveys for *Tasmannia glaucifolia* were conducted across a considerable area of Gloucester Tops. A total of 650 plants were recorded across the survey area. This is a significant increase to the population as less than 100 plants were recorded previously. These baseline results show the importance of surveys in the area. The next steps will be to establish a monitoring program in-line with the 2 other management sites.

Gloucester Tops remains free of scotch Broom and feral pig activity in the area is low.

Priority management site: Point Lookout

Local government area:

Armidale Regional; Bellingen; Nambucca Valley

Partners:

Environment, Energy and Science

Population outcome



On track



On track (inferred)



Not on track (inferred)



Not on track

The species population is inferred to be on track based on threat management being on track. The population trend is unknown at this time.

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	Area of Occupancy (landscape wide using master grid).
Monitoring result	A total of 150 points were surveyed for baseline data across the master grid. <i>Tasmannia glaucifolia</i> was recorded at 16 of 150, or 10.66% of points surveyed. Of these points, most were individual plants. Potential hybrids (<i>Tasmannia glaucifolia</i> x <i>Tasmannia stipitata</i>) were recorded at 36 of 150, or 24% of points surveyed. These hybrids were also single plants to clusters of up to 10.
Scientific rigour of monitoring method	Moderate
Conducted by	Environment, Energy and Science

Investment

Participant	Cash	In-kind
Environment, Energy and Science	\$3,100	\$2,250

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?
Insufficient understanding of species phylogeny.	Incorporate research results into site-specific management strategy.	Yes

Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Insufficient understanding of species phylogeny.	Three meetings with the university.	On track
Insufficient understanding of species phylogeny.	Three meetings with the University of New England to finalise research.	On track

Site summary

Targeted grid-based surveys were conducted at 150 points across the Point Lookout management site. *Tasmannia glaucifolia* was recorded at 16 of 150, or 10.66% of points surveyed. Potential hybrids between *Tasmannia glaucifolia* and *Tasmannia stipitata* were recorded at 36 of 150, or 24% of points surveyed. This baseline survey provides a an overview of the spatial distribution of *Tasmannia* within the Point Lookout site. Further surveys in the adjoining Styx River State Forest will complete the picture. The next steps following baseline surveys will be to incorporate the findings of the University of New England's genetic analysis on the hybridisation into the spatial distribution data.

Saving our Species 2020-2021 annual report card for Fragrant Pepperbush (*Tasmannia glaucifolia*). For more information refer to the specific strategy in the Saving our Species program.