



SAVING OUR SPECIES

Lord Howe Island Broom

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 | Southern Mountains |
| Action implementation | 3 (of 3) management actions were fully or partially implemented as planned for the financial year. |
| Total expenditure | \$126,265 (\$24,565 cash; \$101,700 in-kind) |
| Partners | Environment, Energy and Science; Lord Howe Island Board |



Scientific name:
Carmichaelia exsul

NSW status:
Endangered

Commonwealth status:
Not listed

Management stream:
Site-managed species

Photo: Dianne Brown

Priority management site: Southern Mountains





Local government area:

Lord Howe Island -
Unincorporated Area

Partners:

Environment, Energy and
Science; Lord Howe Island
Board

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 | Maintain an average of 40 individuals (+/- 10) across a mix of age classes within the 6 permanent monitoring plots. |
| Long term target | By 2032, to maintain a stable population of approximately 200 individuals across a mix of age classes within the Southern Mountains <i>Saving our Species</i> site; and, to maintain a stable population of approximately 40 individuals (+/- 10) across a mix of age classes within the 6 permanent monitoring plots. |
| Monitoring result | Four of the permanent monitoring plots were resurveyed in 2020–21. A total of 20 individuals were recorded within the plots (6 juvenile, 14 mature and an additional 2 senescent). Additional plants were also observed adjacent to the Grey Face and Eddies Cave sites but are not recorded in this survey. |
| Scientific rigour of monitoring method | High |
| Conducted by | Environment, Energy and Science |

Investment

| Participant | Cash | In-kind |
|---------------------------------|----------|-----------|
| Environment, Energy and Science | \$24,565 | \$1,000 |
| Lord Howe Island Board | \$0 | \$100,700 |

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? |
|---|---|-------------------------|
| Predation and browsing by black rats. | Continue the implementation of the Lord Howe Island Rodent Eradication Project. The Department of Planning, Industry and Environment to provide support to the Lord Howe Island Board to help implement the Lord Howe Island Rodent Eradication Project when appropriate. | Yes |
| Risk of extinction due to small population size. | Collect seed opportunistically when undertaking weed control and species surveys. | Yes |
| Weed invasion, particularly by crofton weed, Kikuyu, cherry guava and tiger lily. | Undertake hand weed control around <i>Carmichaelia exsul</i> plants within the Gower and Lidgbird North landscape units. Undertake aerial weed monitoring and control within the Gower and Lidgbird North landscape units. | Yes |

Threat outcome

Assessment on the status of critical threats at this site.

| Threat | Annual target | Threat status |
|---|---|---------------|
| Weed invasion, particularly by crofton weed, Kikuyu, cherry guava and tiger lily. | Number of weeds controlled per hectare searched reduced by 10% from 2019–20 levels. | On track |
| Predation and browsing by black rats. | Review project delivery. | On track |
| Risk of extinction due to small population size. | Document all seed collections undertaken for the species. | On track |

Site summary

Due to land slips, several monitoring plots were not able to be reached in 2020–21. As a result, the monitoring this year only compares a subset of sites that were able to be accessed this year. The combined count for the 4 plots monitored in 2020–21 was 20 individuals. Several individuals were lost due to landslips and at the Gower and Grey Face monitoring sites at least 6 individuals were unable to be relocated. Extremely difficult access at many of these sites does make monitoring and relocation of individual plants difficult though. The plants that were relocated were all in good health and large seed crops were observed on several plants. It is expected some plants still persist within the plots unable to be accessed, meaning the annual monitoring target is reached.

In 2020–21, a total of 3105 hrs of search effort across 229 ha within the Lidgbird Remote, Lidgbird South West and Gower landscape units resulted in the control of 14,450 target weeds. Out of the 14,450 weeds controlled, only 135 were recorded as mature (0.01% of all weeds controlled). The proportion of all weeds that are mature has decreased compared to 2019–20. In 2019–20, a total of 43 priority weeds were controlled per hectare searched, while in 2020–21 a total of 63 weeds were controlled per hectare. This increase consists mostly of immature weeds and may be due to a reduction in rodent browsing of seedlings since the implementation of the rodent eradication program. The dominant weeds in the areas controlled were cherry guava (*Psidium cattleianum* var. *cattleianum*) and ground asparagus (*Asparagus aethiopicus*).

The Lord Howe Island (LHI) rodent eradication baiting phase was completed in late 2019. Three hundred and thirty permanent monitoring devices have now been established to monitor for signs of rodents across key locations on Lord Howe Island. Between October 2019 and April 2021 there were nil detections of rodents on LHI giving a high level of confidence that the original rodent eradication project resulted in the eradication of rodents from LHI. Recent detections in April and May 2021 are likely to be the result of a new incursion onto the island and are being treated as a biosecurity issue with an incursion response plan currently being implemented.

Saving our Species 2020-2021 annual report card for Lord Howe Island Broom (*Carmichaelia exsul*). For more information refer to the specific strategy in the Saving our Species program.