



SAVING OUR SPECIES

Lord Howe Island Phasmid

2022-2023 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	Lord Howe Island
Action implementation	3 (of 3) management actions were fully or partially implemented as planned for the financial year.
Total expenditure	\$375,000 (\$70,000 cash; \$305,000 in-kind)
Partners	Environment and Heritage Group; Lord Howe Island Board; Zoos Victoria



Scientific name:
Dryococelus australis

NSW status:
Critically Endangered

Commonwealth status:
Critically Endangered

Management stream:
Site-managed species

Photo: Pavel German

Priority management site: Lord Howe Island

Local government area:

Unincorporated - Lord Howe Island

Partners:

Environment and Heritage Group; Lord Howe Island Board; Zoos Victoria

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 minimum captive-bred population of 1000 individuals.
Long term target	Release a captive-bred population onto the Lord Howe Island mainland from individuals collected on Ball's Pyramid.
Monitoring result	There are currently over 1,100 captive-bred Lord Howe Island Phasmids. Numbers are reduced compared to last year, due to changes in husbandry practices to limit overcrowding of the Lord Howe Island captive population.
Scientific rigour of monitoring method	High
Conducted by	Environment and Heritage Group

Investment

Participant	Cash	In-kind
Environment and Heritage Group	\$70,000	\$0
Lord Howe Island Board	\$0	\$55,000
Zoos Victoria	\$0	\$250,000

Management actions

The following actions are those identified as being required in financial year 2022-23 to secure the species in the wild.

Threat	Management action	Implemented as planned?
Invasion of habitat by exotic plant species <i>Ipomoea cairica</i> .	Undertake 0.5 ha of targeted weed control within Lord Howe Island Phasmid habitat on Ball's Pyramid.	Yes
Predation by introduced rodents.	Environment, Energy and Science to provide support to the Lord Howe Island Board to help implement the Lord Howe Island <i>Rodent Eradication Project</i> when appropriate.	Yes

Risk of extinction due to small population size and restricted distribution.	Complete safe access works on Ball's Pyramid to allow future collections and implementation of site management actions. Collection of additional animals from Ball's Pyramid to supplement captive population. Participate in community consultation sessions on biodiversity management on Lord Howe Island, including potential reintroduction of species back onto the main island.	Partial implementation - logistical delays
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Threat outcome

Assessment on the status of critical threats at this site.

Threat	Annual target	Threat status
Invasion of habitat by exotic plant species <i>Ipomoea cairica</i> .	Undertake weed control and reduce weed species cover to less than 15% within areas of Lord Howe Island Phasmid habitat.	On track
Predation by introduced rodents.	Environment and Heritage Group to provide support to the Lord Howe Island Board to help implement the Lord Howe Island Rodent Eradication Project when appropriate.	On track
Risk of extinction due to small population size and restricted distribution.	Maintain genetically diverse <i>ex situ</i> population for security and potential reintroduction.	On track

Site summary

Zoos Victoria and the Lord Howe Island Board have continued their partnership to manage *ex situ* populations of the Lord Howe Island Phasmid. Over 1,100 animals are currently managed in these *ex situ* collections. Work has been completed on Lord Howe Island (LHI) to complete two LHI Phasmid enclosures through financial support from Zoos Victoria. This work will improve captive animal management on Lord Howe Island. Zoos Victoria have also continued to lead *Serratia* research and population genetic studies. A polymerase chain reaction (PCR) screening test was developed for *Serratia*, in collaboration with the University of Melbourne, to assist with managing *Serratia* in the captive population. Trials are also currently being run at both Melbourne Zoo and the Lord Howe Island Board to determine if we can create *Serratia*-free populations by transferring eggs to clean enclosures and breaking the cycle of *Serratia* transmission between generations.

Habitat management included weed control on Ball's Pyramid. This work resulted in the control of key weed species impacting known LHI Phasmid habitat. During this weed work 2 Lord Howe Island Phasmid exoskeletons were found, confirming the persistence of the species on Ball's Pyramid. Design and contracting work for the anchor points on Ball's Pyramid were completed but the trip proposed for their installation had to be cancelled due to unsuitable weather. The NSW Department of Planning and Environment will continue to work with the Lord Howe Island Board to progress this work.

The initial Lord Howe Island rodent eradication baiting phase was completed in late 2019. Between October 2019 and April 2021 there were no detections of rodents on Lord Howe Island although in April 2021 a black rat was found, initiating a rodent response from the Lord Howe Island Board. This response resulted in the control of 96 rodents up to 12 August 2021, with no additional rodents recorded since. An intensive and spatially comprehensive rodent detection check will be carried out by the Lord Howe Island Board between 8 to 26 July 2023. This check aims to confirm the absence of black rats and house mice (*Mus musculus*) on the island. It is an important ecological milestone for the islands eradication process, following the *Rodent Eradication Project* effort of 2019 and response of 2021. The results will be analysed by the Island Eradication Advisory Group of the New Zealand Department of Conservation, who are leading experts in rodent eradication.