Book of Hope case study

The Lord Howe Island phasmid, back from the brink

Project 6.4

Threatened Species Recovery Hub

National Environmental Science Programme

Adult female Lord Howe Island phasmid . Photo: Rohan Cleave, Melbourne Zoo, Australia

The Lord Howe Island phasmid (*Dryococelus australis*), a shiny, black, heavy-bodied flightless stick insect that grows to 120 to 150 mm in length, was formerly common and widespread on Lord Howe Island.

However, it was extirpated from the island in the 1930s following the accidental introduction of rats. For three decades it was thought to be extinct, until the unexpected discovery in the 1960s of evidence of its persistence on the unlikely refuge of Balls Pyramid, a 550m-high rock stack 23km offshore. A 2001 survey found a tiny population on a single rock ledge supporting melaleuca bushes, and it was listed as Critically Endangered under the EPBC Act.

Recovery action

The NSW National Parks and Wildlife Service prepared a draft Recovery Plan. Surveys were undertaken to estimate the wild population, and two adult pairs of the phasmid were taken from Balls Pyramid in February 2003 to establish captive populations in Australia. A population was established at Melbourne Zoo.

The recovery plan included control of an exotic weed that was threatening the precarious melaleuca habitat on Balls Pyramid.

Program success

Extinction has probably now been averted. Captive populations are increasing in Australian and international zoos, most notably at Melbourne Zoo, and in enclosures on Lord Howe Island, and the tiny wild population is continuing to cling to Balls Pyramid.

Outstanding communication programs have galvanised public support for this seemingly uncharismatic invertebrate, which has found fame as the "world's rarest insect".

The future

Recovery aims to reintroduce the phasmid to Lord Howe Island, if rats can be eradicated. In 2012, the Lord Howe Island Board received significant funding for a rat eradication program, and baiting commenced in June 2019.

Captive populations of the phasmid have undergone palatability trials of Lord Howe Island plants in anticipation of reintroduction.

For the future, surveys will be conducted of the small wild population on Balls Pyramid and, where appropriate, new founders collected for the captive population. One female was collected in 2017 during such a survey, the first since 2003. Genetic research is being undertaken to inform captive management decisions and reintroduction planning.

More information

Hank Bower, Nicholas Carlile, Rohan Cleave, Chris Haselden, Dean Hiscox and Lisa O'Neill (2018) The path to recovery for the 'extinct' Lord Howe Island phasmid. In *Recovering Australian Threatened Species: A Book of Hope.* (Eds S Garnett, P Latch, D Lindenmayer, J Woinarski) pp 189-198. CSIRO Publishing, Melbourne.

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