

## **Progress Report SP 1996-008**

# **Gilbert's potoroo recovery plan**

**Animal Science**

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Approved and active

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**Project Team**

granted

**Program Leader**

granted

**Directorate**

granted

# Gilbert's potoroo recovery plan

A Friend

## Context

Gilbert's potoroo (*Natator depressus*) is the world's rarest marsupial. Since its rediscovery in Two Peoples Bay in 1994, implementation of actions under a series of recovery plans has resulted in the establishment of two new populations near Albany: one on Bald Island and the other inside a 380 hectare enclosure protected from foxes and cats. A catastrophic bushfire at Two Peoples Bay in October 2015 rendered 90% of potoroo habitat there uninhabitable and killing 60% of known individuals. The current objectives of the project are the establishment of another island population with science-based assessment of the likelihood of success, to measure the rate of recovery of burnt habitat at Two Peoples Bay and to collect demographic data in all populations, followed by population viability analysis to inform future management options.

## Aims

- Implement the *Gilbert's Potoroo Recovery Plan*.
- Increase the numbers of individual Gilbert's potoroos known to be alive in the wild and increase the number of locations in which they occur.

## Progress

- GPS tracking of surviving potoroos at Two Peoples Bay in November 2017 showed that two years after the fire, individuals were already exploring burnt habitat well away from their unburnt refuge.
- Assessment of Middle Island in the Recherche Archipelago as a translocation site was undertaken during 2017-18 through a program of seasonal habitat assessment and two trial translocations, in winter 2017 and late summer 2018.
- In each trial, four potoroos were released on the island and monitored intensively by daily radio-tracking, GPS logging and weekly trapping. Faecal samples collected during trapping were analysed by a mycologist and spore types recorded. Success criteria were established to provide an assessment of the island as suitable for a full translocation: survival of 75% of the trial animals four weeks after release on the island, and body weight of all animals within 10% of release weight after four weeks. The success criteria were met in both trials and a full translocation has been approved.

## Management implications

- The establishment of two insurance populations and the earlier development of captive management protocols enabled effective management of potoroos from the Two Peoples Bay Nature Reserve (TPBNR) population that was impacted by fire.
- While islands provide safety for potoroos from introduced, and in some cases, native predators, careful prior evaluation of habitat suitability and in particular the adequacy of food resources is critical.
- Due to the small size of the Two Peoples Bay population, close management of all colonies to maximise numbers and genetic diversity will be required in planning translocations of potoroos.

## Future directions

- Undertake analysis and publication of potoroo population demographics to determine future monitoring needs at all sites.
- Implement full translocation to Middle Island (Recherche Archipelago) and continue monitoring to evaluate success.