

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

# **Gilbert's potoroo recovery plan**

**Animal Science**

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**Project Team**

granted

**Program Leader**

granted

**Directorate**

granted

# Gilbert's potoroo recovery plan

A Friend

## Context

Gilbert's potoroo (*Potorous gilbertii*) 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 killed 60% of known individuals. Following closely monitored trial translocations in winter 2017 and late summer 2018 which indicated that potoroos could thrive on Middle Island, a full translocation of 10 animals to the island was completed in July 2018. The current objectives of the project are to assess the success of the Middle Island translocation, to monitor the rate of increase of use by potoroos of burnt habitat at Two Peoples Bay and to collect and analyse demographic data from 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

- After two successful trial translocations to Middle Island, the full translocation was carried out by transferring six potoroos from Bald Island in July 2018, to join four remaining on the island from the second trial.
- A survey of Middle Island for hypogeal fungi generated 37 collections. Morphological and DNA analysis confirmed the presence of 19 fungal species.
- Analyses of GPS unit/transmitter packages on six potoroos showed that the animals had all established home ranges at the western end of the island.
- At Two Peoples Bay, only one female and two male potoroos were captured during the year. One of these is a two-year-old male, indicating that breeding has occurred since the 2015 fire.
- GPS units have been fitted to potoroos at Two Peoples Bay whenever possible to study movements in the burnt and unburnt habitat. Movement of potoroos into burnt areas was first recorded in November 2017 and the latest data from April 2019 shows this activity has increased.
- Thrice-yearly monitoring in the 380 ha Waychinicup National Park potoroo enclosure has shown that since 2016 the population has achieved stability at between 20 and 30 animals known to be alive, with frequent breeding and recruitment of young into the population.
- The Gilbert's potoroo monitoring data is currently being analysed for a paper on potoroo demographics.

## 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 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.
- Continue monitoring Middle Island translocation to evaluate its success.