

## **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 (*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 percent of potoroo habitat there uninhabitable and killed 60 percent of known individuals. Following 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

- Within the Waychinicup enclosure, the number of potoroos known to be alive remained stable at 25-30 individuals.
- With State NRM funding through the Gilbert's Potoroo Action Group (GPAG), seven potoroos at Waychinicup were radio-tracked by teams of volunteers for two weeks in February-March 2020. Results on habitat use will help inform selection of translocation sites.
- At Two Peoples Bay, one male and one female potoroo were fitted with GPS units with findings indicating that, just four years after the fire, the burnt habitat will support potoroos and that translocation of individuals to restock burnt areas should now proceed.
- Camera monitoring was established across the Mount Gardner headland immediately after the extensive fire in 2015. In July 2019, the first image of a potoroo at a burnt site was captured, over 1.3 km from unburnt habitat, well beyond the expected movement range of a potoroo.
- Collections of ear tissue samples taken over the years from 302 individual potoroos at Two Peoples Bay, Bald Island and Waychinicup will be used to examine population genetic structure within and between populations and assess the extent to which the genetic composition of the Two Peoples Bay population has been retained within the two translocated populations.
- Two individual potoroos were translocated from the 14 hectare Ryedene Farm enclosure prior to its decommissioning to the Waychinicup enclosure. Both animals were fitted with tail transmitters and GPS units and the movement data show that the male settled into a stable home range after four days and the female after 13 days.

## 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.
- Gilbert's potoroos can utilise suitable habitat much sooner after fire than was previously thought.
- 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 monitoring of translocated populations on Bald Island or Middle Island.
- Complete a population management strategy for Gilbert's potoroo to guide translocations over the coming years.
- Complete the analysis of radio tracking data from Waychinicup.
- Undertake analysis and publication of potoroo population demographics to determine future monitoring needs at all sites.