Concept Plan SP 2015-022

Recovery of Gilbert's potoroo *Potorous gilbertii*

Animal Science

Project Core Team

Supervising Scientist	Tony Friend
Data Custodian	Tony Friend
Site Custodian	

Project status as of Oct. 6, 2020, 12:32 p.m.

Pending project plan approval

Document endorsements and approvals as of Oct. 6, 2020, 12:32 p.m.

Project Team	granted
Program Leader	granted
Directorate	granted

Recovery of Gilbert's potoroo *Potorous gilbertii*

Biodiversity and Conservation Science Program

Animal Science

Departmental Service

Service 6: Conserving Habitats, Species and Communities

Aims

To carry out research projects to support the objectives listed in the current Gilbert's potoroo recovery plan:

- To ensure existing populations of Gilbert's potoroo are returned to and maintained at sustainable levels and that genetic diversity is maximised.
- To increase the number of populations and individuals of Gilbert's potoroo.

To achieve these aims, recommendations for management are required and in some cases, management actions will be undertaken or led by research personnel. The main areas of research will be:

- Evaluation of the importance of predation by carpet pythons in the Waychinicup NP enclosure in regulating potoroo numbers. This aspect is largely complete, and a paper is in preparation.
- If python predation is significant, evaluate methods for reducing python predation at this site, for implementation. This research aspect is covered by a separate SPP and is being led by Dr David Pearson with input from Albany-based SCD and FRSD staff.
- Evaluate potential translocation sites, including Middle Island in the Recherche Archipelago and a mainland site, including resource availability and predation risk.
- Implement a translocation to at least one of these sites.
- Undertake a survey of the genetic variability of Gilbert's potoroo across all populations and develop a population management strategy.
- Publication of 20 + years of research and monitoring data to ensure appropriate management into the future.

Expected outcome

The expected outcome of this project will be a series of recommendations, based on published information for management of Gilbert's potoroo to achieve the greater security of the species. Ideally, management of the populations will achieve population stability and the highest genetic variability possible given the low number of animals. This will require a greater understanding of the current status of populations and the ecological requirements of the species at its various sites.

Management Implications

The recommendations arising from this project will include management actions necessary to increase the likelihood that this species will persist. These are expected to include continued and enhanced control of foxes and feral cats at all existing and new mainland population sites as well as fire management at all sites to protect long-unburnt habitat areas. Action to reduce predation by carpet pythons may also be recommended. Management of potoroo population genetics will involve movement of animals between the isolated population sites. Some or all of these actions will involve District and Regional staff.

Strategic context

This project will further the aims of and operate within the context of the following plans and documents:

- Department of Parks and Wildlife Gilbert's Potoroo Recovery Plan (revised plan currently under review)
- Department of Parks and Wildlife Strategic Direction 2014-2017 (DPaW 2014a)

- Department of Parks and Wildlife Corporate Policy Statement No. 35 Conserving threatened species and ecological communities (DPaW 2015a)
- Department of Parks and Wildlife Corporate Policy Statement No. 12 Management of pest animals (DPaW 2015c)
- Department of Parks and Wildlife Corporate Policy Statement No. 19 Fire management (DPaW 2015d)
- Department of Parks and Wildlife Corporate Policy Statement No. 88 Prescribed burning (DPaW 2016a)
- Department of Parks and Wildlife Corporate Guidelines No. 35 Listing and recovery of threatened species and ecological communities (DPaW 2015b)
- Department of Parks and Wildlife Corporate Guidelines No. 36 Recovering threatened species through translocations and captive breeding (DPaW 2015f)
- Two Peoples Bay Nature Reserve Management Plan (CALM 1995a)
- Esperance and Recherche Parks and Reserves Management Plan 84 (DPaW 2016b)
- Albany Coast Draft Management Plan (DPaW 2016c)
- South Coast Regional Fire Management Plan 2009-2014 (DEC 2009)
- South Coast Threatened Birds Recovery Plan (DPaW 2014f)
- Quokka Recovery Plan (DEC 2013b)
- Western Ringtail Possum Recovery Plan (DPaW 2014d)
- Threatened Species and Ecological Communities Strategic Management Plan, South Coast Region, WA (Gilfillan *et al.* 2009)
- Western Shield Fauna Recovery Program Interim Strategic Plan 2009/10 – 2012/13 (DEC 2008)
- Threat abatement plan for predation by European red fox (DEWHA 2008)
- Threat abatement plan for predation by feral cats (Commonwealth of Australia 2015)
- Survey guidelines for Australia's threatened mammals (DSEWPaC 2011)
- Threatened Species Strategy (Commonwealth of Australia 2016

Expected collaborations

Existing collaborations with Parks and Wildlife Albany District and South Coast Region staff are vital for the successful management and recovery of Gilbert's potoroo. This involves working closely with management staff, particularly on predator control, fire management and management of infrastructure such as the captive holding facility at Two Peoples Bay and the Waychinicup NP enclosure.

Collaborations with university academics and students from ECU, Murdoch University and UWA have already produced valuable information on the biology and ecology of Gilbert's potoroo and it is expected that such collaborations will continue and increase. In particular, students at the UWA Albany campus are ideally situated to be involved in such projects.

Funding collaboration, most importantly with South Coast NRM and local community group the Gilbert's Potoroo Action Group (GPAG) will continue and will involve close cooperation with these groups to foster and grow support for potoroo recovery. GPAG has been awarded a grant of $250,000 over two years to support the investigation of potential translocation sites and an initial translocation.

Proposed period of the project

Oct. 8, 2015 – June 30, 2019

Staff time allocation

Role	Year 1	Year 2	Year 3
Scientist	0.4	0.4	0.4
Technical	1.5	1.5	1.5
Volunteer	0.2	0.2	0.2
Collaborator	0.1	0.1	0.1

Indicative operating budget

Source	Year 1	Year 2	Year 3
Consolidated Funds (DPaW)	20,000	20,000	20,000
External Funding	100,500	100,500	50,000