

GILBERT'S POTOROO

RECOVERY TEAM

ANNUAL REPORT

1995

by

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for

The Gilbert's Potoroo Recovery Team

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1. INTRODUCTION

1.1. Background

This report addresses those actions specified in the "Interim Recovery Plan for Gilbert's Potoroo (*Potorous tridactylus gilbertii*) which were carried out in 1995.

The first meeting of the Recovery Team was held on 14 March 1995 and subsequent meetings have been on 11 April, 29 June and 20 November 1995. All except the June meeting, which was held in Perth, were held at Two Peoples Bay.

1.2 Recovery Team

Recovery Team membership at the end of 1995 was:

Kelly Gillen (Chair)	CALM, South Coast Region
Alan Danks	CALM, Two Peoples Bay NR
Tony Start	CALM, Science & Information Division
Elizabeth Sinclair	UWA Zoology Department
Dr Vic Smith	representing local conservation groups
Andrew Burbidge	CALM, WATSCU
Wesley Manson	Consultant Biologist
Sally Stephens	ANCA Endangered Species Unit

John Watson, Regional Manager, South Coast Region, attended some meetings as an observer.

2. PROGRESS WITH IMPLEMENTATION OF THE INTERIM RECOVERY PLAN

2.1. Fire

Fire is recognised as a serious threat to Hakea Gully and other known and potential Potoroo sites. The Mt Gardner area is managed in a heavy fuel load state to satisfy the habitat requirements of the Noisy Scrub Bird and other threatened species.

Slashing along tracks and fire breaks and in sections of the strategic buffer system has been completed in the reserve. Some prescribed burning on three cells in the strategic buffer and progress on provision of new water supply tanks for fire control has also been achieved.

These activities are in accordance with the Fire Section of the Management Plan for the Reserve (in press).

2.2. Dieback Disease

The Hakea Gully site in which the potoroo was first trapped has been confirmed as a *Phytophthora*-free area. The dieback disease occurrence mapping current at the time of rediscovery of the potoroo was broad-based and not suitable for highly specific site-based activity. The potential significance of dieback-free vegetation as habitat highlighted the need to identify uninfected pockets over the headland.

A program of re-mapping *Phytophthora* occurrence over the whole of the Mt Gardner headland was initiated to ensure that research activities would not compromise these potentially important areas by providing detailed information prior to new areas being targeted for trapping.

Survey to date has indicated other areas on and around Mt Gardner which are apparently disease free. The necessity for broad-scale aerial phosphonate spraying of disease free patches of vegetation is yet to be determined.

As a result of the work to date, the path to the summit of Mt Gardner has been closed as this alignment put at risk the Hakea Gully site due to its location down slope of the path.

2.3 Feral Predators

The established egg baiting programme from April to September each year in Two Peoples Bay has continued with aerial baiting using 1080 injected dried meat baits occurring in April and October 1995. The next aerial baiting will occur at the end of December 1995.

To date there is no specific bait that can be safely used for control of feral cats. CALM is continuing to work on finding a suitable bait that is attractive to cats.

2.4 Captive Breeding Colony

A captive breeding colony has been established at Two Peoples Bay. Initially this consisted of five animals (including two females with pouch young), which were held independently in the noisy scrub bird cage facilities. A new captive breeding complex has been constructed at Two Peoples Bay specifically for Gilbert's Potoroo. Eight interconnecting 10 m x 3 m enclosures are now available, each capable of holding three females and one male. In July 1995 the animals were moved into the new pens.

Currently there are four males and three females in the colony with none of the females carrying pouch young. Three of the males are rapidly approaching adult weight.

2.5 Search for other populations

Other populations have been searched for on Mt Gardner, Lake Gairdner, Vancouver Peninsula and Hill 700 in Two Peoples Bay, and in Gull Rock National Park and at Norman's Inlet.

Sites chosen for potoroo trapping have been based on observable quokka (*Setonix brachyurus*) sign in the form of runs scats and diggings. Hair tubes have been placed in these sites on a regular basis (usually left for two weeks before collection of tape). Hair analysis techniques have been developed which now provide ready discrimination between quokka and potoroo hair. The use of hair tubes is proving to be a very practical and cost-effective approach to locating new populations.

Trap success has been distinctly seasonal in 1995 with relatively good trap success being achieved at the change of season from Autumn (dry) to first rains. Once Potoroo presence has been identified at sites using the hair tubes, follow up trapping has been successful.

To date no potoroos have been identified outside of the Mt Gardner area at Two Peoples Bay.

2.6 Home Range and use of Habitats

Radio tracking has been undertaken on some individuals. The scope of this work has so far been limited but has shown the potential for considerable movement by some animals between preferred sites. Animals have been found to nest during the day in *Anarthria scabra* and also in sheoak needles in *Allocasuarina* woodland.

2.7 Husbandry of the Colony

The husbandry methods employed have so far been reflected in weight gains by captive animals.

Methods for regular monitoring of the captive animals are being refined to reduce the stress associated with recapture and processing, since stress may be a factor in reduced reproductive success.

Arrangements have been made to provide local (Albany) veterinary advice if needed.

2.8 Change in Status

The status of Gilbert's Potoroo has been amended under section 18 (1) of the Endangered Species Protection Act 1992. The species has been deleted from Schedule 1, Part 3 - "Species that are presumed extinct" and added to Schedule 1, Part 1 "Species that are endangered".

2.8 Genetic Studies - Taxonomic Status

This is being approached in two parts;

- (1) Allozyme electrophoresis - this work has not progressed so far due to inability to obtain blood samples from eastern States' potoroo species.
- (2) Mitochondrial DNA sequencing - This work is nearly complete. Results so far suggest Gilbert's' Potoroo is more closely related to *P. longipes* (9% sequence divergence) than to *P. tridactylus* from Victoria (12% divergence).

Any conclusions must await the allozyme results and an examination of the extent of divergence within other Marsupial genera.

3. HUMAN RESOURCES

Consultant biologist Wes Manson concluded his contract at the end of December 1995 and negotiations are proceeding to replace him. The project has progressed well during 1995 due to the financial support of ANCA and CALM and the commitment of Mr Manson. Support from District staff and from volunteers has been invaluable.