Concept Plan SP 2015-019

Recovery of the Numbat *Myrmecobius fasciatus*

Animal Science

Project Core Team

Supervising Scientist	Tony Friend
Data Custodian	Tony Friend
Site Custodian	

Project status as of July 3, 2017, 1:41 p.m.

New project, pending concept plan approval

Document endorsements and approvals as of July 3, 2017, 1:41 p.m.

Project Team	required
Program Leader	required
Directorate	required

Recovery of the Numbat *Myrmecobius fasciatus*

Science and Conservation Division Program

Animal Science

Parks and Wildlife Service

Service 2: Conserving Habitats, Species and Ecological Communities

Aims

Background

The numbat is the only marsupial termite specialist and is of high conservation significance due to its phylogenetic distinctness. Its recorded decline since European settlement saw its distribution reduced from widespread across southern Australia to just two small populations in south-western WA (Friend 1989). In the early 1980s a research program to determine the causes of decline showed that control of foxes using 1080 meat baits was followed by a dramatic recovery of the Dryandra numbat population. Based on this finding, a vigorous program of reintroduction by Parks & Wildlife (and its predecessors) with collaborating organisations commencing in 1985 increased the number of populations to eight (Friend and Thomas 2004) with several more in various stages of establishment.

Despite this success, one of the two surviving populations, at Dryandra Woodland, has declined rapidly to a very low level. Another SPP, "Feral cat control and numbat recovery in Dryandra woodland and other sites" is concerned with this issue, using the hypothesis that, under an effective fox control regime, predation by cats has taken over from predation by foxes as the regulating influence on numbat populations.

Under this Science Project, the numbat reintroduction program will continue, but with a monitoring program enhanced by use of DNA technology that will determine with certainty the species and sometimes the individual identity of the responsible predator. This will allow critical intervention strategies to be developed before the numbat population becomes extinct.

Project Aim

To provide management solutions to effect improvement in the conservation status of the numbat, currently listed as Endangered by IUCN and Vulnerable under the EPBC Act.

Expected outcome

1) Increases in the number of numbat populations and the total numbers of numbats, resulting in population data that will support relisting by IUCN from Endangered to Vulnerable.

2) Demonstration of management practices that will result in numbat populations achieving stability at carrying capacity.

3) Demonstration that Parks & Wildlife, in collaboration with other groups, can prevent the extinction of Western Australia's mammal emblem.

Strategic context

Captive breeding and translocation are key actions in the Recovery Plans for both the numbat (Friend and Page 2015) and dibbler (Friend 2004). Improved conservation security for the numbat is one of the proposed outcomes of the Department's Strategic Directions for 2014-2017. Conservation of the numbat is supported by a Government election commitment aimed at protecting the population at Dryandra, now the subject of a major Wheatbelt Region project.

Expected collaborations

Collaborations are currently under way with a number of agencies and institutions.

- Parks & Wildlife staff in Wellington, Perth Hills and Great Southern Districts report numbat sightings and assist in numbat monitoring at times.
- We have a close relationship with Perth Zoo, where the breeding colony is based and in the past we have collaborated in research projects.

- A Ph.D. project at UWA involving behavioural assessment of individual numbats (and dibblers) prior to release is nearing completion.
- Analysis of genetic variability in numbat populations will be carried out as a student project through Murdoch University (Peter Spencer's lab).
- The community group Project Numbat is closely involved with the numbat recovery program, and has provided funds for radio-collars, tracking flights and trail cameras. We are currently negotiating a regular survey program to monitor all WA numbat sites.
- The numbat recovery project also has close ties with Australian Wildlife Conservancy and Arid Recovery where numbat populations exist or are in process of establishment and we are collaborating in reintroduction programs with both groups.
- Volunteers are often involved in aspects of numbat research, either recruited from the community or through Project Numbat and the Friends of the Fitzgerald River National Park.

Proposed period of the project

Oct. 6, 2015 – June 30, 2019

Staff time allocation

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

Indicative operating budget

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