



Bilby

Current Initiatives

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Photo: M. Dziminski



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Existing Program

The conservation and management of
the greater bilby *Macrotis lagotis* in the
Pilbara bioregion, Western Australia:
2012 – 2021

Project Plan



by

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Australian Government
Department of Sustainability, Environment,
Water, Population and Communities



Department of
Environment and Conservation



Potential Research Program

OBJECTIVE

This document has several objectives:

- To document and guide the implementation of priority future actions for the conservation and management of the Bilby in the Pilbara.
- To justify funding allocations for the priority actions.
- To guide future controlling provisions and potential research offset decisions in Western Australia.

Project 1 – Grey Literature Review & Knowledge Synthesis

Project 2 – Development of a Survey & Monitoring Program

Project 3 – Pilbara Bilby Landholder Consultation Survey

Project 4 – Implementation of Monitoring Program

Project 5 – Demographic & Ecological Studies

Existing Program



Government of Western Australia
Department of Parks and Wildlife



PROGRESS REPORT 2013

THE CONSERVATION AND MANAGEMENT OF THE BILBY (*MACROTIS LAGOTIS*) IN THE PILBARA

MARTIN DZIMINSKI

OCTOBER 2013

This report summarises the work carried out on the conservation and management of the bilby (*Macrotis lagotis*) in the Pilbara during the period 2012 -13. This report details progress against activities outlined in the Project Plan supporting the Pilbara Bilby Trust (Marlow et al. 2011).

Work undertaken in the period 2012-13 included:

1. Refinement of the Project Plan and Experimental Design.
2. Employment of a Technical Officer.
3. Population Viability Analysis – How much land is required to support a viable bilby population?
4. Collation of current and historic distributional data.
5. Modelling the distribution of bilbies in the Pilbara.
6. Developing a fine-scale population monitoring technique.
7. Developing a broad-scale survey technique.

1. Refinement of the Project Plan and Experimental Design

The plan for the conservation and management of the bilby (*Macrotis lagotis*) in the Pilbara was extensively redesigned following a literature review and incorporation of rigorous experimental design into components of the plan. Table 1 summarizes the new project plan.

The aim of this project is to improve our understanding of the distribution, and demographics of bilbies in the Pilbara, and provide information to environmental regulators and resource development companies that will allow appropriate management to ensure the persistence of this species in the Pilbara.

Specifically, the objectives of this project are to:

Performance tracking

October 2013

Project	Theme	Progress	Funding - committed
Project 1	Literature Review	Nearing completion (December 2013)	Fortescue Offset (EPBC 2010/5513) Millennium Minerals Offset (2011/5855)
Project 2	Development Survey & Monitoring Program	Ongoing (June 2014)	Fortescue Offset (EPBC 2010/5513) Millennium Minerals Offset (2011/5855)
Project 3	Survey & Landholder Consultation	Ongoing (December 2014)	Fortescue Offset (EPBC 2010/5513) Millennium Minerals Offset (2011/5855)
Project 4	Monitoring Program	Limited (December 2014)	Fortescue Offset (EPBC 2010/5513) Millennium Minerals Offset (2011/5855)
Project 5	Demographic Studies	Limited (2014 & beyond)	?

Committed funds

- Fortescue offset (EPBC 2010/5855) – research to inform better protection & long term conservation – 10 yrs - \$1M
- Millennium Minerals offset (EPBC 2011/58557) – research to inform better protection & long term conservation – 7 yrs - \$420K

Other funds: Offsets committed to DPaW managed NQ Trust for research

- Fortescue (MS 721, Assessment 1577) - ecological studies – up to ~\$450K over three years



Refined Project Plan

Component	Milestones	Completion	Outputs
Collate current and historic distributional data	<ul style="list-style-type: none"> Set up a database Complete search of all published and unpublished literature and interviews with landholders and managers Set up database as NatureMap theme and online user contributable input interface 	Dec 2013	<ul style="list-style-type: none"> Accurate database of bilby records in the Pilbara NatureMap theme as portal to database with online user contributable interface to keep database current
Model distribution of bilbies in the Pilbara	<ul style="list-style-type: none"> Habitat model of bilbies in Pilbara completed and written up for publication 	Dec 2013	<ul style="list-style-type: none"> Publication in scientific journal
Develop broad-scale survey technique	<ul style="list-style-type: none"> Select sites to trial survey techniques Compare survey techniques and select most efficient 	2014	<ul style="list-style-type: none"> Publication in scientific journal Survey protocols for DoE and DPaW
Develop fine-scale population monitoring technique	<ul style="list-style-type: none"> Select sites to trial monitoring techniques Develop and test DNA extraction and PCR with developed bilby microsat primers from faecal samples Compare monitoring techniques and select most efficient 	2014	<ul style="list-style-type: none"> Publication in scientific journal Population monitoring protocols for DoE and DPaW
Broad-scale survey of Pilbara	<ul style="list-style-type: none"> Select areas to survey based on habitat modelling Selected areas surveyed Data imported into online database 	2015-ongoing	<ul style="list-style-type: none"> Publication in scientific journal Dataset available online via NatureMap theme portal
Long-term population monitoring	<ul style="list-style-type: none"> Select sites/functional populations for long-term monitoring Annual monitoring 	2015-ongoing	<ul style="list-style-type: none"> Annual technical report Periodic publications in scientific journals of the status of bilbies in the Pilbara Information for the basis of development and management decisions
Understand effects on demographics	<ul style="list-style-type: none"> Determine population genetic structure of bilbies in the Pilbara and elsewhere Investigate potential impacts of mining activities and development on populations 	2014+	<ul style="list-style-type: none"> Publication in scientific journals Information for the basis of development and management decisions Protocols for bilby management on mining and other development sites

Thanks to

Buru Energy & Aurizon

for generously sponsoring the Pilbara
Northern Quoll workshop



OTHER WORKSHOPS



Tuesday 10 December – Pilbara Olive Python

Wednesday 11 December - Mulgara

(Sponsor required)

February 2014 – Hamersley Peppercress - *Lepidium catapycnon* (TBC)

February 2014 – Ferals predator interactions in the Pilbara (TBC)

March 2014 – Ghost bat (TBC)

April 2014 – *Lerista neviniae* (TBC)

May 2014 - SRE (TBC)

Thanks

Presenters

Catering

To those who have supplied data & reports –

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Martin, Fiona & Keith - DPaW

Rebecca

Craig

sustainable
consulting



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