



Department of
Environment and Conservation

Our environment, our future 

ANNUAL REPORT

THREATENED SPECIES OR COMMUNITIES RECOVERY TEAM

PROGRAM INFORMATION

Program Name Shark Bay Marsupials Recovery team

**Reporting Period
(Financial/Calendar Year)** Calendar year, 2007

Current membership

Member		Representing
1. Chair	Dr Nicky Marlow	Science Division, DEC
2.	Dr Colleen Sims	Shark Bay District, DEC
3.	Neil Thomas	Science Division, DEC
4.	Dr Peter Mawson	Species and Communities Branch, DEC
5.	Dr Jacqueline Richards	Australian Wildlife Conservancy
6.	Katherine Moseby	Arid Recovery Project
7.	Dr Mandy O'Hara	Murdoch University, School of Veterinary and Biomedical Sciences
8.	Katherine Miller	WA Threatened Species Network
9.	June Butcher	Kanyana Wildlife Rehabilitation Centre
10.	Peter Copley	Threatened Species Unit, SA Department of Environment and Heritage
11.	Dr Jeff Short	Wildlife Research and Management

Dates meetings were held 01 February 2007, 02 August, 2007

Changes to Team Members Darren Pepworth (Useless Loop Community Biosphere Project Group Inc) (now represented by Jeff Short) and Stephan Fritz (Chevron) are no longer on the team.

Status of Plan Latest draft of the plan (Feb 2007) awaiting approval by Director of Nature Conservation and Director General.

Aim

1. Ensure the survival and improve the status of the Shark Bay island subspecies of the western barred bandicoot (currently 'Endangered' under the EPBC Act and the *IUCN Red List 2000*) within 20 years to a level that will enable down listing to 'Vulnerable', based on the IUCN (1994) criteria of extent of occurrence.
2. Ensure the survival and maintain the status (currently 'Vulnerable' under the EPBC Act and the *IUCN Red List 2000*) of the Bernier and Dorre Island subspecies of the burrowing bettong

	and banded hare-wallaby and Barrow Island subspecies of the burrowing bettong.
Assessment of Aims	No detectable declines in island populations.

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
1. Manage Bernier and Dorre Islands Nature Reserve for the conservation of the western barred bandicoot, burrowing bettong and banded hare-wallaby.	DEC	DEC	Ongoing	Restricted access to islands and disease risk management in place
2. Develop and implement a cost-effective monitoring program for the wild Bernier and Dorre Island populations..	DEC	DEC, BCI	Ongoing (funding dependent)	Population monitoring on Bernier and Dorre Islands undertaken annually; data analysis underway- a population decline was indicated at the last monitoring June 2008 will be the last monitoring unless additional funding can be obtained
3. Manage Barrow Island Nature Reserve for the conservation of the burrowing bettong..	DEC, Chevron	DEC, Chevron	Ongoing	
4. Continue the mammal monitoring program for the wild Barrow Island burrowing bettong population	DEC, Chevron	DEC, Chevron		
5. Maintain the captive populations at the Dryandra Field Breeding Facility.	DEC,	DEC	Ongoing	96 boodies were present in the RTD enclosure- a strong male bias exists and needs to be rectified 13 WBBs were present in November 2007
6. Maintain the captive banded hare-wallaby population at the Peron Captive Breeding Centre.	DEC.	DEC	Ongoing	Currently 18 males and 11 females in the colony with a male bias in births. Some breeding females becoming senescent. Need to supplement stock with new individuals from Bernier Is

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
7. Determine which populations of western barred bandicoot are free from the papilloma-like syndrome	DEC, Murdoch Uni	Murdoch Uni	By 2009	Currently the syndrome has not been detected at Dorre Is, Faure Is and Heirisson prong (!) but more sampling needs to be undertaken to validate results
8. Research into the western barred bandicoot papilloma-like syndrome.	DEC, Murdoch Uni	Murdoch Uni	By 2009	WBB papillomatosis and carcinomatosis syndrome has been shown to be caused by a novel virus (BPCV1) which is from a new family of viruses. It has co-evolved with the WBB over the last 10 million years and is usually a disease of older animals
9. Research into the incidence, abundance and impact of <i>Chlamydia</i> and toxoplasmosis in captive and wild populations	DEC, Murdoch Uni	Murdoch Uni	By 2009	The prevalence of Chlamydiales- associated conjunctivitis in WBBs appears to be low and is treatable in captive facilities
10. Maintain the reintroduced populations of western barred bandicoots and burrowing bettongs at Heirisson Prong, Shark Bay, Western Australia	ULCBPG, SBSJV, Wildlife Research and Management	ULCBPG, SBSJV, Wildlife Research and Management	Ongoing	Last WBB caught at HP in Jan 2007 despite >1600 trap nights; following two of the driest years on record. 8 cats removed from HP >100 boodies present and breeding well The lack of tenure at HP continues to be problematical
11. Maintain the reintroduced populations of western barred bandicoots and burrowing bettongs at the Arid Recovery Project (ARP), Roxby Downs, South Australia	ARP	ARP	Ongoing	ARR is very dry at present and boodies are stripping bark from trees. Boodies population has declined and stabilised at a slightly lower density than their peak in mid 2007. Track counts of WBBs have increased to 35-40 tracks/ km suggesting an increase in abundance. ARP are seeking WBBs from Faure Is- perhaps later in 2008 after the July survey at Faure Is and following winter rain.

TASKS CARRIED OUT AGAINST ACTIONS				
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12.Maintain the reintroduced populations of western barred bandicoots, burrowing bettongs and banded hare-wallabies at Faure Island, Shark Bay, Western Australia	AWC	AWC	Ongoing	Trapping in January 2007 indicated the WBBs are doing well. Boodies are also doing well with 80% trap success (over 400 caught in July 2007).
13.Maintain the reintroduced burrowing bettong population at Scotia Wildlife Sanctuary	AWC	AWC	Ongoing	>200 boodies at Scotia, breeding and doing well
14.Maintain the reintroduced burrowing bettong population at Boodie Island	DEC	DEC	Ongoing	
15.Assess the abundance and diet of feral cats on Dirk Hartog Island, Shark Bay, as a precursor to cat eradication efforts and mammal reintroductions	DEC	DEC	By 2009	
16.Reintroduce burrowing bettongs to Dryandra Woodland	DEC	DEC	By 2010	In Spring 2007 27 boodies were released Dryandra Woodland; 11 were taken by foxes,4 by pythons and 1 by an eagle. Another release will be undertaken when increased baiting at Dryandra to control foxes is implemented.
17.Reintroduce burrowing bettongs at Yookamurra Wildlife Sanctuary	AWC	AWC	Ongoing	In November 2007 10 boodies were reintroduced into Yookamurra. All were surviving in December and one failed collar was removed
18.Establish a sustainable population of burrowing	Parks Australia	Parks Australia	Ongoing	Progress unknown

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
bettongs at Uluru-Kata Tjuta National Park				
19.Reintroduce western barred bandicoots, burrowing bettongs and banded hare-wallabies to additional mainland sites	Recovery team	DEC		On hold pending outcome of disease investigations
20.Assess strategies for hybridisation of reintroduced populations to enhance genetic diversity	Recovery team	DEC, recovery team	By 2009	PhD student Felicity Donaldson is examining the level of genetic divergence between Bernier and Dorre Island burrowing bettongs, to determine whether hybridisation of the two populations is acceptable- results pending
21.Research into the taxonomic status and genetic structure of burrowing bettong populations from Barrow, Bernier and Dorre Islands	DEC, UWA, AWC	DEC, UWA, AWC	By 2008	PhD student Felicity Donaldson is examining the level of genetic divergence between Bernier and Dorre Island burrowing bettongs, to determine whether hybridisation of the two populations is acceptable
22.Research into the taxonomic status and genetic structure of western barred bandicoot populations from Bernier and Dorre Islands, and Heirisson Prong, Dryandra Field Breeding Facility and the Arid Recovery Reserve	Griffith University, DEC	Griffith University, DEC	By 2008	Steve Smith from Griffith University in Queensland is completing postgraduate research on the genetics of wild and reintroduced populations of the western barred bandicoot in relation to disease expression. Results pending
23.Continue involvement of the Useless Loop community in the management of	ULCBPG, SBSJV, Wildlife Research and Management	ULCBPG, SBSJV, Wildlife Research and	Ongoing	

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
Heirisson Prong and the conservation of its populations of western barred bandicoots and burrowing bettongs		Management		
24.Continue community involvement in the Arid Recovery Project and the conservation of its populations of western barred bandicoots and burrowing bettongs	ARP, Friends of the ARP, BHP Billiton	ARP, Friends of the ARP, BHP Billiton	Ongoing	
25.Support tourism at Dryandra Woodland through public education and visits to Barna Mia	DEC	DEC	Ongoing	Visits to Barna Mia are increasing. Free tours for nearby landholders have been popular and provide a vehicle to showcase the success of Western Shield, the RTD project and Barna Mia
26.Support involvement of the Denham community in the management of <i>Project Eden</i>	DEC, WWF, TSN	DEC, WWF, TSN	Ongoing	
27.Support limited ecotourism in the Shark Bay region in conjunction with <i>Project Eden</i>	DEC, Shire of Shark Bay	DEC, Shire of Shark Bay	Ongoing	
28.Source additional funding to support recovery actions for the western barred bandicoot, burrowing bettong and banded hare-wallaby	Recovery Team, DEC, ARP, ULCPBG, AWC	Recovery Team, DEC, ARP, ULCPBG, AWC	Ongoing	Ongoing

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
29.Enhance linkages between projects involved in the recovery of western barred bandicoots, burrowing bettongs and banded hare-wallabies	Recovery Team, DEC, AWC, ULCBPG, ARP	Recovery Team, DEC, AWC, ULCBPG, ARP	Ongoing	Ongoing

GOALS FOR NEXT YEAR			
Reporting Period (Financial/Calendar Year)		2008 Calendar Year	
Goal		Priority	Participants
Conduct last (!) monitoring of Bernier and Dorre Islands before funding ceases.		High	DEC Shark Bay District, DEC Science division
Investigate possibility of regional NRM funding to continue Bernier and Dorre Is surveys		High	DEC Shark Bay District
Undertake meeting of WBB recovery strategic subgroup-date set 23 rd May 2008		High	DEC, Kanyana, Murdoch Uni
Determine fate of excess male boodies at RTD enclosure		High	DEC,
Clarify tenure of Heirisson Prong		High	DEC, ULCBPG, SBSJV, Wildlife Research and Management, CSIRO
Continue research on BPCV1		High	Murdoch Uni.
Possible transfer of WBBs from Faure Is to ARR in September 2008		Medium	DEC, AWC, ARP
ARP to swab WBBs at Roxby Downs for BPCV1.		Medium	ARP
BHW translocation from PCBC to Faure to be confirmed and undertaken		Medium	DEC, AWC
Water in PCBC colony to be tested for bacteria that may be causing infections in BHWs		Medium	DEC
Assess whether boodies at Yookamurra constructing burrows		Medium	AWC