



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, 2008

**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** 27 February 2008, 22 August, 2008

**Changes to Team Members** Blair Parsons is replacing Dr Jacqui Richards as the representative of Australian Wildlife Conservancy. Dr Richards has requested she remain a member of the team as a private consultant. Her membership is currently being considered by the team. A new member to represent the WA Threatened Species Network is being sought. A change of representative of Murdoch University is also being considered.

**Status of Plan** Latest draft of the plan (Feb 2007) awaiting District sign-off and 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*)

	<p>within 20 years to a level that will enable down listing to 'Vulnerable', based on the IUCN (1994) criteria of extent of occurrence.</p> <p>2. Ensure the survival and maintain the status (currently 'Vulnerable' under the EPBC Act and the <i>IUCN Red List 2000</i>) of the Bernier and Dorre Island subspecies of the burrowing bettong and banded hare-wallaby and Barrow Island subspecies of the burrowing bettong.</p>
<b>Assessment of Aims</b>	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	Restrictions on public day use of Dorre Island may be lifted. This may result in increased disease risk
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 has been undertaken annually and the latest data analysis indicates a population decline in western barred bandicoots which may result in them being re-listed as Critically Endangered  June 2008 will be the last monitoring unless additional funding for further monitoring can be obtained. Without adequate monitoring any future decline or recovery of the western barred bandicoot population will not be detected.
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	Ongoing	
5. Maintain the captive populations at the Dryandra Field Breeding Facility.	DEC,	DEC	Ongoing	114 boodies were present in the RTD enclosure- a strong male bias exists and needs to be rectified  9 WBBs were transferred (inappropriately) to the Barna Mia viewing facility from RTD. The latest monitoring in Barna Mia revealed no Western barred bandicoots: most of the 9 animals were probably adversely affected by high levels of intraspecific

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
				aggression
6. Maintain the captive banded hare-wallaby population at the Peron Captive Breeding Centre.	DEC.	DEC	Ongoing	Currently 14 males and 10 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; 3 males to be translocated to Faure Island in May 2009
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 (!)
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	Only one WBB caught at HP in the latest trapping session >200 boodies present and breeding well DEC needs to advise SBSJV that it is supportive of their ongoing involvement in the project. A letter of support is being drafted
11. Maintain the reintroduced populations of western	ARP	ARP	Ongoing	Approximately 500 boodies are still within the fenced area at ARR. This is a decline from about 1500. No sick animals

TASKS CARRIED OUT AGAINST ACTIONS				
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barred bandicoots and burrowing bettongs at the Arid Recovery Project (ARP), Roxby Downs, South Australia				observed but testing for Coccidia is planned Track counts of WBBs indicate an increase in abundance. ARP are seeking WBBs from Faure Is- perhaps later in 2009.
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 and track counts indicated the WBBs are doing well. 13 individuals captured Boodies are also doing well .
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 may be undertaken when increased baiting at Dryandra to control foxes is implemented.

TASKS CARRIED OUT AGAINST ACTIONS				
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17.Reintroduce burrowing bettongs at Yookamurra Wildlife Sanctuary	AWC	AWC	Ongoing	In November 2007 10 boodies were reintroduced into Yookamurra.
18.Establish a sustainable population of burrowing bettongs at Uluru-Kata Tjuta National Park	Parks Australia	Parks Australia	Ongoing	Progress unknown
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- results pending
22.Research into the taxonomic status and genetic structure of western barred bandicoot populations from Bernier and Dorre Islands, and Heirisson Prong, Dryandra Field	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

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
Breeding Facility and the Arid Recovery Reserve				
23.Continue involvement of the Useless Loop community in the management of Heirisson Prong and the conservation of its populations of western barred bandicoots and burrowing bettongs	ULCBPG, SBSJV, Wildlife Research and Management	ULCBPG, SBSJV, Wildlife Research and Management	Ongoing	
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	

TASKS CARRIED OUT AGAINST ACTIONS				
Action	Participants	Funding	Date	Task (include project report)
28.Source additional funding to support recovery actions for the western barred bandicoot, burrowing bettong and banded hare-wallaby	Recovery Team, DEC, ARP, ULCBPG, AWC	Recovery Team, DEC, ARP, ULCBPG, AWC	Ongoing	Ongoing
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)		2009 Calendar Year	
Goal		Priority	Participants
Obtain funding for ongoing monitoring of Bernier and Dorre Islands before continuity of monitoring is compromised		High	DEC Shark Bay District, DEC Science division
Investigate latest abundance estimates for Western Barred bandicoots on Bernier and Dorre Islands and consider whether they should be reclassified as Critically Endangered		High	DEC Shark Bay District
Provide DEC support for continued involvement of SBSJV at Heirisson Prong		High	DEC, ULCBPG, SBSJV, Wildlife Research and Management
Continue research on BPCV1		Medium	Murdoch Uni.
Possible transfer of WBBs from Faure Is to ARP in September 2009		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