



Department of  
Environment and  
Conservation

Our environment, our future

## RECOVERY TEAM ANNUAL REPORT

### THREATENED SPECIES AND/OR COMMUNITIES RECOVERY TEAM

#### PROGRAM INFORMATION

Recovery Team

Numbat

Reporting Period

DATE FROM: 1<sup>st</sup> January 2012 DATE TO: 31<sup>st</sup> December 2012

#### Current Membership (as of 31<sup>st</sup> December 2012)

	Member	Affiliation
<b>Chair</b>	Tony Friend	DEC Science Division
	Brett Beecham	DEC Wheatbelt Region
	Rob Brazell	DEC Wellington District
	Peter Collins	DEC Albany District
	Peter Copley	SA DENR
	Rebecca Hayes	DEC Mundaring District
	Matt Hayward	Australian Wildlife Conservancy
	Dani Jose	Perth Zoo
	Peter Mawson	Perth Zoo
	Manda Page	DEC Species and Communities
	Kylie Piper	Arid Recovery
	Vicki Power	Project Numbat
	Juanita Renwick	DEC Western Shield
	Mike Saxon	NSW OEH
	Neil Thomas	DEC Science Division
	Ian Wilson	DEC Donnelly District
<b>Dates meetings were held</b>	20 <sup>th</sup> March 2012 and 17 <sup>th</sup> September 2012	

**Highlights of achievements** for the previous 12 months suitable for publication in *WATSNU* and contribution to DEC annual report. Provide 1-2 paragraphs summarising total number of new populations located, surveys completed, list major management actions etc

Things are looking up for Australia's numbat populations, with a spike in numbers at AWC's well-established Scotia (NSW) and Yookamurra (SA) populations, and hints of a recovery of the embattled Dryandra population following experimental cat baiting. Perth Zoo's output of 19 young numbats in 2012 were used to reinforce the translocation into Scotia's new Stage 2 predator-free area. Meanwhile, surveys in WA's southwest showed that numbats are doing well in Boyagin Nature Reserve and Batalling forest block west of Darkan.

### List of recovery actions coordinated by Recovery Team

#### Action 1 Management of existing populations and habitat.

##### *Habitat management*

Fox control, fire management and visitor management, where appropriate, were carried out at the eight DEC-managed sites that support numbat populations. Australian Wildlife Conservancy (AWC) manages two fenced wildlife sanctuaries (Yookamurra in South Australia and Scotia in NSW) that are free of foxes and feral cats and support reintroduced numbat populations.

Monthly fox control by 1080 baiting is carried out at Dryandra Woodland, Boyagin and Tutanning Nature Reserves and within Cocanarup Timber Reserve and adjacent Unallocated Crown Land. Quarterly fox control continues at Dragon Rocks Nature Reserve, Stirling Range National Park, Perup Nature Reserve/Greater Kingston National Park and surrounding areas and in State forest in the Batalling area. All of these sites support numbat populations or have been subject to recent translocations.

A review of the Western Shield baiting program in 2012 to manage increasing costs has proposed the cessation of baiting in Dragon Rocks Nature Reserve due to the failure to catch Critical Weight Range mammals during recent monitoring. Baiting would continue, however if numbat sign was found during a survey carried out in December 2012. This survey yielded no numbat sign (see below).

Prescribed burning is carried out in some DEC-managed numbat sites for hazard reduction and environmental outcomes (e.g. regeneration of kwongan and threatened flora management). Timber harvesting is under way in numbat habitat at Hillman block near Batalling and in Warrup block east of Bridgetown and post-harvesting regeneration burns are planned.

##### *Numbat monitoring*

Monitoring of existing populations is an integral part of their management and driven surveys were carried out in Dryandra in April and November 2012, while a number of radio-collared numbats were monitored there through the year. The results of the November survey indicate that the Dryandra population is recovering from its 2006-09 crash. Driven surveys were also carried out at Yookamurra and Scotia Sanctuaries and showed that high densities of numbats currently exist at those reserves. Track counts are also carried out at Scotia, where the substrate is very suitable for this activity.

Diggings surveys are also used to monitor numbats at sites where very low numbers or dense vegetation preclude driven surveys. Diggings surveys were carried out at Boyagin and Dragon Rocks Nature Reserve in November and December respectively. Diggings were widespread in both blocks of Boyagin, indicating a healthy population. No diggings were found in three days searching at Dragon Rocks however, so it seems the population there is apparently at a very low level or extinct.

Numbat sighting reports come in to DEC regularly from Perup/Kingston, Batalling and Boyagin indicating that these populations are healthy. No sightings at Tutanning have been reported since 2009, so this site will be surveyed intensively in 2013.

##### *Predator control research*

In the response to the dramatic decline in the Dryandra numbat population described in the 2009 report of the Numbat Recovery Team, a project commenced in October 2010, aiming to determine whether predation by cats is the cause and if so to devise and implement a cat control strategy in Dryandra. In a two-year intensive study of causes of mortality in numbats and woylies, strong evidence that cats are now the most important predators of both species was obtained. This work was still in progress at the end of 2012.

A detailed study of uptake of non-toxic Eradecat® cat baits by non-target (i.e. native) species commenced in April 2011, focussing primarily on red-tailed phascogales and mardos. These two carnivorous marsupials are the species occurring at Dryandra thought most likely to be at risk from Eradecat® cat baits, which are smaller, softer and carry more 1080 than Probait fox baits. This study indicated that red-tailed phascogale in Dryandra were not at risk but that mardos may be. This was followed in May 2012 by a toxic baiting

campaign over the main block (13,000 ha) with radio collared chuditch (4), red-tailed phascogales (4) and mardos (2) at or near bait drop sites. Despite the fact that these animals are likely to eat cat baits and would quickly reach dangerous consumption levels, all radio-collared animals survived, indicating that the risk to these species was low.

Monitoring cat numbers using sandplots, sensor cameras on tracks and individual identification from DNA swabbed from remains of predated animals was not sufficiently sensitive, however, to detect any change in cat numbers before and after baiting.

In 2013 cats will be captured in Dryandra and Tutanning and fitted with GPS radio-collars prior to trial baiting, in order to measure the efficacy of cat control using Eradicat® baits.

#### **Action 2 Genetic survey of existing populations.**

Ear tissue for DNA analysis is collected routinely from all numbats handled in DEC- and AWC-managed populations. A genetic survey of Dryandra, Perup and Boyagin was carried out in 1995 and the results were published. Another survey is proposed in the near future and some funds have been provided by the community group Project Numbat through the "Bowling for Numbats" fundraiser.

#### **Action 3 Translocations to establish at least six further self-sustaining populations**

This action is listed in the 1994 recovery plan, when there were two existing and one reintroduced population (Boyagin). Three other translocations were in early stages (Karroun Hill, Tutanning, Batalling and Yookamurra). Since 1994, new translocations have been carried out to Karakamia Sanctuary (AWC), Dragon Rocks, Dale Conservation Park, Stirling Range National Park, Scotia Sanctuary (AWC) and Cocanarup Timber Reserve.

The numbat reintroduction to Cocanarup Timber Reserve commenced in 2006. Between 12 and 14 animals, mostly captive-bred, were released there in December each year in 2006, 2007, 2008 and 2009. The progress of the reintroduction was summarised in the report of the Recovery Team for 2009. In September 2010 the Recovery Team decided that no numbats would be released in Cocanarup in December 2010 so that the viability of the population could be assessed. Eight numbats were known to be alive there at that time. By the end of 2011, only one radio-collared numbat, a female, remained. This animal was found predated in August 2012. Monitoring at Cocanarup by diggings surveys and sensor cameras will continue.

A numbat translocation was commenced in 2009 by AWC at Scotia Sanctuary when seven male numbats were moved from Stage 1 to the adjacent Stage 2 between November 2009 and January 2010. No numbats were moved in 2010 due to low numbers encountered in Stage 1. The translocation continued in December 2011 when 13 numbats from Perth Zoo were flown to Scotia and released.

In December 2012, a further 17 numbats were available for release from the breeding program at Perth Zoo. The recovery team decided to provide this group for release into Scotia Stage 2 as a reinforcement of the captive-bred group that was released there in December 2011. Scotia is the only currently approved numbat translocation site. Eleven of these numbats were fitted with radio-collars before despatch from Perth (five were too small and one had its collar removed after fitting). The numbats were flown from Perth to Adelaide on December 13<sup>th</sup> then from there to Scotia by charter aircraft before release that afternoon.

AWC Scotia Sanctuary personnel are monitoring the releases numbats.

#### **Action 4 Disease survey and health monitoring of all populations.**

A comprehensive disease survey on numbat populations was carried out during the 1990s. Health monitoring is continuing, both on the captive population and through regular monitoring of the current translocation. No disease issues have emerged recently.

#### **Action 5 Captive breeding to provide animals for display and to supplement the translocation program if necessary.**

Since the crash of the numbat population at Dryandra in 1993, the collaborative breeding program at Perth Zoo has been the primary source of stock for the translocation program. A numbat display has been maintained at Perth Zoo throughout that time and is very important part of the recovery team's awareness-raising program.

The breeding program continued in 2012, providing 17 numbats for release at Scotia Sanctuary Stage 2 in December. Two other young born in 2012 were retained for breeding. The captive colony has been short of adult males and three were provided from Scotia Sanctuary in November 2012.

#### **Action 6 Establishment and support of public awareness and sponsorship programs.**

Involvement in the activities of the Recovery Team by the community action group, Project Numbat (PN), has provided greater public awareness, extra funding through fund-raising and sponsorships, and a source of volunteers. DEC, AWC, the Malleefowl Preservation Group and Perth Zoo provide support for PN's initiatives. During 2012, PN provided a fabulous total of \$16,436.66 for three projects - 1 )radio-collars to

be fitted to numbats for translocation in December 2012, 2) 10 sensor cameras for research into the Dryandra numbat population and on cat control and 3) genetic assessment of variability within numbat populations.

During the year, volunteers provided valuable assistance in field activities as part of DEC's numbat recovery activities including the Boyagin diggings survey.