SHARK BAY MOUSE RECOVERY TEAM

ANNUAL REPORT

1994

by

Keith Morris and Peter Speldewinde

for

The Shark Bay Mouse Recovery Team

Property and copyright of this document is vested jointly in the Director, National Parks and Wildlife Service, Australian Nature Conservation Agency, and the Executive Director, Western Australian Department of Conservation and Land Management

The Commonwealth disclaims responsibility for the views expressed

Department of Conservation and Land Management
Western Australian Wildlife Research Centre
PO Box 51, Wanneroo, WA 6065.

SUMMARY

This report documents the third year of implementation of the Shark Bay Mouse (SBM) recovery plan. Financial support continued from ANCA's Endangered Species Program and CALM. In kind support was received from Useless Loop Salt Pty Ltd. and Perth Zoo. During 1994, the recovery plan was revised to reflect the changes in the translocation program whereby the translocation to Doole Island was to be undertaken prior to the translocation to Heirisson Prong. The translocated population on Doole Island was monitored three times this year. While it was clear through track counts that SBM had persisted on the island, low capture rates made it difficult to assess the success of this program. The Bernier Island population was monitored twice and lower capture rates to previous years were found. After an earlier delay, the translocation to Heirisson Prong was undertaken in November utilising some wild caught and captive bred SBM. Initial monitoring showed very little mortality and that the SBM was establishing satisfactorily. Monitoring of the Bernier and Doole Islands, and Heirisson Prong populations will continue in 1995.

1. INTRODUCTION

The Shark Bay Mouse (SBM) recovery plan was prepared in November 1991 and implemented in March 1992. During 1994 it was revised to reflect changes to the translocation program. Translocation to an offshore island (Doole Island) was to be undertaken before Heirisson Prong. With the implementation of a program by CALM to control feral animals on Peron Peninsula, it is likely that a further revision (downwards) of the funding required for a reintroduction to Peron Peninsula will be made.

2. RECOVERY TEAM

The Recovery Team met twice in 1994, on 27 April at CALM Woodvale, and on 7 December at Dryandra Woodland. The Minutes from the April meeting formed the basis of the 1994 Progress Report. Membership of the recovery team is as follows:

Mr Ron Shepherd	(Chair)	CALM Shark Bay District
Mr Keith Morris		CALM, Science & Information Division, Woodvale
Mr Peter Speldewinde		CALM, Science & Information Division, Woodvale
Dr Andrew Burbidge		CALM WATSCU
Ms Sally Stephens		ANCA ESU
Mr Jeff Short		CSIRO Division of Wildlife & Ecology
Mr Brian Cane		Useless Loop Community

3. RECOVERY PLAN STATUS AND FUNDING

The recovery plan completed its third year of implementation in 1994 and was fully funded by ANCA ESP and CALM. Additional support for the translocation program to Heirisson Prong was received from Useless Loop Salt Pty Ltd through transport of materials to Useless Loop, and Perth Zoo, through the temporary holding of SBM before release.

A program to control feral animals on Peron Peninsula followed by reintroduction of the mammal fauna has been initiated by CALM (Operation Eden) and this should reduce the reduce the ANCA funding component in 1996. Provision had been made in the SBM recovery plan for funds to control feral animals at a reintroduction site on Peron Peninsula, probably Herald Bight. It is likely that less funding will now be required and this will be reflected in the revised recovery plan which will be available for the next recovery team meeting in July 1995.

4. PROGRESS ON RECOVERY ACTIONS

Action 3.1 - Research and monitoring on Bernier Island:

Two monitoring visits (June and October) and an additional "opportunistic" trip (August) were made to Bernier Island in 1994. In June, trap success rates of 0.9 % were obtained; 2.5 % in October. Both these capture rates were lower than for corresponding times in previous years (Table 1). The reason for this is not clear. The lower than average rainfall in 1993/4 may have affected breeding, particularly the length of the breeding period. Also, most of the mice used for the translocation to Doole Island in 1993 were removed from the monitoring grids and this may have impacted the resident population.

Monitoring period	Trap success rate (%)
June 1992	1.5
June 1993	2.3
June 1994	0.9
Oct / Nov 1992	4.1
October 1994	2.5

Table 1. Shark Bay Mouse trap success rates from monitoring sites on Bernier Island.

During 1994 33 mice were removed from Bernier island for the translocation to Heirisson Prong. In June, ten SBM were trapped and brought to the Perth Zoo for temporary holding until October. In August, two SBM were added to the Zoo colony. Another female was kept at CALM Woodvale as she gave birth to five young en route from Bernier Island to Perth. Another two females gave birth to an unknown number of young while being held at the Zoo - two were known to have died and three survived. In October another 20 mice were trapped and taken directly to Heirisson Prong for release along with those from the Perth Zoo (see Action 3.3 below). Of the 33 mice removed from Bernier Island in 1994, none came from the monitoring sites at Boulder and Red Cliff.

The methodologies of the monitoring program for Bernier and Doole Island is to be documented for the recovery team by the July 1995 meeting. Monitoring of the Bernier Island population probably should be undertaken twice a year instead of the current once a year.

Action 3.2 - Translocation to Doole Island:

No further SBM were added from external sources to the Doole Island population in 1995. Three monitoring trips were made to the island - March, April and October.

In March, three SBM were trapped (1 340 trapnights = 0.2 % trap success), two were new animals born on the island. All were trapped on the beaches rather than on the monitoring grids established further inland. Mangrove thickets continued to provide shelter and track observations suggested that the mice preferred to utilise the coastal white sand / *Spinifex longifolius* habitat. There was some indication also that the mice were avoiding the Elliott traps.

In April, no mice were trapped (910 trapnights) however one of the radiocollared animals from March was recovered from a mangrove hollow and appeared to be in good condition. Tracks were again present on coastal areas.

In October, both beach areas and inland grids were trapped but no mice were captured (1075 trapnights). Tracks were obvious on many beaches but trap avoidance appeared to be a problem.

Modifications to the monitoring program on Doole Island are required and these will be documented for the recovery team prior to the July 1995 meeting.

Action 3.3 - Experimental translocation to Heirisson Prong:

A translocation site on Heirisson Prong was selected in March. This was approximately 2 km south of Cape Heirisson, on the east side of the prong. The release site was coastal white sand dune habitat dominated by *Spinifex longifolius* and *Olearia*, similar to the preferred habitat on Bernier island. The recovery team approved the release site at its April meeting and agreed that the translocation occur in June.

The low numbers of mice captured (10) in June on Bernier Island necessitated a delay until November. These animals were held at Perth Zoo (see Action 3.1 above) and subsequently another 23 SBM were collected from Bernier Island for release on Heirisson Prong. Prior to the release a 1 ha enclosure made of zincalum sheets 0.9m high was constructed at the release site. Thirty three SBM (19 males, 14 females) were released into the enclosure at dusk on 7 November. Thirteen had come from being held at Perth Zoo, 20 directly from Bernier Island. Eight were fitted with radiocollars.

Known movements of SBM since release are shown in Table 2. After three weeks, wind erosion under the metal sheeting led to some mice escaping from the enclosure. Initially most stayed within 30m of the enclosure, subsequently five have established territories within 200m of the release area. Since then it is known that at least 8 mice have remained within 200m of the release area. Another two moved up to 1 km north of the release area, and tracks of another individual have been found on the west side of the prong. All mice appear to have remained on or near beach habitat. Three animals are known to have died, none from cat predation.

Time after release	Number of SBM within 200m of release area	Number of SBM beyond 200m of release area
14 days	11	0
28 days	20	0
42 days	10	1

Table 2. Known movements of Shark Bay mice following release on Heirisson Prong.

Action 3.4 - Control of feral animals on Peron Peninsula:

A major project to control the feral animals on Peron Peninsula has recently been implemented by CALM (Operation Eden). If satisfactory control is achieved, several species of mammal are to be reintroduced to the peninsula, commencing in 1997. The Shark Bay Mouse will be one of these species to be reintroduced, as proposed in the recovery plan, however the funding required from ANCA to do this will now be less. The revised recovery plan will reflect this.

Action 3.5 - Re introduction to Peron Peninsula:

Providing satisfactory control of feral animals is achieved, the SBM reintroduction should proceed in 1997.

5. BUDGET

ANCA's Endangered Species Program contributed $ 47 500 to the Shark Bay Mouse recovery program in 1994. CALM contributed $ 8 100 through provision of a portion of the salary of the supervising scientist and vehicle standing charges. Perth Zoo contributed an amount, estimated at $10 000, through provision of holding cages and keeper salaries while the SBM were held at the Zoo. Useless Loop Salt Pty Ltd provided transport from Perth to Useless Loop for fencing materials prior to the release at Heirisson Prong.

6. CONCLUSIONS

Some further revision of the recovery plan is required in 1995, as is the documentation of monitoring protocols. Problems have been encountered in determining the success of the Doole Island translocation, however the SBM have persisted and will probably increase in numbers following the breeding period in 1995. Preliminary results from Heirisson Prong suggest that this population will establish and that the continued presence of low numbers of feral cats has not been a problem.