

# FAURE ISLAND WILDLIFE SANCTUARY ANNUAL REPORT 2009

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## INTRODUCTION

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Faure Island Sanctuary is a 5,816 ha pastoral lease located in Shark Bay, Western Australia. It was acquired by the Australian Wildlife Conservancy (AWC) in 1999. The island has an arid climate with hot dry summers, mild winters and erratic rainfall, most of which falls in winter, though cyclonic activity may bring significant summer rainfall. There are five major plant communities on the island, *Acacia* shrubland, mallee shrubland, spinifex grassland, samphire and *Atriplex* shrubland, and mangrove woodland (Keighery and Muir 2008).

Feral goats and cats were eradicated off the island and sheep stocking rates have been greatly reduced. Since 2002, five threatened mammal species have been translocated to the island (Boodie, Shark Bay Mouse, Banded Hare Wallaby, Western Barred Bandicoot and Greater Stick-nest Rat).

The purpose of this report is to summarise monitoring and research activity undertaken on Faure Island Wildlife Sanctuary during 2009. This includes monitoring of translocated species to satisfy agreed reporting commitments between AWC and DEC.

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## METHODS AND RESULTS

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### ANNUAL SURVEYS

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Boodies (*Bettongia lesueur*) and Shark Bay Mice (*Pseudomys fieldi*) were first translocated to Faure Island in 2002, Banded Hare-wallabies *Lagostrophus fasciatus fasciatus* in 2004, Western Barred Bandicoots *Perameles bougainville* in 2005, and Greater Stick-nest Rats *Leporillus conditor* in 2006, with several follow up translocations since. Prior to 2009, annual and targeted surveys were conducted to monitor translocated species (Figure 1), however, trap saturation was being experienced due to population increase and 'trap happy' Boodies, at the expense of other species. The survey method was thus changed this year to address this and to provide insights into habitat use.

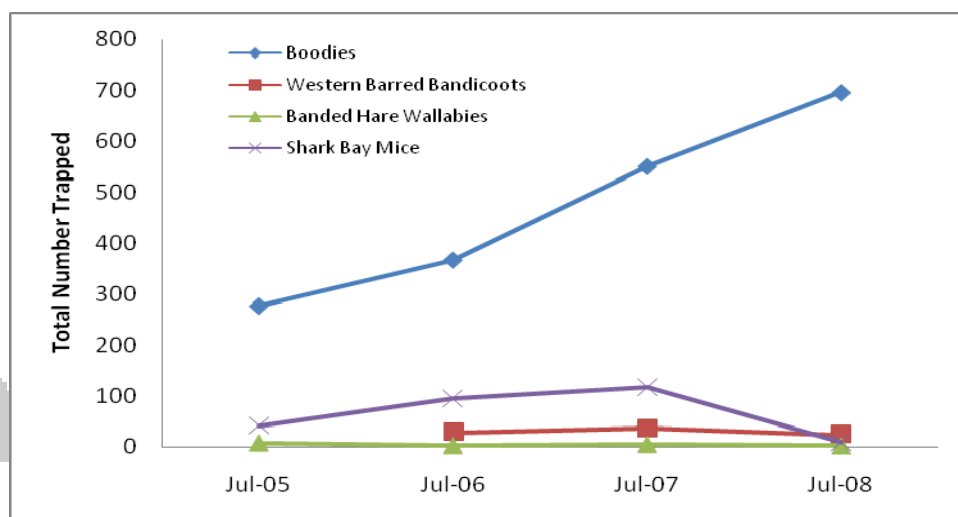


Figure 1: Total number of Boodies, Western Barred Bandicoots, Banded Hare Wallabies and Shark Bay Mice caught during the annual surveys undertaken in 2005, 2006, 2007 and 2008.

The new monitoring method uses 15 sites, (3 replicates of 5 different vegetation types), set up in a 1 hectare grid of 25 cage traps, 25 Elliott traps, up to six funnel and seven pits traps. The Elliott traps are placed inside a PVC pipe that has been adapted to be a Boodie-proof trap cover to reduce the Boodies disturbing traps. This survey is conducted bi-annually in Spring and Autumn. Table 1 provides a summary of trap effort and trap rates for all targeted species in the 2008 (old transect style) survey and both of the 2009 (new grid trapping style) surveys.

Table 1: A summary of trap effort and results for 2008 (transect trapping), February 2009 (grid trapping) and September 2009 (grid trapping) for Boodies, Western Barred Bandicoots (WBB), Shark Bay Mice (SBM), Banded Hare Wallabies (BHW) and reptiles.

	Transect Method 2008	Grid Method February 2009	Grid Method September 2009
no. cage trap nights	900	2100	2250
no. elliott trap nights	900	2100	2250
no. pits trap nights	60	120	140
no. funnels trap nights	0	180	0
no. individual Boodies	627	366	590
total no. Boodies	697	505	783
no. individual WBB	7	13	67
total no. WBB	7	11	54
no. individual SBM	24	73	179
total no. SBM	24	81	145
no. individual BHW	0	1	0
total no. BHW	0	1	0
total no. reptiles (not funnels)	25	82	59
total no. reptile spp (not funnels)	4	16	11

Trap rates for Boodies, Shark Bay Mice and Western Barred Bandicoots all increased substantially between February and September 2009. Further data will reveal if this is a seasonal fluctuation or a result of population growth for these species. The new grid trapping method seems to have reduced some of the Boodie trap-saturation issues, though Western Barred Bandicoot and Shark Bay Mice prints on the island suggest that their numbers may be higher than the trap rate indicates.

There was only one Banded Hare Wallaby trapped during the grid trapping efforts in 2009; this is a result of Boodie trap-saturation and the trap-shy nature of the wallabies; this is an on-going issue at Faure. There is abundant evidence of the wallabies near the release site including browsing/grazing, scats, runnels and occasional diurnal sightings. Banded Hare Wallabies were sighted (at night) on two separate occasions (21/06/09 & 22/09/09) over 5km from the release site. On one occasion two adult individuals were sighted with no ear tags and one was carrying a large pouch young. Such sightings are significant because it indicates that the population is breeding and that they are spreading across the island. However this may make them even more difficult to 'target trap' if they are widely (and possibly thinly) spread out. Spotlighting will be incorporated into the ongoing monitoring as an attempt to gather further information on the more cryptic animals. Four additional Banded Hare Wallabies (three males and one female) were translocated to Faure Island in June 2009 from Peron Captive Breeding Centre.

Five Western Barred Bandicoots (3 females and 2 males) were translocated from Faure to Arid Recovery in Roxby Downs in September. This was the first translocation of this species off Faure Island. The intensive trapping (50 cage traps and 50 Elliott traps cleared every 2 hours) for the translocation ran smoothly and is a fair indication of the effort required to capture the Bandicoots for any future translocations of this species. Most recent reports are that all animals have increased in weight and that all three females are carrying pouch young.

There were two new species of reptiles added to the species inventory for Faure Island this year; the Beaked Blindsnake (*Ramphotyphlops grypus*) and Clawless Gecko (*Crenadactylus ocellatus horni*). Both were captured during the hot and humid February survey.

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#### OTHER MONITORING: BIRD SURVEYS

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Birds Australia WA undertook a survey of shore birds on Faure Island in September 2009. This consisted of four expert bird watchers who spent a week surveying the shoreline of the island. In addition they completed 15 inland Atlas sites (20 minute search of 2ha). There was a total of 67 species (shorebirds and land birds) recorded during this survey period. Six species were added to our bird list as a result; Lesser Crested Tern, Little Grassbird, Orange Chat, Rufous Fieldwren, Black-faced Cuckoo-shrike, Red Knot and Pectoral Sandpiper. Faure has a notable absence of small insectivorous birds, such as White-winged Fairy-wren, Thick-billed Grasswren and thornbills that are found on the adjacent mainland.

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## OTHER MONITORING: VEGETATION

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There are 23 photographic monitoring points on Faure Island consisting of three Department of Agriculture Rangeland Monitoring Sites, which have a long monitoring history, and 20 sites established by AWC covering different habitats, disturbed areas, weeds and regeneration of vegetation such as sandalwood. These photographs are held by AWC. A field herbarium is currently being established and to date includes 169 species recorded and 36 complete specimens.

Eight fenced exclusion plots (each 20m x 20m) were established in 2009 to test the impacts of the translocated species (particularly Boodies) on the vegetation at Faure. These plots will form part of the overall ecological assessment of the island.

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## CONCLUSION

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Evidence suggests that populations of Boodies, Shark Bay Mice and Western Barred Bandicoots are healthy and increasing. Boodies are maintaining an above average weight (1512 grams at Faure and 1280grams at Bernier and Dorre' Islands) and numbers of new individuals are being captured. The health of the Banded Hare Wallaby population is less well understood due to trap-saturation by Boodies and individuals being trap-shy. The health of Greater Stick-nest Rat population is unknown. Data supports the suggestion that the island is an important area for migratory shore birds but lacking in some land bird functional groups. Reptile surveys are still uncovering new species and thus inventory will continue.

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