MT GIBSON WILDLIFE SANCTUARY ANNUAL REPORT 2009

INTRODUCTION

Mt Gibson Wildlife Sanctuary (130,500 ha) is located approximately 350 km north-east of Perth in the Avon Wheatbelt Bioregion and became an AWC property in 2001, The property is a pastoral lease in the semiarid (mean annual rainfall 332mm) transitional vegetation zone between two major bioregions; the arid Eremean botanical province to the north and the mesic south-west botanical province to the south. This results in high biological diversity, including 13 vegetation associations and 27 rare or priority flora.

Initial biological surveys were conducted in 2001 and since then management has focused on feral animal control, including reduction of sheep numbers, feral goat control, and an integrated control of cats, foxes and wild dogs as part of a CRC project with DEC and the Invasive Animal Cooperative Research Centre (IA CRC). The purpose of this report is to summarise monitoring and research activity undertaken on Mt Gibson Wildlife Sanctuary during 2009.

IA CRC PROJECT

In 2009, IA CRC predator transects were recorded in February, April, June and July 2009 (Figure 1). General seasonal trends were noted but for all species, activity was no greater than in previous years. Though this data provides some information about broad trends, it was decided that we would change to a new, expanded program for 2010. The aim will be to monitor predator and other feral animal tracks more frequently (every second month) and cover a larger proportion of the property to gain information about distribution also.

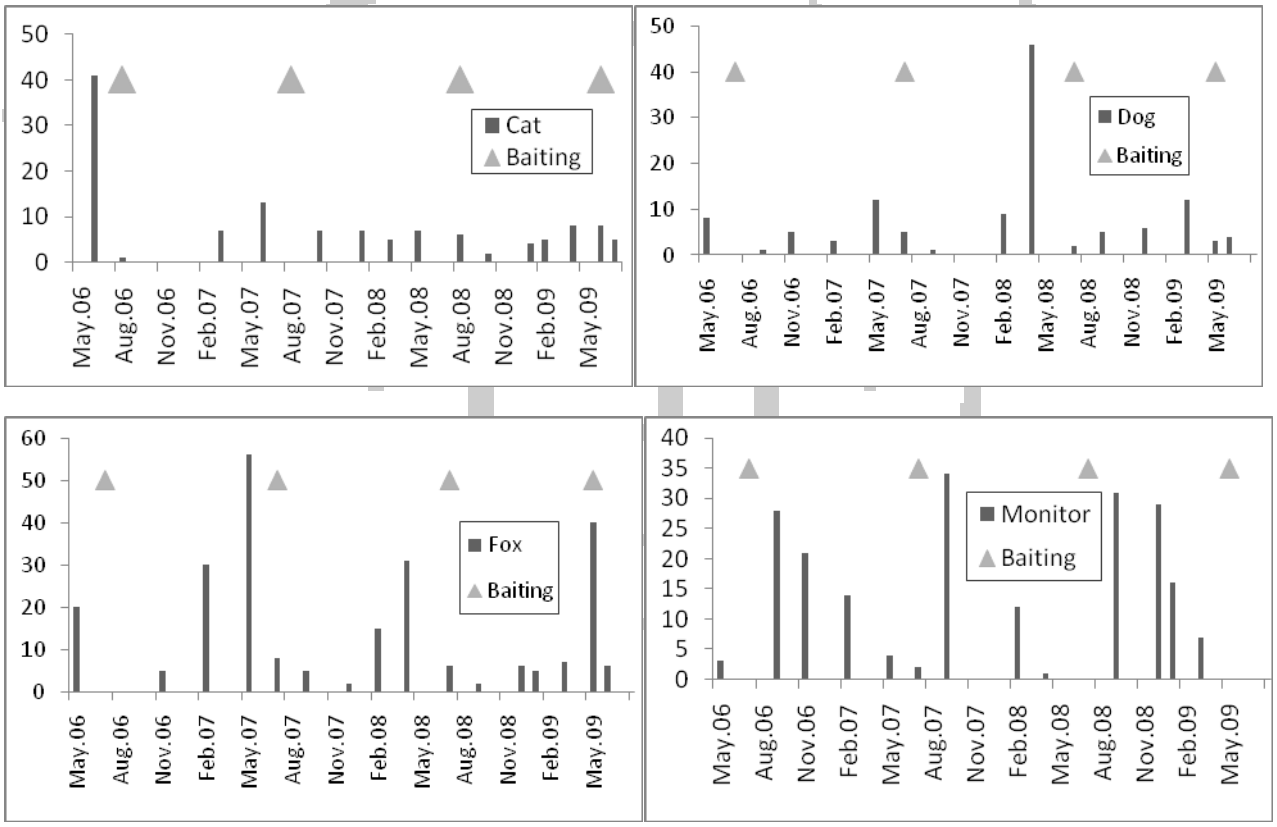

Figure 1. Total track counts for cats, dogs, foxes and goannas on Mt Gibson, and baiting events.

The last trapping session associated with the IA CRC project was conducted in 2008, so no further data was added during 2009. However, during November, a subset of the CRC pit sites and some existing 2001 pit sites were re-opened. The primary objective of this survey was for inventory, though we also tested new trapping techniques not employed at Mt Gibson previously, including the use of funnel and cage traps. A total of 18 sites were opened during November 2009. Each ~ ¼ ha site consisted of 4 – 8 pitfall buckets each with a single, 10 m long drift fence, each with a funnel trap on either side (total of 8 per site), 20 Elliot traps in a square around the perimeter and 4 cage traps (1 at each corner). Sites were divided into three groups of six and were left open for six consecutive mornings. Table 1 shows the species and numbers trapped. Also four new species were recorded on the sanctuary for the first time, *Pseudechis australis*, *Varanus panoptes rubidus*, *Ctenotus uber uber* and the highly endangered *Egernia stokesii badia*. Also *Lerista kingi* (previously *L. muelleri*) was confirmed since the taxonomic revision of the *Lerista muelleri* species complex in 2007.

Table 1: Summary of trapping results at Mt Gibson in 2009.

Species	**No. Trapped**
Pygopus nigriceps	3
Simoselaps bertholdi	2
Ctenotus schomburgkii	18
Ctenotus mimetes	47
Cryptoblepharus buchananii	2
Morethia butleri	5
Lerista gerrardii	7
Eremiascincus richardsonii	4
Demansia psammophis	2
Lerista kingi	1
Delma australis	1
Menetia greyii	3
Varanus caudilineatus	2
Ctenotus pantherinus	4
Ramphotyphlops hamatus	2
Gehyra variegata	7
Diplodactylus granariensis	2
Ctenophorus scutelatus	1
Ctenophorus cristatus	2
Pseudechis australis	1
Varanus gouldii	2
Strophurus assimilis	4
Ctenotus uber	1
Lucasium maini	1
Egernia stokesii	1
Egernia depressa	1
Pseudomys hermansbergensis	5
Sminthopsis dolichura	4
Mus mus	10
Crow	2
Total number of species	**29**

During the November surveys, a single Western Spiny-tailed Skink (*Egernia stokseii badia*) was captured. As well as being an addition to the species of Mt Gibson, this record is extremely significant as the subspecies in highly endangered and Mt Gibson represents a newly found population, up to 70 km from the closest known population. Clearing of habitat in the wheatbelt has reduced its distribution to less than half of its former range and to a handful of small bushland remnants. Both a live animal, active log pile and latrines with at least 3 scat sizes were found, coupled with the large, intact areas of Salmon and York Gum woodlands, this suggests that Mt Gibson may house of substantial and significant population of the endangered lizard. More extensive targeted searches are planned for 2010.

ADDITIONAL EVENTS & ACHIEVEMENTS

- A potential sighting of Chuditch (*Dasyurus geofroii*)
- A significant percentage of Mt Gibson was mapped and subsequently ground-truthed for vegetation and fire history
- Project numbat volunteers and AWC staff surveyed several areas for termite activity to predict suitability for re-introductions of Numbats
- BAWA visited Mt Gibson as part of an annual bird survey
- The SW Orchid Society visited for a weekend to find and identify the orchids of Mt Gibson
- A substantial number of opportunistic mallefowl sightings were made throughout the year, suggesting that the population of malleefowl is reasonable
- Old mallefowl mounds were re-visted, one of these was found to be active
- No major fires or storms
- Rare plant sites were visited and plans were negotiated to translocate some threatened plant species back into Mt Gibson
- Sarah Dalgleish (Edith Cowan University) completed an honours project titled 'Fuel Characteristics and Dynamics in Shrublands of the Transitional Rainfall Zone, WA', incorporating field sites on Mt Gibson.

CONCLUSION

Data collected in 2009 has provided us with greater insights to inform future approaches to integrated predator control strategies and improve monitoring techniques. The fauna surveys carried out in November 2009 indicate that the reptile diversity and species richness is quite high, and in the future we are hoping that combined results of the newly established predator tracks, improved fauna sampling techniques, proposed malleefowl monitoring coupled with concise vegetation and fire mapping will help to gain a much more conclusive results on the overall management. It was unfortunate to catch very little mammals during 2009, however, this may be a reflection of the time of year sampled. A targeted mammal survey in winter may provide more positive results. In 2010 we hope to increase the trapping efforts on Mt Gibson to better understand distribution, activity seasons and habitat use. In addition projects relating to Western Spiny-tailed Skinks, Malleefowl and fire regimes are planned for 2010.

FURTHER INFORMATION

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