

# Mt Gibson Endangered Wildlife Restoration Project



Numbat

W.Lawler

**The Mt Gibson Endangered Wildlife Restoration Project will provide a more secure future for more than 10% of Australia's threatened mammal species. By substantially increasing the population of nine threatened species, our investment at Mt Gibson will deliver a higher ecological "return" than any other mammal conservation project in Australia.**

### The mammal extinction crisis

Australia has the worst mammal extinction record in the world. Twenty two mammals have become extinct in the last 200 years. This represents around one third of the planet's mammal extinctions in that period. Our mammal extinction crisis is ongoing: around 20% of surviving mammal species are listed under federal legislation as being at risk of extinction.

All but one of the mammal extinctions in Australia have occurred in the arid or semi-arid zone. Almost all of the remaining small-medium sized mammal species in this zone have suffered massive range contractions and/or a catastrophic drop in population size. The Numbat, for example, has now disappeared from more than 90% of its original range.

The impact has been particularly severe in the wheatbelt region of south-western Australia – where Mt Gibson is located – which has lost 55% of its original mammal fauna. There are few areas on the planet that have lost such a high proportion of their original mammal species. In this region, and elsewhere across southern and central Australia, the factors propelling the wave of extinctions are feral predators (foxes and cats), feral herbivores (such as rabbits and goats) and habitat destruction.

### The strategy at Mt Gibson

At Mt Gibson, our key strategy is to establish a 6,000 hectare feral-free area – the largest such area on mainland Western Australia – into which at least nine threatened mammal species will be reintroduced. We believe this strategy will maximise the ecological returns (i.e. the recovery of mammals) for the proposed level of investment.

**The need for a feral-proof fence:** the complete exclusion of feral cats and foxes is necessary to ensure the long-term success of any reintroduction of small-medium sized mammals in the arid and semi-arid zone. However, there is currently no effective strategy for the landscape-scale eradication of foxes and cats. The only option is, therefore, the construction of a feral-proof fence. Feral-proof fences are successfully deployed by AWC at Scotia, Yookamurra and Karakamia – in fact, AWC manages more fox and cat-free land than any other organisation on mainland Australia. At Mt Gibson, a specially designed feral-proof fence – impenetrable to foxes, cats, rabbits and goats – will extend for 43 kilometres and enclose 6,000 hectares of diverse habitat.



Western Barred Bandicoot

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**Selecting the species to be reintroduced:** seventeen mammal species have disappeared from Mt Gibson and the surrounding wheatbelt region. Four of these species are extinct, while the

remainder survive only in remnant populations elsewhere (e.g. offshore islands). AWC plans to initially reintroduce 10 species at Mt Gibson, of which nine are threatened (see list below). A rigorous scientific process was used to select the species for reintroduction based on criteria such as conservation status, the area of suitable habitat on Mt Gibson, the level of competitive interaction between species, the availability of source populations and the contribution that Mt Gibson could make to the survival of the species.

Species name	Approx global population size (including other AWC sanctuaries)	Approx target Mt Gibson	Percentage increase in global population
Woylie	10,000	400	4%
Banded Hare-wallaby	8,000	900	11%
Greater Stick-nest Rat	3,000	1,200	40%
Bilby	10,000	600	6%
Numbat	750	250	33%
Western Barred Bandicoot	5,000	1,000	20%
Red-tailed Phascogale	3,000	400	13%
Shark Bay Mouse	6,000	2,000	33%
Chuditch	8,000	100	1%

**Identifying the area to be fenced:** we have selected a 6,000 hectare area of Mt Gibson that encloses the highest density of good quality habitat for the candidate species. In other words, we have identified the area of Mt Gibson which will maximise the "carrying capacity" for our candidate species. This process involved:

- The production of detailed habitat maps using aerial photography and ground-truthing to describe key habitat attributes (floristics, structure, ground-cover etc).
- The identification of critical habitat requirements for each candidate species and mapping where these requirements occurred at the highest quality.
- Overlaying the "habitat quality" maps for each species to find the area with the highest cumulative habitat quality score.

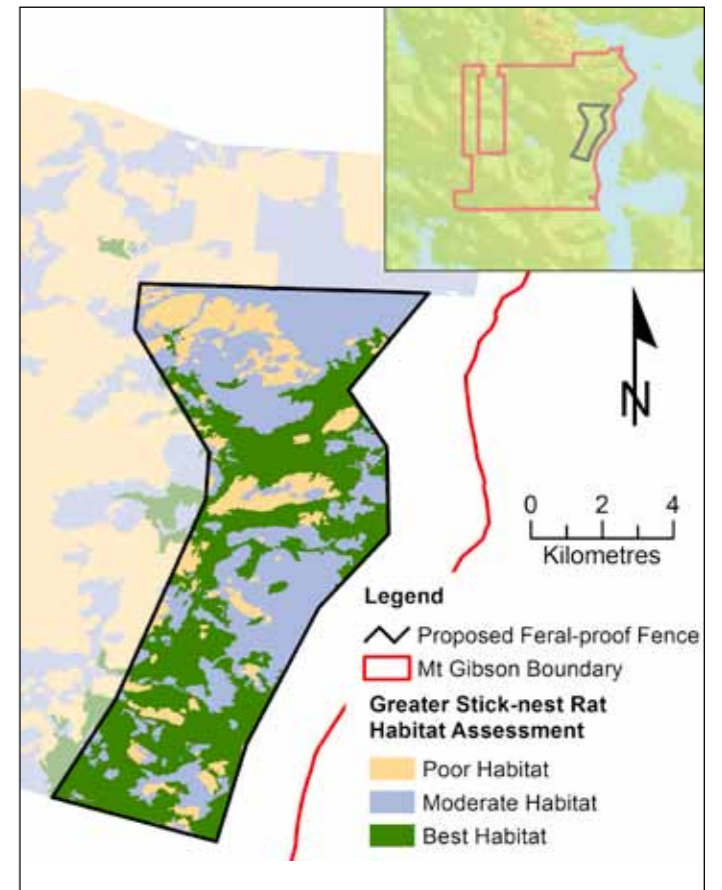
### The ecological return: increasing the population of 9 threatened mammals

The establishment of the largest feral-free area in Western Australia will require an initial investment of around \$2.5 million. However, the ecological return from this investment will be exceptional, *delivering a substantial increase in the global population of at least nine threatened species by 2017.* For example, we expect this single project to increase the total population of Greater Stick-nest Rats by 40%, the Numbat population by 33% and the Shark Bay Mouse population by 33%.



Mature salmon gum at Mt Gibson Wildlife Sanctuary

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Altogether, we expect the feral-free area to be home to more than 7,000 animals across the nine species. Mt Gibson, with an abundance of small-medium sized native mammals, will then resemble the Australian bush as it was 200 years ago, before feral cats and foxes decimated our native wildlife and rendered much of inland Australia "a marsupial ghost town".

We expect the removal of feral animals and the return of native digging mammals to also deliver broader ecological benefits including an increase in the richness and abundance of ground-dwelling birds (e.g. malleefowl) and an improvement in ecosystem processes such as nutrient and water retention.

### We need your help

Please make a tax deductible gift to help us establish the largest feral predator-free area in Western Australia and provide a more secure future for nine threatened mammal species. For information on how to donate, please see page 20 or the enclosed donation form.