

Fauna reconstruction in the WA rangelands.

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The arid rangeland areas of Australia have suffered a high rate of loss of mammal fauna in the past 200 years. Of the 85 species of terrestrial native mammals known to have once occurred in the arid zone, 11 are now extinct, another six are found only on offshore islands, and 16 are now severely restricted in their range. A program to reconstruct the native mammal fauna of the rangelands is underway on two former pastoral leases – Lorna Glen and Earraheedy – 1100 km north east of Perth. This is one of the ecologically integrated components of the Rangelands Restoration project, which aims to restore natural ecosystem function and biodiversity at a landscape scale.

Since acquisition of the properties by the WA Government in 2000 there has been control of introduced herbivores (camels and cattle), carnivores (cats and foxes) and implementation of ecologically appropriate fire regimes to maintain a diverse heterogenous landscape. We now aim to reintroduce 11 species of mammals, most of them threatened taxa, that were formerly present in this area, over an 11 year period. In 2007 and 2008 bilbies (*Macrotis lagotis*) and brushtail possums (*Trichosurus vulpecula*) were reintroduced and have successfully established at Lorna Glen. Mala (*Lagorchestes hirsutus*) were released in 2008 but did not establish due to predation by feral cats and native predators. A revised reintroduction strategy was developed and adopted in 2009 with the construction of an 1100 ha acclimatization pen and an expanded feral cat baiting program. In 2010 boodies (*Bettongia lesueur*) and golden bandicoots (*Isodon auratus*) were translocated from Barrow Island and released into the acclimatization pen. A PhD study is being undertaken on these to determine the role that disease, founder numbers and founder source have on the success of fauna translocations.

These reintroductions will improve the conservation status of arid zone mammals and, in doing so, return many important ecological functions such as soil cultivation through digging and burrowing, nutrient recycling, seed dispersal and grazing and browsing. This is the first time fauna reintroductions have been attempted in the WA rangelands without use of predator-proof fences.

Threatened Species Research Forum



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A Review of WA Government Research into Threatened Species