



Threatened Species Strategy Action Plan 2015-16 20 mammals by 2020

The Action Plan 2015-16 identifies 12 threatened mammals for action that will grow their populations. They were identified by the Office of the Threatened Species Commissioner in response to expert input and consultation with the scientific community, and through consideration against the principles for prioritisation in the Threatened Species Strategy.

The remaining eight mammals will be identified in one year through community consultation.

Mala

Listing status: Endangered

The mala is a small and highly susceptible marsupial that once occurred across most of Australia before the arrival of feral cats and foxes. It is now listed as endangered and limited to feral-free areas. While genetically similar to other small kangaroo-like marsupials, mala perform an important environmental function by assisting with composting and soil improvement.



Immediate actions for the mala are focused on captive populations, with a longer-term goal of release into the open landscape where feral predators are controlled. At present, recovery in feral-free areas is feasible with fenced areas having proven effective in avoiding the species' extinction. Parks Australia and the Australian Wildlife Conservancy are committed to mala conservation. Establishment costs for predator proof enclosures can be relatively high, but where the mala is paired with other species for conservation the economies of scale can reduce costs significantly. As a species present on a Commonwealth National Park, Uluru Kata Tjuta National Park, we are committed to demonstrating best-practice conservation for the mala.

Mountain pygmy-possum

Listing status: Endangered

The mountain pygmy-possum is a very small and charismatic endangered possum endemic to the snow-covered alpine regions of Victoria and New South Wales. Mountain pygmy-possums are an important part of the conservation story in alpine regions and used as a flagship by national parks services.



Acting to reduce the threat of feral cats is likely to have significant measurable benefits for mountain pygmy-possums. In addition, improving their genetic resilience, through gene-pool widening, will help the species adapt to a changing climate. Climate change is a major threat to the possum because as their habitat changes, hibernation patterns alter and food sources become scarcer. As the possums are forced to spend more time foraging in the open, the hunting efficiency of feral cats increases.

Reducing feral cat numbers in mountain pygmy-possum habitat is likely to have a more immediate effect than other actions. Feral cat control will also have an umbrella effect by helping other species that share the same habitat, like the Koonoom, or smoky mouse, (endangered) and the broad-toothed rat (vulnerable in NSW).

Partnerships between the Australian Government, state governments, ski resorts and the university sector are in place and critical to recovery. Work to broaden the gene pool and prevent inbreeding is being driven by best practice science. On ground actions to tackle feral cats connects the efforts of partners with opportunities in government programmes.

Greater bilby

Listing status: Vulnerable

The greater bilby is one of Australia's most iconic yet threatened marsupial species. The Australian community has a strong cultural connection to this vulnerable species and it plays a crucial role in the environment by helping to improve soil quality and water retention.



Like all small mammals in Australia, a key threat to the bilby's survival is predation by feral cats and foxes. Wild bilby populations persist in the Northern Territory and Western Australia, while the population in Queensland appears to be under increased pressure. Feral-free exclosures and management of fire regimes have been shown to work; when feral cats are removed, bilbies thrive. Exclosure fencing can have relatively high infrastructure costs, but the need for a secure insurance population is high. Over the longer-term, landscape level feral cat management will allow for releases of fenced populations back into the wild.

Community support and partnerships to save the bilby are strong, with involvement of conservation organisations, zoos, wildlife parks, the Save the Bilby Foundation, state and Australian governments and the community. Further assistance through improving habitat quality and feral cat management can be supported through the National Landcare Programme and Green Army, and scientific knowledge and understanding of recovery can be boosted via the National Environmental Science Programme.

Golden bandicoot

Listing status: Vulnerable

The golden bandicoot is one of two bandicoots included in the initial list of priority mammals. Golden bandicoots are severely affected by feral cat predation with ongoing declines on the mainland, compared to the relative stability of close relative populations on our islands.



Considered to have high uniqueness by the *Action Plan for Australian Mammals 2012*, golden bandicoots also have strong relevance to Indigenous and non-Indigenous communities.

With predation by feral cats a key driver of declines, reducing this threat across the landscape as well as completely removing the threat among insurance populations in fenced areas has a high chance of recovery success. Landscape feral cat management will also help the species with which the golden bandicoot shares habitat, including the northern quoll (endangered), partridge pigeon (vulnerable), koorrawal, or golden-backed tree-rat, (vulnerable) and the black-flanked rock-wallaby (vulnerable).

Existing actions are leveraging additional investment, while connection with the National Landcare Programme, Green Army and Indigenous Ranger Groups can boost partnerships further. In addition, Australian Wildlife Conservancy and Western Australian Department of Parks and Wildlife commitment to this species bodes well for sustained protection and recovery.

Numbat

Listing status: Vulnerable

The numbat is an iconic small mammal severely affected by invasive predators (foxes and feral cats). Officially listed as vulnerable, numbat numbers in the wild have been experiencing long-term decline. Numbats are highly unique according to the *Action Plan for Australian Mammals 2012* and are broadly known and loved in the community.



Releases of numbats into the open landscape have proven difficult, with persistent predation reducing success. But with an active breeding population at Perth Zoo, successful recovery in feral-free enclosures, motivated community groups like 'Project Numbat', and ongoing fox and feral cat baiting, success is possible. In the short-term, increased investment through feral enclosures will increase the chance of reversing the species' trajectory. Landscape feral cat management will help other species that share the same habitat.

Building and leveraging existing involvement of the Western Australian Government and community interest will help to deliver value for money, especially when linked to greater effort through the National Landcare Programme and Green Army.

Brush-tailed rabbit-rat

Listing status: Vulnerable

With a distribution across monsoonal Northern Australia, the brush-tailed rabbit-rat is most notable for its large eyes and long and tufted tail. The existing Australian population is considered highly unique by the *Action Plan for Australian Mammals 2012*. The species is known as 'pakooma' by some Indigenous groups.

A long breeding season and multiple litters per year mean rapid recovery is achievable if the key threats can be mitigated. Threats to the species include inappropriate fire regimes, habitat loss, invasive herbivores and feral cats. Managing these threats in the open landscape will have an umbrella effect, by supporting the threatened partridge pigeon, masked owl, golden-backed tree-rat, Butler's dunnart, yellow-snouted gecko, northern quoll, golden bandicoot and Gouldian finch that share the same habitat.

Partnerships with state governments and conservation groups will leverage investment in the species. The species occurs across the Northern Territory, Rangelands (WA) and Southern Gulf (Qld) Natural Resource Management Regions; partnering with these groups through the National Landcare Programme and Green Army can also help to deliver positive outcomes for brush-tailed rabbit-rats.



Eastern bettong

Listing status: Extinct on the mainland

Once a familiar sight across south eastern Australia, this small kangaroo-like marsupial is now highly threatened by feral cats and foxes. It was driven to extinction on the mainland but has survived in Tasmania due to the absence of foxes there.



Small numbers of the species have been reintroduced to the mainland at Mulligan's Flat feral-free area on the outskirts of Canberra. Comprehensive reintroduction to the mainland can help fulfil an important ecosystem function—eastern bettongs' scratching and foraging improves water retention in the soil, increases composting and supports the threatened box gum woodlands that it resides in. Reintroductions can also create an insurance against losses in Tasmania, identified in the *Action Plan for Australian Mammals 2012*.

Success is possible with establishment of populations in feral-free enclosures before release of animals into the landscape, in tandem with intensive control of threats like foxes and feral cats. There will be benefits to other threatened species that share the same habitat, and the box gum woodland ecological community in which they live.

Partnerships for eastern bettongs are established and leverage philanthropic funding. Community groups are engaged and Australian Government programmes such as the Green Army are already supporting the recovery of the eastern bettong and can be expanded further.

Western quoll

Listing status: Vulnerable

Western quolls previously occupied nearly 70 per cent of Australia, occurring in every state and territory. Today, they are found only in south-west Western Australia and in insurance populations, including a recently reintroduced population in the Flinders Ranges, South Australia.



The western quoll is one of Australia's native predators and is important for rebalancing local ecosystems in favour of native species. For this reason, actions to protect the species have an umbrella effect and improve ecosystem function for the benefit of native species.

A key threat to the survival of the western quoll is predation by feral cats and foxes. Intensive feral cat and fox management has been proven to support quoll recovery. Reintroduction efforts such as those in the Flinders Ranges have potential for expansion through partnerships that draw on the National Landcare Programme and the Green Army.

Community support and existing action for the western quoll is robust, with engagement from state and the Australian government and strong potential for more philanthropic and corporate investment. Non-government organisations and the Indigenous community are involved and actively support recovery actions for the western quoll.

Kangaroo Island dunnart

Listing status: Endangered

The Kangaroo Island dunnart is loved by the locals as the island's only endemic mammal and is a flagship for ecosystem health on Kangaroo Island. Major threats to the species include predation by feral cats, wildfire and inappropriate fire regimes, and reduced food supply due to plant death.



Actions to address these threats will not only protect the dunnart, but also offer protection to other species that share the ecosystem, and improve ecosystem health overall.

Bold and united action has begun on Kangaroo Island to eradicate feral cats and contribute to the protection and recovery of the Kangaroo Island dunnart. The local council, NRM body, farmers and the broader local community are strongly engaged. Strong partnership potential and local community participation boosts the likelihood of success for the species and the potential for enduring outcomes. Positive links with the National Landcare Programme, Green Army and existing Australian Government programme investments increase likelihood of success.

Eastern barred bandicoot

Listing status: Endangered on the mainland

The eastern barred bandicoot is the second bandicoot included in this priority list. Once distributed across the south eastern corner of Australia, eastern barred bandicoots are now considered endangered on the mainland. The eastern barred bandicoot has high genetic distinctiveness according to the *Action Plan for Australian Mammals 2012*; there is also an increasing community awareness of the need to protect the species.



Like so many of Australia's small mammals, key threats include predation by red foxes and feral cats. Risks from disease and habitat loss are also significant. Establishment of insurance populations has proven to be successful and further intensive management of captive populations before release into the landscape, in tandem with intensive feral animal control, is likely to improve the trajectory of the species. Landscape management of feral predators, including eradication from enclosures and islands, as well as use of innovative measures such as guardian dogs to protect the species from feral cats in the wild, will also benefit other mammals, birds and insects that share the same habitat.

Strong involvement in recovery by community groups, state governments and the zoo sector increases the likelihood of long-term success and leverages funding from multiple sources that can complement National Landcare Programme and Green Army support.

Central rock-rat – emergency intervention

Listing status: Endangered

Expert ecologists have raised concerns that the central rock-rat is at risk of extinction, with significant recent declines and only two known locations of the species in the West MacDonnell Ranges.

Known as an 'Antina' in the local Indigenous language, without early and immediate intervention this species could easily become extinct.



Threats to the central rock-rat include inappropriate fire, feral cats and foxes, invasive herbivores and exotic grasses. By controlling these threats in the landscape with experimental aerial baiting and more intensive landscape manipulation we can improve the chance of central rock-rats surviving in the wild. Further, by taking some into captivity and developing breeding programmes in feral-free exclosures, we will be able to establish an insurance population.

Scientific experts, the Northern Territory Government and land managers are joining with the Australian Government to take emergency actions for the central rock-rat.

Leadbeater's Possum – emergency intervention

Listing status: Critically Endangered

The Leadbeater's possum is a charismatic and iconic Australian possum and the faunal emblem of Victoria.

After carefully considering the advice of the independent Threatened Species Scientific Committee and submissions from experts and the community, Minister Hunt decided in April 2015 to uplist the Leadbeater's possum to critically endangered.



Leadbeater's possums have very specific habitat requirements to survive and flourish. Sadly, almost half of the possum's ideal habitat—the old-growth mountain ash forest in the Central Highlands of Victoria—was burnt in the 2009 bushfires. The challenges facing this iconic species are significant. It has undergone very severe population declines in recent decades with numbers having decreased by more than 80 per cent since the mid 1980s.

The Australian Government will be working closely with the Victorian Government to find a solution which will help save the possum for future generations. The Department is working with Victoria to commence a review and update of the possum's Recovery Plan.

Partnerships are in place and can be built upon. The Australian Government is supporting Zoos Victoria to create new habitat for the possum and the National Environmental Science Programme Threatened Species Recovery Hub will be testing and exploring options to recover the species.

Protecting Leadbeater's possums will also support other threatened species that share the same habitat.

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Golden bandicoot: R Knowles, Australian Wildlife Conservancy

Numbat: Alexander Dudley, Yookamurra Sanctuary

Brush-tailed rabbit-rat: Hugh Davies, Melbourne University

Eastern bettong: Mulligan's Flat Wildlife Sanctuary

Western quoll: Todd R Soderquist

Kangaroo Island dunnart: DEWNR Kangaroo Island

Eastern barred bandicoot: Victorian Department of Environment,
Land, Water and Planning

Central rock-rat: Alex James

Leadbeater's possum: Zoos Victoria