

Threatened species of the Northern Territory

Greater bilby

Macrotis lagotis

Conservation status

Australia: Vulnerable

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976

Description

The Greater Bilby is a medium-sized marsupial, weighing between 600 g and 2.5 kg. Their soft silky fur is mostly blue-grey above, while the underside is white to cream. The long tail, which has a distinct dorsal crest, is black in the middle and white terminally. The robust forelimbs have three stoutly clawed toes and two clawless toes. The long slender hind limbs resemble those of macropods. The snout is long and delicate and the ears are large and rabbit-like.

Distribution

The Greater Bilby once occurred widely across Australia, primarily in arid and semi-arid regions, but declined dramatically following European settlement, disappearing from 80% of its former range. It is now restricted to the western deserts region of the Northern Territory (NT) and Western Australia and in the channel country of south-western Queensland¹.

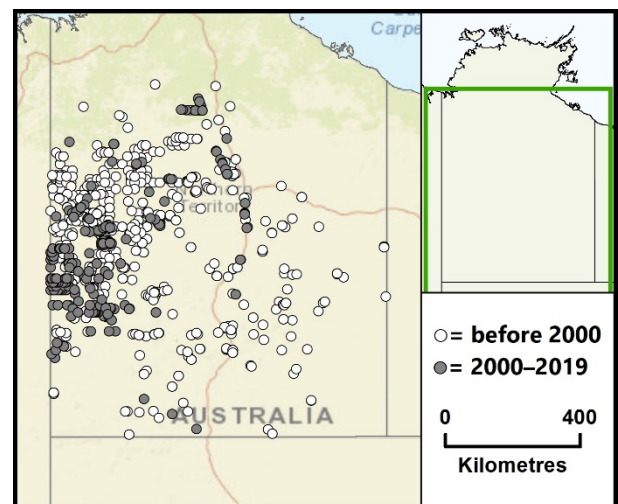
In the NT, the Greater Bilby has a highly fragmented distribution across the central and western parts of the Tanami, the southern Sturt Plateau and northern Great Sandy Desert bioregions.



Credit: W. Lawler/Australian Wildlife Conservancy

The southern boundary of this distribution has shifted north by >200 km since the 1960s.

NT conservation reserves where reported:
Formerly occurred in areas that are now included within Uluru-Kata Tjuta National Park, Watarrka National Park and Tjoritja/West MacDonnell National Park.



Caption: Known localities of the Greater Bilby in the NT (nrmaps.nt.gov.au)

Ecology and life-history

The Greater Bilby now occurs primarily in open tussock grasslands, Mulga *Acacia aneura* woodlands and shrublands (including mixed associations with Witchetty Bush *A. kempeana*), and hummock grasslands. These habitats occur on a variety of landforms, including uplands, rises, sand plains, dunes, drainage systems and other alluvial areas²⁻³.

The Greater Bilby is omnivorous and has a variable diet. Termites, beetles, insect larvae and spiders are the most commonly eaten animals. Important plant foods include bulbs and seeds of grasses and sedges⁴. Fungi are also frequently consumed. Food items are obtained from the ground surface or by digging.

The Greater Bilby is nocturnal and dig burrows up to three metres long, where they shelter during the day. An individual may have over a dozen regularly used burrows within its home range.

Litters comprise one to three young and can be produced at any time of year. Under ideal conditions, females can produce four litters within a year. Generation length is estimated to be 4 years³.

Threatening processes

A wide range of threats are responsible for historical and ongoing declines of the Greater Bilby⁵⁻⁶. However, the impacts of these threats vary across the distribution of the species. The most significant threats in the NT are extensive and intense fires, which remove vegetation cover and food resources from large areas, and removal of vegetative cover and soil compaction by livestock and feral ungulates.

Additional threats to the species are: predation by the introduced Red Fox *Vulpes vulpes* (particularly in southern areas) and feral Cat *Felis catus* (particularly in Queensland); habitat loss and degradation due to the intensification of agriculture and pastoralism and from mining operations; and competition with European Rabbits *Oryctolagus cuniculus*, which also support higher densities of introduced predators.

Conservation objectives and management

Conservation objectives and management priorities for the Greater Bilby are to: maintain or expand the current distribution; implement landscape-scale control of introduced predators at key sites; maintain or increase the number of insurance populations on islands and within mainland fenced areas where introduced predators are absent; define and promote appropriate region-specific fire management; manage densities of introduced herbivores to mitigate their negative impact on habitat quality; and develop and implement a national monitoring program⁶.

References

- ¹ Southgate, R.I., 1990. Distribution and abundance of the greater bilby *Macrotis lagotis* Reid (Marsupialia: Peramelidae), in: Seebeck, J.H., Brown, P.R., Wallis, R.L., Kemper, C.M. (Eds.), Bandicoots and bilbies. Surrey Beatty & Sons, Sydney, pp 293–302.
- ² Southgate, R.I., 1990. Habitat and diet of the greater bilby *Macrotis lagotis* Reid (Marsupialia: Peramelidae), in: Seebeck, J.H., Brown, P.R., Wallis, R.L., Kemper, C.M. (Eds.), Bandicoots and bilbies. Surrey Beatty & Sons, Sydney, pp 303–309.
- ³ Woinarski, J.C.Z., Burbidge, A., Harrison, P., 2014. The Action Plan for Australian Mammals 2012. CSIRO Publishing, Canberra.
- ⁴ Southgate, R., Carthew, S.M., 2006. Diet of the bilby (*Macrotis lagotis*) in relation to substrate, fire and rainfall characteristics in the Tanami Desert. *Wildl. Res.* 33, 507–519.
- ⁵ Bradley, K., Lees, C., Lundie-Jenkins, G., Copley, P., Paltridge, R., Dziminski, M., Southgate, R., Nally, S., Kemp L., (Eds.) 2015. 2015 Greater Bilby Conservation Summit and Interim Conservation Plan: an Initiative of the Save the Bilby Fund. IUCN SSC Conservation Breeding Specialist Group, Apple Valley, MN.
- ⁶ Threatened Species Scientific Committee, 2016. Conservation Advice *Macrotis lagotis* Greater Bilby. Department of the Environment, Canberra.