Department of Biodiversity, Conservation and Attractions

GOVERNMENT OF WESTERN AUSTRALIA

FAUNA PROFILE

Bilby *Macrotis lagotis*

Conservation Status: Vulnerable

Identification

Photo: Save the Bilby Fund

The bilby *Macrotis lagotis* is a type of bandicoot characterised by its distinct rabbit-like ears and long face with a pointed snout. The bilby has long, silky blue-grey fur and a long tail that is black with a white tip. The tail has a distinctive crest along its length. It is light and delicate in build, but with strongly clawed toes used for digging burrows and extracting food from the soil. Males can be differentiated from females based on their size, because they can be up to double the body mass, have longer canines and have a noticeably larger forehead than females.

Head and Body Length: 30-55cm (male) and 29-39cm (female)
Tail Length: 20-29cm (male) and 20-27cm (female)
Weight: maximum 2.5kg (male) and 1.1kg (female)

Taxonomy

Family: Thylacomydidae
Genus: *Macrotis*
Species: *lagotis*
Other common names: greater bilby, Dalgyte, Ninu

Distribution and Habitat

The bilby used to exist across most of the arid and semi-arid areas of mainland Australia. The species became extinct in New South Wales and southern South Australia sometime in the 1940s-1950s, and its distribution in Queensland, Northern Territory and Western Australia continued to contract northward. In Western Australia, the bilby is now largely restricted to the Gibson, Little Sandy and Great Sandy Deserts, and parts of the Pilbara, Dampierland, Central Kimberley and Ord-Victoria Plains bioregions. It also occurs across to the Tanami Desert in the Northern Territory, and there are disjunct subpopulations in Queensland.

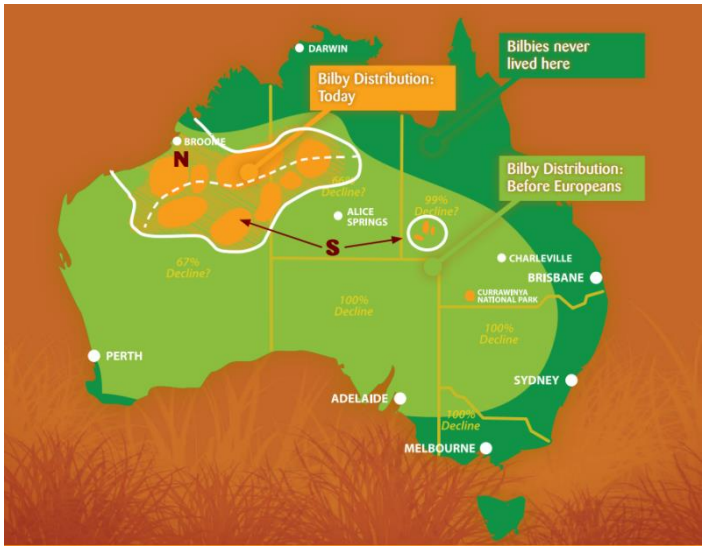

Illustration of bilby distribution and the North (N) and South (S) portioning of ecological and land-use threats (Bradley *et. al.* ,2015*)*

The bilby continues to occupy a wide range of vegetation types, with the major vegetation types defined as:

- open tussock grassland on uplands and hills,
- mulga woodland/shrubland growing on ridges and rises, and
- hummock grassland (spinifex) growing on sandplains and dunes, drainage systems, salt lake systems and other alluvial areas.

For further information regarding the species distribution, please refer to www.naturemap.dpaw.wa.gov.au.

Community Involvement

If you think you have seen a bilby, fill out a fauna report form and send it to the Department's Species and Communities Branch at fauna@dbca.wa.gov.au. The Department keeps track of the distributions of threatened species to help monitor population trends and inform management decisions.

The Department runs a variety of volunteer projects across WA including scientific research, community education and manual labour. Further information about these opportunities can be found on the Department's webpage.

Biology and Behaviour

Bilbies are solitary, nocturnal animals, and they are the only bandicoot that dig and use burrows. The burrows descend in a spiral up to 3m deep. Some can be complex systems with multiple entrances and interconnecting burrows. Bilbies use the burrows for shelter during daylight and intermittently at night for refuge. Bilbies have been recorded using up to 12 burrows within their home range. Short term home range size varies between 0.1-3km^2.

Bilbies emerge from their burrows after twilight, and they spend the majority of the night foraging. They are omnivorous, eating a wide range of plant foods (grass and sedge seeds, bush onion bulbs) and invertebrates (termites, ants, beetles, insect larvae, spiders). Like other bandicoots, bilbies dig holes in the soil to expose plant roots, bulbs and fungi, and penetrate termite galleries and ant nests.

Bilbies have a polygamous mating system, where a male mates with multiple females. Depending on seasonal conditions and food availability, bilbies can breed all year round, producing up to four litters a year. Litter size is between 1-3 young, which remain in the pouch for approximately 75 days. They are then left in a maternal burrow for an additional 2 weeks before they are weaned. Females begin breeding from 5 months and males from 8 months. Bilbies have been recorded living up to 10 years.

Conservation Status

The bilby is recognised as a threatened species under State and Commonwealth legislation. In Western Australia the species is listed as fauna that is 'likely to become extinct' in the wild (Specially Protected) under the *Wildlife Conservation Act 1950* and has been assigned the threat status ranking of Vulnerable using International Union for Conservation of Nature (IUCN) criteria. Nationally the species is also listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

The species has been declining dramatically across Australia since European settlement. Predation by foxes, feral cat and wild dogs is considered to be the main cause of this ongoing decline. Other threats include:

- Competition with and habitat degradation by introduced herbivores (rabbits, cattle, camel);
- Inappropriate fire regimes;
- Climate change leading to a drier climate;
- Habitat loss and degradation due to mining and other developments; and
- Road mortality.

Management

Recovery Plan

A national recovery plan has been produced for the numbat, and it outlines the recovery actions required to improve the species' conservation status. Recommended recovery actions from this plan include:

- Assess and reduce the impact of predators, fire and other threatening processes.
- Maintain genetic diversity.
- Conduct reintroductions within the species' former range.
- Monitor trends in occurrence and abundance.
- Raise community awareness and involve stakeholders in the recovery process.

Existing Conservation Measures

In 2015, a Greater Bilby Recovery Summit was held to discuss the future of bilby conservation, bringing together experts and various stakeholder groups. The National Bilby Recovery Team, with membership including the

Department of Biodiversity, Conservation and Attractions, was re-established in 2016 to guide the recovery actions undertaken for bilby conservation.

The Department is the key agent undertaking research on the bilby in Western Australia, with a focus on improving ecological and distributional information to inform adaptive management practices. The Pilbara bilby research program, funded by environmental offsets derived from resource development, is supported by several mining companies, environmental consultancies, CSIRO and traditional owner groups. A coordinated Kimberley bilby program is being established, and will build on the existing work of WWF, Environs Kimberly, Rangelands NRM, Kimberley Land Council and traditional owner groups. The focus of both programs is surveys and population monitoring and adaptive threat abatement activities at a landscape scale.

The Department's Western Shield program undertakes fox control and additional feral cat control at some sites in Western Australia.

Successful reintroductions have been undertaken in SA, NSW, WA and QLD, including into fenced enclosures and onto islands. A national captive breeding program, as part of a Zoo and Aquarium Association conservation program, has been running since 1995.

Save the Bilby Fund is a national charity that raises funds, engages in captive breeding for reintroductions, and educates and raises awareness across the community.

Citation

Department of Biodiversity, Conservation and Attractions. (2017). *Fauna Profile - Bilby Macrotis lagotis.* Retrieved from http://www.dbca.wa.gov.au/

Key References and Further Reading

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