

Threatened species of the Northern Territory

Brush-tailed bettong

Bettongia penicillata

Conservation status

Australia: Endangered (*B. p. ogilbyi*)

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Endangered (Extinct in the NT)

Territory Parks and Wildlife Conservation Act 1976

Description

The Brush-tailed Bettong is a small macropod with an adult body mass typically between 0.75 and 1.8 kg. It is grey to grey-brown above and pale grey to whitish below. The long tail is well-furred, with a black dorsal crest that becomes more prominent towards the tip of the tail.

Two subspecies have been described; though their validity remains to be confirmed¹. *Bettongia penicillata penicillata* purportedly differs from *B. p. ogilbyi* in having proportionately shorter, less slender and paler hindfeet, shorter ears, and paler and denser fur on the underside of the tail². Such observed differences could be attributable to individual or clinal variation³.

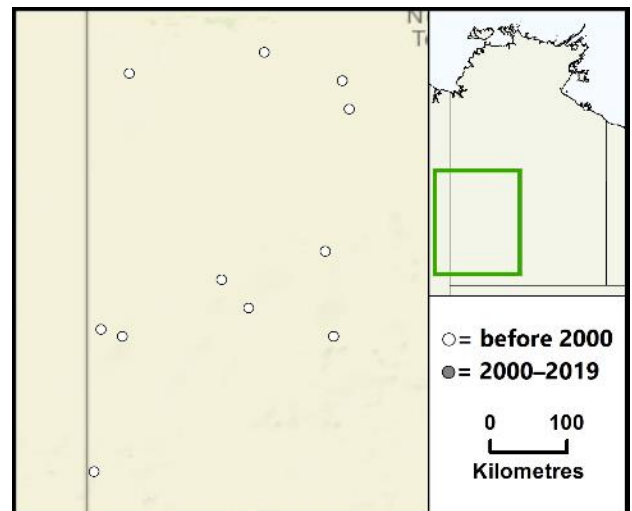
Distribution

The Brush-tailed Bettong formerly occurred across most of New South Wales and Victoria through to southern South Australia (*B. p. penicillata*), and in south-western Australia (*B. p. ogilbyi*). It was also widely distributed in the central and western deserts— including the south-western Northern Territory⁴⁻⁵.



Credit: P. Nunn/Alice Springs Desert Park

However, the extent of its distribution in these deserts is unclear, since some of the oral history records of Aboriginal people may refer to the Desert Bettong *B. anhydra*¹. This species is known from only two skulls from south-western NT and the Nullarbor Plain. Its external appearance, and therefore whether it was similar to that of the Brush-tailed Bettong, is unknown.



Caption: Known localities of the Brush-tailed Bettong in the NT (nrmmaps.nt.gov.au)

The distribution of the Brush-tailed Bettong declined dramatically following European settlement. By the 1970s, it remained only in four subpopulations in south-western Western Australia. Additional subpopulations have been

established through translocations to Western Australia, South Australia and New South Wales and islands off the South Australian coast.

NT conservation reserves where reported: None

Ecology and life-history

Brush-tailed Bettongs formerly inhabited a wide range of habitats from desert spinifex grasslands to sclerophyll forests. Remnant subpopulations in south-western Western Australia inhabit woodlands and adjacent heaths with a dense understorey of shrubs. Underground fungi form a significant component of the diet, but the species also consumes tubers, bulbs and seeds.

During the day, Brush-tailed Bettongs shelter in grass-lined nests in grass tussocks and hummocks or other concealing vegetation. They use their prehensile (adapted for grasping) tail to carry nesting material to their nest. The Brush-tailed Bettong is solitary and can breed continuously throughout the year. Females typically produce a single young at a time, and can rear up to three young per year. Generation length is estimated to be 3–5 years¹.

Threatening processes

Predation by Red Foxes *Vulpes vulpes* and feral Cats *Felis catus* is considered to be the major cause of mortality of the species in Western Australia today. This, in concert with habitat degradation and altered fire regimes, presumably led to the extinction of the species across most of its once extensive range.

Conservation objectives and management

As the species is presumed extinct in the NT, there are currently no conservation objectives for the Brush-tailed Bettong in the NT.

Elsewhere in Australia, priority conservation objectives include: controlling Red Foxes and feral Cats in occupied habitat; improving understanding of the causes of decline and lack of recovery; managing and monitoring wild and reintroduced subpopulations; and continuing to

manage insurance populations and undertaking targeted wild-to-wild translocation programs⁶.

References

- ¹ Woinarski, J.C.Z., Burbidge, A., Harrison, P., 2014. The Action Plan for Australian Mammals 2012. CSIRO Publishing, Canberra.
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- ⁴ Burbidge, A.A., Johnson, K.A., Fuller, P.F., Southgate, R.I. 1988. Aboriginal knowledge of animals of the central deserts of Australia. Aust. Wildl. Res. 15, 9–39.
- ⁵ Finlayson, H. H., 1958. On central Australian mammals. Part III. The Potoroinae. Rec. South Aust. Mus. 13, 235–302.
- ⁶ Threatened Species Scientific Committee, 2018. Conservation Advice *Bettongia penicillata* Woylie. Department of the Environment, Canberra.