

# Threatened species of the Northern Territory

## Burrowing bettong (inland)

### *Bettongia lesueur graii*

#### Conservation status

##### Australia: Extinct

Environment Protection and Biodiversity Conservation Act 1999

##### Northern Territory: Extinct

Territory Parks and Wildlife Conservation Act 1976

#### Description

The Burrowing Bettong is a small, stocky macropod (body mass 0.9-1.6 kg) with a short blunt head and relatively small rounded ears. It is yellow-grey above and paler grey below. The ears are short and rounded. The tail is relatively robust and used for storing fat reserves. In some individuals the tail has a distinctive white tip.

#### Distribution

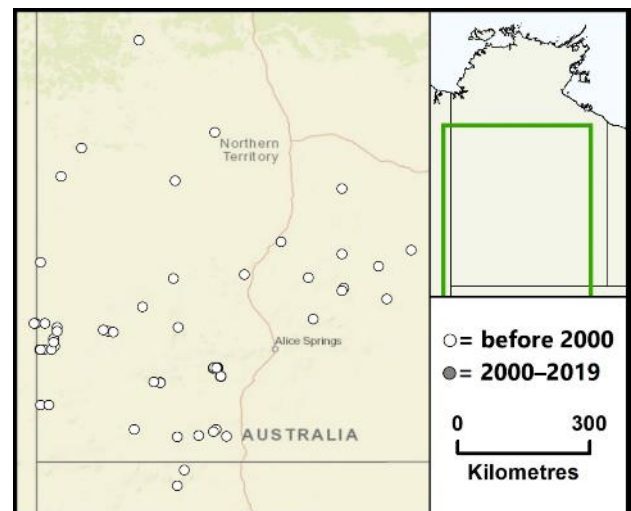
The mainland subspecies of the Burrowing Bettong was one of the most widely distributed native Australian mammal. It occurred over most of Western Australia (with the exception of the north Kimberley) and South Australia and in western New South Wales and the Victorian mallee<sup>1-2</sup>. In the Northern Territory (NT), the Burrowing Bettong occurred extensively in the dune and sandplain deserts of the southern arid region<sup>3</sup>.

Early naturalists noted that the Burrowing Bettong was common and, in many areas, the most abundant mammal<sup>4</sup>; though abundance fluctuated locally<sup>2</sup>, presumably in response to environmental conditions.



Credit: P. Nunn/Alice Springs Desert Park  
Caption: The animals pictured belong to the subspecies *Bettongia lesueur lesueur*

The mainland subspecies is now extinct, but two subspecies still occur on islands off the coast of Western Australia. An unnamed subspecies occurs on Boodie and Barrow Islands off the Pilbara coast, while the much larger *Bettongia lesueur lesueur* occurs on Bernier and Dorre Islands off Shark Bay. Both these subspecies are listed nationally as vulnerable.



Caption: Known localities of the Burrowing Bettong in the NT ([nrmmaps.nt.gov.au](http://nrmmaps.nt.gov.au))

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

## Ecology and life-history

In arid and semi-arid NT, the Burrowing Bettong occurred in a broad range of habitats, except for rocky hills and ranges<sup>1,4</sup>. It was strictly nocturnal and gregarious. The diet in central Australia comprised leaves, seeds, fruits, bulbs and tubers<sup>1,4</sup>, and probably also included invertebrates. Breeding could occur throughout most of the year, with females carrying pouch young observed in the middle of both summer and winter<sup>4</sup>.

The Burrowing Bettong's habitual construction of burrows used for shelter during the day is unique among macropods<sup>4</sup>. The extensive and distinctive warrens constructed by the subspecies can still be found in central Australia, particularly in calcareous country, where excavated stones and gravels form mounds around the entrance of long-abandoned warrens. These warrens created habitat for other animals, including the Western Quoll *Dasyurus geoffroii* and Common Brushtail Possum *Trichosurus vulpecula*<sup>1</sup>.

## Threatening processes

The disappearance of the Burrowing Bettong from central and Western Australia coincided with the expansion of pastoralism and the establishment of the Red Fox *Vulpes vulpes* and the feral Cat *Felis catus*<sup>4</sup>. The subspecies was probably not seriously affected by European Rabbits *Oryctolagus cuniculus*; indeed, both species sometimes shared warrens<sup>1,4</sup>.

## Conservation assessment

The decline of the Burrowing Bettong on the mainland commenced in the nineteenth century. It disappeared from Victoria in the 1860s, but persisted in the central and western deserts until the mid-1900s<sup>1</sup>. No authenticated records of the species have been collected within the NT since the 1930s<sup>3</sup>, and the Burrowing Bettong is

presumed to have become extinct in the NT by the 1960s<sup>2-3</sup>.

## Conservation objectives and management

There are no conservation objectives or management for this subspecies, as it is presumed to be extinct.

Subpopulations of the Bernier and Dorre Islands subspecies of the Burrowing Bettong have been established in feral-predator-free reserves on the mainland, in Western Australia, South Australia and New South Wales<sup>5</sup>. Additionally, a subpopulation in Western Australia was established by mixing individuals of the two extant subspecies<sup>6</sup>.

## References

- <sup>1</sup> 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.
- <sup>2</sup> Finlayson, H.H., 1961. On central Australian mammals, Part IV. The distribution and status of central Australian species. Rec. South Aust. Mus. 41, 141-191.
- <sup>3</sup> Parker, S.A., 1973. An annotated checklist of the native land mammals of the Northern Territory. Rec. South Aust. Mus. 16, 1-57.
- <sup>4</sup> Finlayson, H.H., 1958. On central Australian mammals, Part III. The Potoroinae. Rec. South Aust. Mus. 13, 235-307.
- <sup>5</sup> Richards, J.D., 2012. Western Barred Bandicoot, Burrowing Bettong and Banded Hare-wallaby Recovery Plan. Department of Environment and Conservation, Western Australia & Department of Sustainability, Environment, Water, Population and Communities, Canberra.
- <sup>6</sup> Thavornkanlapachai, R., Mills, H.R., Ottewell, K., Dunlop, J., Sims, C., Morris, K., Donaldson, F., Kennington, W.J., 2019. Mixing genetically and morphologically distinct populations in translocations: Asymmetrical introgression in a newly established population of the Boodie (*Bettongia lesueur*). Genes 10(9), 729.