

Threatened Species of the Northern Territory

BRUSH-TAILED MULGARA (MULGARA)

Dasyercus blythi

Conservation status

Australia: Vulnerable (as *D. cristicauda*)

Northern Territory: Vulnerable



Description

The brush-tailed mulgara is one of the larger carnivorous marsupials with a body mass of over 100 g, head body length of 15 cm and tail length of 9 cm. The species shows sexual dimorphism in size; males are significantly larger than females (Masters *et al.* 2003). The back is sandy brown and the belly is greyish-white. The short tail is enlarged and reddish near the body, tapering quickly to a point.

There has been considerable taxonomic confusion and re-sorting of the mulgaras. For most of the last 30 years only one species, *D. cristicauda*, was recognized. More recently, based on some genetic and morphological attributes, two species were recognized, the Mulgara *D. cristicauda* and Ampurta *D. hillieri* (Adams *et al.* 2000), with both occurring in the Northern Territory. However, Woolley (2005, 2006) re-considered the complex historical treatment of *Dasyercus* and re-assigned the species to the brush-tailed mulgara *D. blythi* and crest-tailed mulgara *D. cristicauda*, both of which occur in the Northern Territory. Woolley (2005, 2006) distinguished these two species on the following characteristics: (i) appearance of black hairs on the distal half of the tail (a brush in *D. blythi* versus a dorsal

crest in *D. cristicauda*), (ii) the number of upper pre-molar teeth (two in *D. blythi* versus three in *D. cristicauda*), and (iii) in females, the number of teats (6 in *D. blythi* versus 8 in *D. cristicauda*).

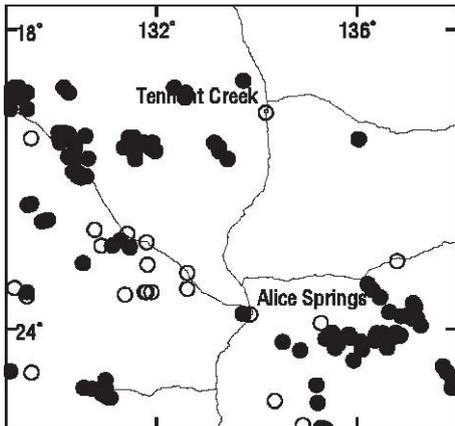
Distribution

Because most previous records did not distinguish among the two species of mulgara now recognized, there is ambiguity about the distribution of both species.

The brush-tailed mulgara is known from at least the western and Simpson deserts, with confirmed records in the Northern Territory from Haast Bluff, Uluru, Papunya, Tanami Desert, Illamurta, Charlotte Waters and Crown Point (Woolley 2005, 2006).

The species was once widespread and common throughout the central deserts region of Australia. However, it began to decline in the 1930s and now has a more restricted and fragmented distribution than in the past.

Conservation reserves where reported:
Uluru-Kata Tjuta National Park.



Known locations of mulgara (note that this map includes records that may be either *D. blythi* or *D. cristicauda*).

o = pre 1970; • = post 1970.

Ecology

Brush-tailed mulgaras are primarily nocturnal, and shelter during the day in burrows that are about 0.5 m deep. Some animals are known to “sunbake” during the day in cold weather. The species is both insectivorous and carnivorous taking a range of insects, scorpions, centipedes, rodents, small marsupials and reptiles.

Brush-tailed mulgaras occur in a range of vegetation types; however, the principal habitat is mature hummock grasslands of spinifex, especially *Triodia basedowii* and *T. pungens* (Masters *et al.* 2003). The location of brush-tailed mulgara colonies may be influenced by the presence of better watered areas such as paleo-drainage systems or drainage lines in sandplain or sand dune habitats.

The species breeds once per year, mating in autumn or winter with litters of 3-6 young being produced between October and December. Home range size is highly variable with extremes of 1.0 to 14.4 hectares recorded (Masters 2003). Home ranges of individuals overlap extensively.

Conservation assessment

Numbers fluctuate dramatically according to climatic conditions making it difficult to estimate the size of the population and, as a consequence, to determine population trends.

Assessment of the conservation status of this species is further complicated by the historical (and in some cases, current) ambiguity of records attributable to this species as distinct from those of *D. cristicauda*.

The decline in the range of the brush-tailed mulgara in the Northern Territory occurred earlier than relevant to IUCN criteria (i.e. <10 years or three generations). However, the species qualifies as Vulnerable (under criteria C2a(i)) based on:

- a population estimated to be
- <10,000 mature individuals;
- a continuing decline observed, projected, or inferred and
- no subpopulation estimated to contain >1000 mature individuals.

Threatening processes

The cause of decline in the brush-tailed mulgara is unknown and, therefore, it has not been possible to identify threatening processes. However, it is likely that the processes of environmental degradation and habitat homogenization that have occurred throughout arid Australia following European settlement have negatively affected the mulgara. Changes in fire regimes, grazing by introduced herbivores including cattle and rabbits, and predation by introduced predators are all likely threatening processes.

Conservation objectives and management

A national Recovery Plan for mulgaras is due for release in 2007.

Management priorities in the Northern Territory are:

- i. to better safeguard existing populations by ensuring that large areas of mature spinifex are not subjected to extensive wildfires;
- ii. to continue regular monitoring of the relatively large population(s) in Uluru-Kata Tjuta NP/Yulara bore fields (currently being undertaken by Parks Australia and Voyages Hotels and Resorts, respectively);
- iii. to better resolve the status and distribution of the two mulgara species; and
- iv. to prevent harmful disturbances (e.g. mining operations) within lateritic areas in the north of the range.

This species is held and bred at the Alice Springs Desert Park.

Complied by

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References

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