

# Threatened species of the Northern Territory

## Butler's dunnart

### *Sminthopsis butleri*

#### Conservation status

##### Australia: Vulnerable

Environment Protection and Biodiversity Conservation Act 1999

##### Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976

#### Description

Butler's Dunnart is a small carnivorous marsupial, with a body mass of about 30 g. It is buffy brown to grey above, with whitish underparts and feet and a buff wash on the cheeks and flanks. The tail is thin, sparsely furred and about as long as the combined head and body length. The soles of the hindfeet are relatively hairy, with interdigital pads that are fused at the base and have conspicuously enlarged, unstriated apical granules<sup>1</sup>. These characteristics, together with no rufous markings on the face, distinguish this species from other dunnarts that occur in the Top End.

#### Distribution

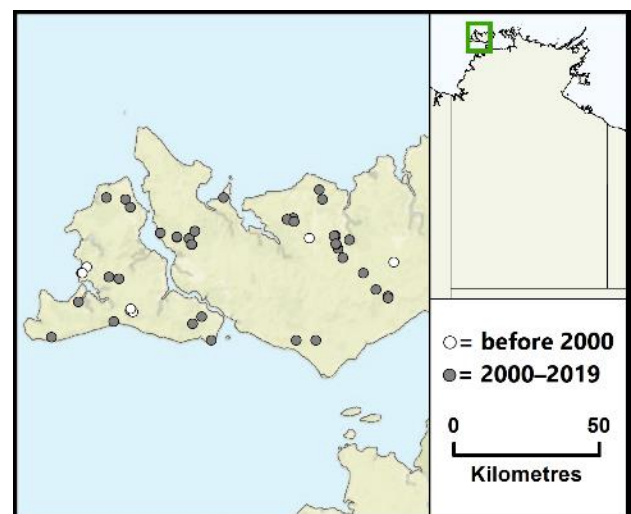
Butler's Dunnart was described from three specimens collected at Kalumburu in the north Kimberley in 1965 and 1966. It has not been recorded from Western Australia since. In the 1990s, the species was recorded on Bathurst and Melville Island (collectively called the Tiwi Islands) in the Northern Territory (NT)<sup>2-3</sup>. Subsequent surveys located the species at a number of sites across both islands.



Credit: S. Ward

In the NT, Butler's Dunnart is evidently restricted to the Tiwi Islands. Targeted surveys in apparently suitable habitat on the adjacent mainland on the Cox and Cobourg Peninsulas have failed to locate the species.

NT conservation reserves where reported: None.



Caption: Known localities of Butler's Dunnart in the NT ([nrmmaps.nt.gov.au](http://nrmmaps.nt.gov.au))

#### Ecology and life-history

The preferred habitats of Butler's Dunnart are eucalypt open forests and woodlands dominated by *Eucalyptus tetradonta*, *E. miniata* and *Corymbia nesophila*. These habitats may have flat sandy

substrates or outcropping rock and boulders. The species also occurs in lower densities in woodland dominated by *Melaleuca* and along the edges of treeless plains<sup>2-4</sup>.

Butler's Dunnart is terrestrial, and shelters under logs or among rocks and other cover. As with other dunnarts, the diet of this species probably comprises invertebrates, and possibly some small vertebrates. Breeding may be seasonal, with reproductively active females being recorded in August to December. Litters of up to nine young have been recorded.

## Threatening processes

Clearing of the preferred habitat of Butler's Dunnart for plantation forestry on Melville Island has now ceased. However, activities associated with the maintenance and protection of plantations on Melville and Bathurst Islands may continue to degrade habitat and threaten the species. Threats associated with plantation management include altered fire regimes and increased spread of weeds. African grassy weeds in particular potentially impact fire regimes and outcompete native grasses. Invasion of the plantation species *Acacia mangium* can alter vegetation structure and outcompete native species.

Feral Pigs *Sus scrofa* are increasing their range on Melville Island, resulting in changes to habitats, and feral Water Buffalo *Bubalus bubalis* and Horses *Equus caballus* exert unnatural grazing pressures on native vegetation. Butler's Dunnart may also be threatened by predation from feral Cats *Felis catus*.

## Conservation objectives and management

A recovery plan for Butler's Dunnart was prepared in 2004<sup>4</sup>. Some of the actions outlined in this plan were implemented in collaborative studies by Tiwi Land Management, the Northern Territory Government and the forestry company Great Southern.

Research priorities for Butler's Dunnart are to: i) undertake sampling to more precisely define its

distribution and status; ii) undertake studies to improve knowledge of its ecological requirements; and iii) investigate the impact of threats.

Management priorities for the species are to: i) control the spread and impact of weed invasion in eucalypt forests and woodlands; ii) manage fire regimes; and iii) manage impacts of feral animals on the Tiwi Islands.

## References

- <sup>1</sup> Van Dyck, S., Woinarski, J.C.Z., Press, A.J., 1994. The Kakadu Dunnart, *Sminthopsis bindi* (Marsupialia: Dasyuridae), a new species from the stony woodlands of the Northern Territory. Mem. Queensl. Mus. 37, 311-323.
- <sup>2</sup> Woinarski, J.C.Z., Woolley, P.A., Van Dyck, S., 1996. The distribution of the dunnart *Sminthopsis butleri*. Aust. Mammal. 19, 27-29.
- <sup>3</sup> Woinarski, J., Brennan, K., Hempel, C., Armstrong, M., Milne, D., Chatto, R., 2003. Biodiversity conservation on the Tiwi Islands, Northern Territory. Part 2: fauna. NT Department of Infrastructure, Planning and Environment, Darwin.
- <sup>4</sup> Woinarski, J.C.Z., 2004. National multi-species Recovery Plan for the Carpentarian Antechinus *Pseudantechinus mimulus*, Butler's Dunnart *Sminthopsis butleri* and Northern Hopping-mouse *Notomys aquilo*, 2004-2008. NT Department of Infrastructure Planning and Environment, Darwin.