

## THREATENED SPECIES OF THE NORTHERN TERRITORY



### BUTLER'S DUNNART *Sminthopsis butleri*

#### Conservation status

Australia (*Environment Protection and Biodiversity Conservation Act 1999*): Vulnerable.

Northern Territory (*Territory Parks and Wildlife Conservation Act 2000*): Vulnerable.

#### Description

A small (about 15 g) dunnart ("marsupial mouse"), distinguished from other dunnarts of the Top End by a combination of lack of rufous markings on the face, relatively small size, and the patterning on the soles of the hindfeet (relatively hairy, with the interdigital pads fused at the base and with conspicuously enlarged unstriated apical granules) (van Dyck *et al.* 1994).



**Fig. 1.** Butler's dunnart is a mouse-sized insectivorous marsupial.

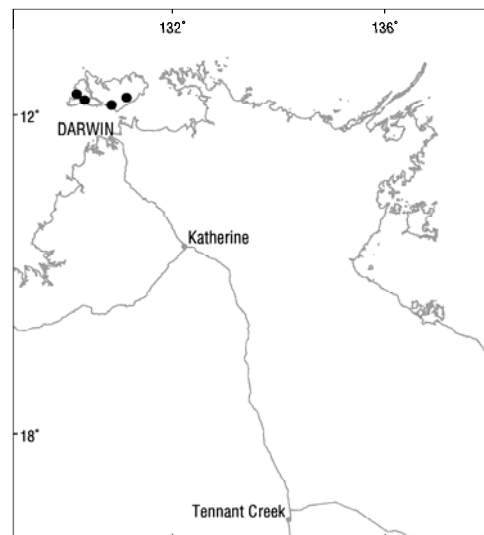
#### Distribution

There are remarkably few records of Butler's Dunnart. It was described from three specimens collected at Kalumburu (north Kimberley) between 1965 and

1966. It has not been recorded from Western Australia since. Subsequently, five individuals have been caught from Bathurst and Melville Islands, and a previously-misidentified record from Melville Island in 1913 has been re-assigned to this species (Woinarski *et al.* 1996, 2000).

This species has not been recorded from any conservation reserves.

When first described (in 1979) this species was considered to extend to Cape York Peninsula and New Guinea, and hence named as the "carpentarian dunnart". Subsequently, specimens from those areas have been split off, as *S. archeri* (the chestnut dunnart).



**Fig. 2.** Known locations of the Butler's dunnart.

#### Ecology

Very little is known of the ecology of this species. The few records are



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associated with a range of habitats (Woinarski *et al.* 1996, 2000), including eucalypt open forest (dominated by *Eucalyptus tetradonta* and *E. miniata*), *Melaleuca* woodland, and “blacksoil sandplain ... heavily vegetated with eucalypt and grass” (Archer 1979). It is terrestrial, and shelters under logs and other cover.

As with other dunnarts, the diet of this species probably comprises invertebrates, and possibly some small vertebrates.



**Fig. 3.** Known habitat on the Tiwi Islands includes a range of vegetation types, including eucalypt open forest.

### Conservation assessment

The status of Butler’s dunnart is difficult to evaluate, given the few records and lack of any information on trends in abundance. We can reasonably infer that it is uncommon in its only known Northern Territory location, the Tiwi Islands. These have now been subject to a substantial biodiversity survey effort since 1991, but this sampling has produced only five individuals. This population can be considered to be likely to decline based on loss of large areas of suitable habitat (300-1000 km<sup>2</sup> from a total Tiwi Islands area of about 7400 km<sup>2</sup>) associated with an approved forestry plantation project. It may also

decline with increasing abundance of feral cats on the Tiwi Islands.

Consequently, Butler’s dunnart fits the status of **Vulnerable** (under criteria B1ab) based on:

- extent of occurrence estimated to be <20,000 km<sup>2</sup> ;
- severely fragmented or known to exist at no more than 10 locations; and
- continuing decline, observed, inferred or projected.

### Threatening processes

The immediate threat to the population is the proposed loss of large areas of suitable habitat on Melville Island because of vegetation clearance for plantation forestry.

Butler’s dunnart may also be affected by predation from feral cats, and vegetation change associated with altered fire regimes, weeds and/or feral animals.

### Conservation objectives and management

Research priorities are to:

- (i) undertake sampling to more precisely define the range and status;
- (ii) undertake a specific study to provide more information on the ecological requirements of, and threatening factors affecting, this species.

Management priorities are to:

- (i) ensure the retention of sufficient areas of preferred habitat on the Tiwi Islands, especially around the few sites of known occurrence.

### Compiled by

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### References

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