

Threatened Species of the Northern Territory

BUTLER'S DUNNART

Sminthopsis butleri

Conservation status

Australia: Vulnerable

Northern Territory: Vulnerable



Photo: S. Ward

Description

Butler's dunnart is a small (about 30 g) dunnart (carnivorous marsupial), distinguished from other dunnarts of the Top End by a combination of lack of rufous markings on the face 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).

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).

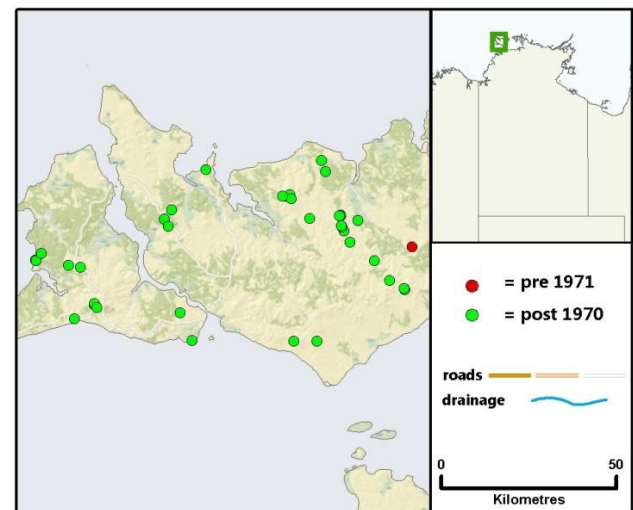
Distribution

Butler's dunnart was described from three specimens collected at Kalumburu (north Kimberley) between 1965 and 1966. It has not been recorded from Western Australia since. In the 1990s the species was identified on the Tiwi Islands north of Darwin (Bathurst and Melville Islands) (Woinarski *et al.* 1996, 2003). Recent targeted surveys for the species have located it at a number of sites across both islands (NRETAS Fauna Atlas, Great Southern unpubl. data).

In the Northern Territory (NT) the species is considered confined to the Tiwi Islands. Targeted surveys for the species in apparently suitable habitat on the mainland adjacent to the Tiwi Islands (Cox and Cobourg Peninsulas) failed to locate it.

Conservation reserves where reported:

None.



Known locations of Butler's dunnart

Ecology

The preferred habitats of Butler's dunnart are eucalypt open forest and woodland dominated by *Eucalyptus tetradonta*, *E. miniata* and *Corymbia nesophila*. These preferred habitats may have flat sandy substrates or

outcropping rock and boulders. The species also occurs in lower densities in *Melaleuca* woodland and the edges of treeless plains (Woinarski *et al.* 1996, 2003; Woinarski 2004, DLRM unpub.).

The species 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.

Conservation assessment

Butler's dunnart is confined to the Tiwi Islands which have a total area of 7 481 km², of which less than 6 500 km² are suitable habitat. Approximately 260 km² of the species' preferred habitat (eucalypt open woodland) was cleared and converted to exotic acacia (*Acacia mangium*) plantations between 2002 and 2009. Management of the plantations extends into the surrounding forest and woodland matrix, including altered fire regimes, weed control (of both African weedy grasses and the plantation species) and feral grazing pressures. The species may also decline with increasing abundance of feral cats on the Tiwi Islands.

Butler's dunnart is listed as **Vulnerable** (under criteria B1ab) in the NT based on:

- extent of occurrence <20 000 km²;
- known to exist on only two islands; and
- continuing decline, observed, inferred or projected.

Threatening processes

Clearing of the species' habitat 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 the habitat and threaten the species. These include imposed fire regimes to protect plantations and greater spread of weeds (of both African grassy weeds that potentially impact fire regimes and out-compete native grasses, and escapees from the plantation species *Acacia mangium* that alter vegetation structure and outcompete native species). Pigs are increasing their range on Melville Island, resulting in changes to habitats, and feral populations of buffalo and horses exert unnatural grazing pressures on native habitats. Butler's dunnart may also be affected by predation from feral cats on the islands.

Conservation objectives and management

A recovery plan for this species (Woinarski 2004) has been developed, and some of the proposed actions were implemented in collaborative studies by Tiwi Land Management Officers, scientists from the Territory Government and the forestry company, Great Southern.

Research priorities are to:

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

Management priorities are to:

- i. control the spread and impact of weeds in eucalypt forests and woodlands;
- ii. manage fire regimes; and
- iii. manage impacts of feral animals on the islands.

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References

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