

Threatened Species of the Northern Territory

CARPENTARIAN ANTECHINUS

Pseudantechinus mimulus

Conservation status

Australia: Vulnerable

Northern Territory: Near Threatened



Photo: K. Brennan

Description

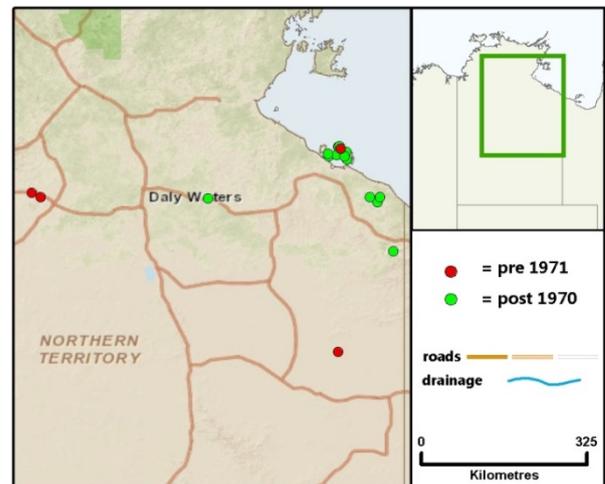
The Carpentarian antechinus is a mouse-sized dasyuid marsupial, with large ears, and rufous-cinnamon fur behind the ears. When an individual is in good condition the tail is swollen to carrot-shaped. It is similar in appearance to the other *Pseudantechinus* species from the Northern Territory (NT): *P. bilarni*, *P. ningbing* and *P. macdonnellensis*, but is typically smaller than these (<18 g cf >18 g). *Pseudantechinus mimulus* may overlap in distribution with *P. bilarni* (Fisher *et al.* 2000).

Distribution

This species was described from one specimen collected in 1905 at "Alexandria" (a then broad geographic area including part of the Barkly Tableland). There were no further records until it was rediscovered on North Island in the Sir Edward Pellew group in 1967 (Kitchener 1991). Subsequently, it has also been reported from South-West, Centre and Vanderlin Islands in the Pellew group (Johnson and Kerle 1991; Taylor *et al.* 2004). In 2009-10, four individuals were trapped on Pungalina-Seven Emu (Australian Wildlife Conservancy pers. comm.), a coastal mainland reserve south west of Borroloola. This raises the likelihood that the species is more widespread in the NT than previously

thought. Beyond the NT, there has been a small number of recent records from near Mt Isa, Queensland (Woinarski 2004, Woolley 2011).

Conservation reserves where reported:
Barranyi (North Island) National Park.



Known locations of the Carpentarian antechinus

Ecology

As with most other pseudantechinuses, the Carpentarian antechinus occurs in a range of vegetation types, but always with a high cover of rocks, boulders and crevices. The type specimen from Alexandria appears to be anomalous, in that the Barkly Tablelands does not appear to be suitable habitat. However, no detail was given of the habitat in which it

was found there, and the locality may be very imprecise.

Its diet comprises mostly invertebrates, but it may also take small vertebrates.

The Carpentarian antechinus is a seasonal breeder, mothers carrying pouch young in August–September and weaning them in October–November (Woolley 2011). Both females and males can survive to breed in a second breeding season.

Conservation assessment

In the NT, the Carpentarian antechinus is known from four islands in the Sir Edward Pellew Group, and from two locations on the nearby mainland (Pungalina-Seven Emu). There is no information available on its population size in any of these places, but trap success has generally been low. Despite considerable survey effort, there have been no confirmed records from the Barkly region (the type location) since 1906. Hence the species declined substantially in range historically, but there is no evidence that this contraction is continuing. Recent finds of the species on coastal mainland NT is evidence that the species is probably more widespread than currently recognised.

The conservation status of the species approaches Vulnerable (under criteria B2ab(i,ii,iii,iv) based on:

- area of occupancy estimated to be >500 km² but <2 000 km²; and
- severely fragmented or known to exist at no more than ten locations.

But there is no evidence to support continuing decline and it is possible that the species is more widespread. The species is classified in the NT as **Near Threatened**.

Threatening processes

There are no clear threatening processes that may have accounted for the apparent decline of this species. It may have been affected by predation from feral cats, although its association with rugged rocky areas would have provided some protection against this threat. Larger marsupial predators have declined with the arrival of cane toads, but the cane toad's impact on this species is unknown. The Pellew group of islands provides little protection from these threats: cats have recently spread to most of the large islands (Taylor *et al.* 2004) and cane toads were carried out to all the large islands on floodwaters of the McArthur River in 2001.

The Carpentarian antechinus may also be affected by changed fire regimes, and particularly by an apparent increase in hot extensive late Dry season fires.

Conservation objectives and management

There is a national recovery plan for this species (Woinarski 2004).

Research priorities are to:

- i. establish a monitoring program, preferably integrated with an assessment of fire management preferences; and
- ii. sample the nearby mainland for additional populations.

Management priorities are to:

- i. work with Aboriginal landowners to control feral cats (and other exotic species) from islands in the Pellew group;
- ii. evaluate options for conservation agreements with Aboriginal landowners; and
- iii. based on monitoring results, implement a favourable fire regime.

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References

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