

THREATENED SPECIES OF THE NORTHERN TERRITORY



NORTHERN QUOLL

Dasyurus hallucatus

Conservation status

Australia: Endangered.

Northern Territory: Critically Endangered.

Description

The northern quoll is a distinctive carnivorous marsupial. It is the size of a small cat (weight 300-1100 g), with prominent white spots on a generally dark body, with a long sparsely furred tail.



Northern Quoll (Photo: M Armstrong)

Distribution

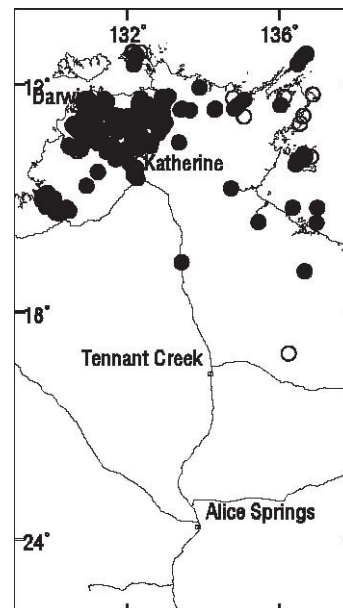
The northern quoll occurs across much of northern Australia, from southeastern Queensland to the southwest Kimberley, with a disjunct population in the Pilbara. It has declined across much of this range (Braithwaite and Griffiths 1994).

In the Northern Territory, it is restricted to the Top End. A 1905 record from Alexandria (Thomas 1906) marks the southern limit of its known Northern Territory distribution, now far from any recent records. It has been recorded from Groote Eylandt and the nearby North-east Island, Marchinbar Island (in the Wessel group), Inglis Island (in the English Company Islands group) and Vanderlin Island (Sir Edward Pellew group). Recently, it has also been translocated to Astell and

Pobassoo islands in the English Company island group.

Conservation reserves where reported:

Berry Springs Nature Park, Black Jungle Conservation Reserve, Charles Darwin National Park, Fogg Dam Conservation Reserve, Garig Gunak Barlu National Park, Howard Springs Nature Park, Kakadu National Park, Leaning Tree Lagoon, Limmen National Park, Litchfield National Park, Manton Dam Recreation Area, Mary River National Park, Nitmiluk National Park, Tjuwalyin (Douglas) Hot Springs Park, Umbrawara Gorge Nature Park.



Known locations of the northern quoll.
o = pre 1970; • = post 1970.

Ecology

The northern quoll is a generalist predator, consuming a wide range of invertebrates and small vertebrate prey. It dens in hollow logs, rock crevices and caves, and in tree



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hollows. Most foraging is on the ground, but it is also an adept climber.

It occurs in a wide range of habitats, but the most suitable habitats appear to be rocky areas. It is also common in many eucalypt open forests.

Northern quolls typically have an annual life cycle, with almost all males living for only one year (Oakwood 2000; Oakwood *et al.* 2002). Young are born in the mid dry season (June), and attain independence in the early wet season (November). Mating is highly synchronised, occurring in late May/early June. Males then die.

During the non-breeding season, home ranges are about 35 ha, but this increases to about 100 ha for males in the breeding season (Oakwood 2002).

Conservation assessment

Broad-scale decline of the northern quoll was described by Braithwaite and Griffiths (1994), but the extent and rate of this decline did not quite reach the relevant threshold values for IUCN threatened status.

Since that review, several studies (e.g. Watson and Woinarski 2003; Oakwood 2004) have suggested rapid collapse to local extinction of northern quoll populations in those parts of Kakadu National Park recently invaded by cane toads *Bufo marinus*. It is likely that cane toads will occur across all of the mainland Top End within the next few years. A similar pattern of decline to that encountered in Kakadu will probably occur elsewhere as cane toads invade new areas. The exact extent of the decline is difficult to estimate and the security of island populations is uncertain. The northern quoll has been classified as **Critically Endangered** (under criterion A3ce) based on an estimated population size reduction of >80% projected for the next 10 years).

Threatening processes

Quolls appear to have been declining in the Northern Territory for at least several decades (Braithwaite and Griffiths 1994; Woinarski *et al.* 2001), possibly because of impacts from feral cats, disease or changed fire regimes. However, the spread of cane toads adds a far more catastrophic threat (Van Dam *et al.* 2002). Quolls appear to be particularly susceptible to the poison of cane toads, and are killed when they attempt to kill or consume the toads. Major declines to regional extinction have been reported for quolls following cane toad invasion on Cape York Peninsula (Burnett 1997).

Conservation objectives and management

There is no current recovery or management plan for this species, however a Recovery Plan is being prepared for 2007. In the short to medium term, it is unlikely that any broad-scale control mechanism can be imposed on cane toads, the primary threat to quolls. Given this outlook, the management priority is to secure the existing island populations from colonisation by cane toads. To increase the number of island populations, quolls have recently (2003) been translocated to Astell and Pobassoo Islands, where they are currently thriving.

Compiler

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Threatened Species Information Sheet

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