

Threatened Species of the Northern Territory

CANEFIELD RAT

Rattus sordidus

Conservation status

Australia: Not listed

Northern Territory: Critically Endangered
(possibly extinct)



Illustrated: J Gould, Museum Victoria

Description

The cane field rat is a typical moderately large rodent (up to 250 g), in the Northern Territory (NT) most like the long-haired rat *R. villosissimus* and the dusky rat *R. colletti*. It has dark golden-brown coarse almost spiny fur, with long guard hairs on the rump. The ears are light grey (cf. *R. colletti* that has dark brown ears, and *R. villosissimus* that are dark grey). *Rattus villosissimus* is also typically more grey in colour, and has even longer guard hairs distributed across more of the back.

The taxonomic status of some native *Rattus* in northern Australia is somewhat uncertain. The identity of the NT cane field rat specimens was corroborated by chromosomal analysis (Johnson and Kerle 1991).

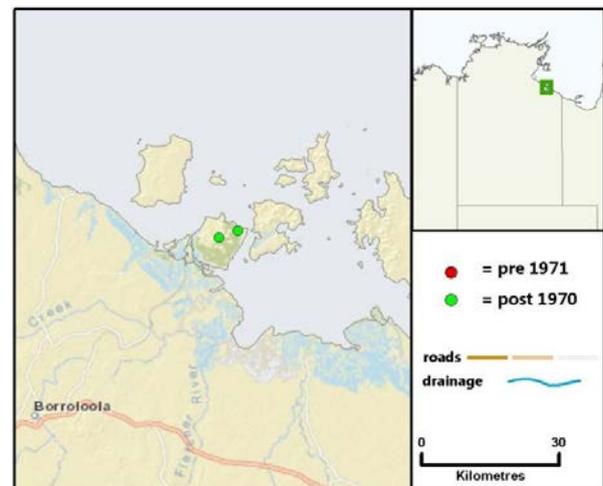
Distribution

In the NT, the cane field rat is known only from South-West Island in the Sir Edward Pellew group.

Elsewhere, it occurs widely in coastal areas of north-eastern Australia, as far south as north-eastern New South Wales, and west to at least Normanton, Queensland (Watts and Aslin 1981).

Conservation reserves where reported:

None.



Known locations of the cane field rat in the NT

Ecology

The NT records are all from coastal dunes: “sandy low-lying open woodland with a grassy understorey” (Johnson and Kerle 1991). In north-eastern Australia it occurs mostly in grasslands, typically in areas with friable soil and with a close ground-cover of grasses, sedges and herbs, and often occurs around swamps or on the grassy verges of closed forests (Watts and Aslin 1981). It is also very abundant in sugar cane crops.

It is a colonial species. It constructs extensive relatively shallow (typically <40 cm deep)

burrows for shelter and breeding, and runways through dense vegetation.

Conservation assessment

In the NT, the species has been recorded from only one site during one field survey (in 1988). More recent surveys of several islands in the Pellew Group from 2003 to 2010 failed to trap any canefield rats (Taylor *et al.* 2004; S. Ward *pers. comm.*; Woinarski *et al.* in press) and noted that the success of mammal trapping generally was lower than on two previous mammal surveys of the islands (in 1966-67 and in 1988). The trapping success was particularly low on South West Island, and was generally low for other „true“ rat species, *Rattus tunneyi* and *Rattus villosissimus*, across the islands. In the 1988 survey canefield rats were recorded only in the dune communities of South West Island, which cover only a small proportion of the total 95 km² area of the island, so the population of canefield rats there is probably small (<50 individuals).

Using IUCN 8.1 (2011) criteria, this species is considered **Critically Endangered (possibly extinct)** in the NT (under criterion D) due to:

- If a population remains it is estimated at fewer than 50 mature individuals.

Note that this species is common and considered a pest across most of the rest of its range.

Threatening processes

Feral cats apparently reached South-West Island around 1990 (Taylor *et al.* 2004), and the highly restricted and colonial population of canefield rats there may have been susceptible to predation by these cats. Cane toads reached the island between 2000 and 2002; but there is no prior evidence to suggest that canefield rats would be affected by cane toads, and indeed the two species co-

occur in extensive areas of Queensland. Fire regimes have changed on the Pellew Islands over the last century, due to less intensive Aboriginal land management. Such changes would have altered vegetation structure and floristics, and hence habitat quality for canefield rats, but it is not yet clear whether such change would have been beneficial or detrimental.

Conservation objectives and management

There is no existing explicit recovery plan or management program for this species.

In the interim, research priorities are to:

- i. confirm the continued existence of this population, and establish a monitoring program, preferably integrated with an assessment of fire management preferences;
- ii. sample the nearby mainland for additional populations; and
- iii. further resolve the taxonomy of *Rattus* in northern Australia.

Management priorities are to:

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

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References

Johnson, K.A., and Kerle, J.A. (1991). Flora and vertebrate fauna of the Sir Edward Pellew group of islands, Northern Territory. Report to the Australian Heritage Commission. (Conservation Commission of the Northern Territory: Alice Springs.)

Taylor, R., Woinarski, J., Charlie, A., Dixon, R., Pracy, D., and Rhind, S. (2004) Report on mammal survey of the Pellew Islands 2003