

Threatened Species of the Northern Territory

Northern Brush-tailed Possum

Trichosurus vulpecula arnhemensis

Conservation status

Australia: Vulnerable

Environment Protection and Biodiversity Conservation Act 1999

Northern Territory: Not Listed

Territory Parks and Wildlife Conservation Act 1976

Description

The Northern Brush-tailed Possum is a moderately sized (1.5 kg to 4.5 kg) possum with a body length of approximately 35-55 cm and a tail length of 25-40 cm¹. The Northern Brush-tailed Possum is one of six sub-species within the *Trichosurus* genus. It can be distinguished from other sub-species by its short fur and lack of hair on the tail², as well as by being smaller in size and lighter in colour³. The coat is typically grey in colour; however, variations can include reddish brown, copper or chocolate brown.

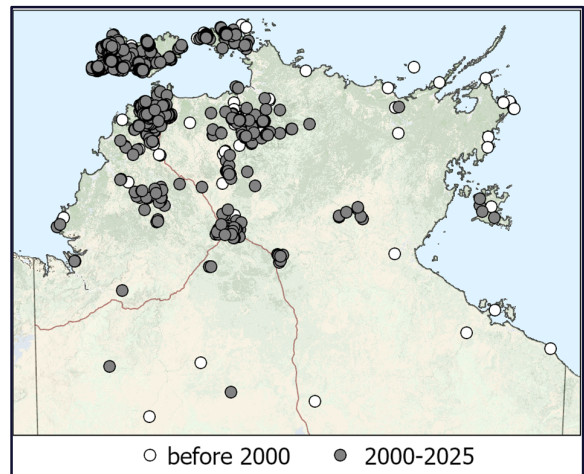
The Northern Brush-tailed Possum was previously referred to as the Common Brush-tailed Possum (north-western).

Distribution

The Northern Brush-tailed Possum occurs across the Top End from the Gulf of Carpentaria hinterland near Borroloola, Northern Territory (NT)¹⁻³ to the west of the Kimberley in Western Australia (WA). However, within this range, distribution is discontinuous. Sightings in Western Australia have been rare in recent



Photo: NT Government



Known localities of the Northern Brushtail Possum in the NT
(nrmaps.nt.gov.au)

decades and the Northern Brush-tailed Possum is now mostly found in the NT.

NT conservation reserves where reported: Black Jungle/Lambells Lagoon Conservation Reserve, Berry Springs Nature Park, Casuarina Coastal Reserve, Charles Darwin National Park, Eley National Park, Fogg Dam Conservation Reserve, Garig Gunak Barlu National Park, Holmes Jungle Nature Park, Howard Springs Nature Park, Judbarra/Gregory National Park, Kakadu National Park, Litchfield National Park, Manton Dam Recreation Area, Nitmiluk National Park, Shoal Bay Coastal Reserve.

Ecology and life-history

The Northern Brush-tailed Possum is a nocturnal, semi-arboreal marsupial. It occurs mainly in tall eucalypt forests that have large hollow-bearing trees, particularly where the understorey includes shrubs that have fleshy fruits¹. However, the sub-species also occurs in mangroves, rainforests and semi-urban areas (notably around Darwin and Katherine).

The Northern Brush-tailed Possum shelters mostly in tree hollows and, in some cases, human infrastructure. The sub-species occurs in higher abundance in areas with high shrub density, likely because these areas provide food, as well as refuge from predation by feral cats (*Felis catus*)¹.

Threatening processes

The distribution of the Northern Brush-tailed Possum has decreased – and continues to decrease – due to losses of sub-populations across north-western Australia, as well as extensive areas of the NT¹. The contraction in range has been away from the arid areas to the more mesic areas⁵.

The most significant threats to the Northern Brush-tailed Possum are clearing and disturbance of its habitat. This can occur through a range of mechanisms, including clearing of native vegetation for buildings, agriculture, mining and forestry; increased frequency of extensive and intense fires that are exacerbated by invasive grasses (Gamba Grass *Andropogon gayanus* and Mission Grass *Pennisetum polystachion*); and predation by feral cats¹⁻⁴.

Conservation objectives and management

Management priorities for the Northern Brush-tailed Possum are to: i) minimise clearing of habitat, especially riparian areas that provide connectivity; ii) instate fire management that supports the sub-species' persistence; and iii) remove and/or reduce impacts from grazing so as to allow suitable habitat to recover.

References

- ¹ Threatened Species Scientific Committee, 2021. Conservation advice *Trichosurus vulpecula arnhemensis* Northern Brushtail Possum. Department of Agriculture, Water and the Environment, Canberra.
- ² Middleton, S.C., Davis, R.A., Travouillon, K.J., Hopkins, A.J.M., Mills, H.R., Umbrello, L.S., 2025. Revised phylogeography of the common brushtail possum (*Trichosurus vulpecula*) reveals new insights into genetic structure across Australia. *Zool. J. Linnean Soc.* 1, 2-4.
- ³ Kerle, J.A., McKay, G.M., Sharman, G.B., 1991. A Systematic Analysis of the Brushtail Possum, *Trichosurus vulpecula* (Kerr, 1792) (Marsupialia: Phalangeridae). *Aust. J. Zool.* 39, 315-317.
- ⁴ Lawes, M.L., Murphy, B.P., Fisher, A., Woinarski, J.C.Z., Edwards, A.C., Russell-Smith, J., 2015. Small mammals decline with increasing fire extent in northern Australia: evidence from long-term monitoring in Kakadu National Park. *Int. J. Wildland Fire.* 24, 712-722.
- ⁵ Stobo-Wilson, A., Murphy, B., Cremona, T., 2019. Contrasting patterns of decline in two arboreal marsupials from Northern Australia. *Biodiv. Cons.* 28, 2951.