

# Threatened species of the Northern Territory

## Masked owl (northern mainland)

### *Tyto novaehollandiae kimberli*

#### Conservation status

##### Australia: Vulnerable

Environment Protection and Biodiversity Conservation Act 1999

##### Northern Territory: Vulnerable

Territory Parks and Wildlife Conservation Act 1976



Credit: D. Portelli

#### Description

The Masked Owl is a large robust owl with a prominent dark-rimmed facial disc. The upperparts are intricately streaked and mottled with buff and/or white over a blackish ground colour, while the underparts are buff to white with black speckling. Paler individuals are easily confused with the Eastern Barn Owl *Tyto javanica*, but are distinguishable by the more rounded, rather than oval, facial disc; thicker and completely feathered legs; robust feet; relatively large eyes; and bolder markings on the upperparts.

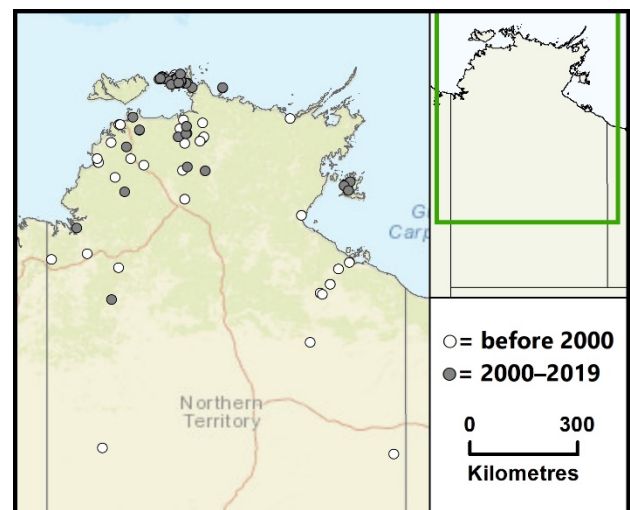
The two subspecies that occur in the Northern Territory are appreciably smaller than those that occur in south-western and south-eastern Australia. *Tyto novaehollandiae kimberli* is larger and paler (at least for females) than the subspecies occurring on the Tiwi Islands.

#### Distribution

The Masked Owl (northern mainland) is distributed widely across northern Australia, from the Kimberley region, across the Northern Territory (NT) to Cape York Peninsula and far-north Queensland.

In the NT, the subspecies has been recorded mostly in the western Top End, Cobourg Peninsula and Groote Eylandt. Its status in lower-rainfall areas is poorly known. For example, the subspecies has not been recorded in the McArthur River region since the 1970s.

NT conservation reserves where reported: Garig Gunak Barlu National Park, Judbarra/Gregory National Park, Kakadu National Park, Keep River National Park and Nitmiluk National Park.



Caption: Known localities of the Masked Owl (northern mainland) in the NT ([nrmaps.nt.gov.au](http://nrmaps.nt.gov.au))

## Ecology and life-history

The Masked Owl (northern mainland) occurs mainly in tall open eucalypt forests, especially those dominated by Darwin Woollybutt *Eucalyptus miniata* and Darwin Stringybark *E. tetradonta*. The subspecies also commonly roosts in monsoon rainforests, and also forages in more open vegetation types, including grasslands.

Individuals typically roost in tree hollows, but may also roost among dense foliage. Masked Owls breed in large tree hollows, which usually form in large rainforest trees. It is likely that individual home ranges are large.

The diet of the Masked Owl (northern mainland) mostly comprises mammals up to the size of possums.

## Threatening processes

Threats to the Masked Owl (northern mainland) are poorly understood. Food resources have almost certainly declined as a result of dramatic broad-scale declines of small and medium-sized native mammals across northern Australia<sup>1-2</sup>. Threats impacting prey populations, such as altered fire regimes and predation by feral Cats *Felis catus*, are therefore likely to be indirect threats to the Masked Owl (northern mainland). Marked increases in the cover and height of invasive exotic grasses<sup>3</sup> may reduce the foraging efficiency of owls.

The current fire regime of more intense, frequent and extensive fires may be a significant direct threat, since such fires can reduce the availability of large trees and hollows<sup>4</sup> that Masked Owls require for roosting and nesting.

## Conservation objectives and management

The main research priorities for the subspecies are to: i) estimate the number of individuals; ii) investigate habitat requirements, including home range size; and iii) examine responses to putative threats.

Baseline data are now available for monitoring the subspecies at Garig Gunak Barlu and Kakadu National Parks using call playback surveys<sup>5</sup>.

## References

- <sup>1</sup> Woinarski, J.C.Z., Milne, D.J., Wanganeen, G., 2001. Changes in mammal populations in relatively intact landscapes of Kakadu National Park, Northern Territory, Australia. *Austral Ecol.* 26, 360–370.
- <sup>2</sup> Fitzsimons, J., Legge, S., Traill, B., Woinarski, J., 2010. Into oblivion? The disappearing native mammals of northern Australia. *The Nature Conservancy*, Melbourne.
- <sup>3</sup> Rossiter, N.A., Setterfield, S.A., Douglas, M.M., Hutley, L.B., 2003. Testing the grass-fire cycle: alien grass invasion in the tropical savannas of northern Australia. *Divers. Distrib.* 9, 169–176.
- <sup>4</sup> Williams, R.J., Cook, G.D., Gill, A.M., Moore, P.H.R., 1999. Fire regimes, fire intensity and tree survival in a tropical savanna in northern Australia. *Australian J. Ecol.* 24, 50–59.
- <sup>5</sup> Ward, S., 2010. Survey protocol for Masked Owls in the NT *Tyto novaehollandiae* (north Australian mainland subspecies *T. n. kimberli* and Tiwi subspecies *T. n. melvillensis*). Department of Land Resource Management, Darwin.