

Threatened Species of the Northern Territory

MASKED OWL (Tiwi subspecies)

Tytonovaehollandiae melvillensis

Conservation status

Australia: Endangered

Northern Territory: Endangered



Photo: R. Firth

Description

The Tiwi Masked Owl is a large dark owl, most likely to be confused with the barn owl *Tyto alba*, which is noticeably smaller and paler, with far weaker legs and feet and with far less feathering on the legs. It is most likely to be detected from its loud call, which comprises a highly varied set of shrieks and complex whistles.

The Tiwi subspecies is only weakly differentiated from the subspecies occurring on mainland northern Australia. Both are appreciably smaller than the two other subspecies from south-eastern and south-western Australia.

Distribution

This subspecies of masked owl is restricted to Bathurst and Melville Islands (the Tiwi group).

Conservation reserves where reported:

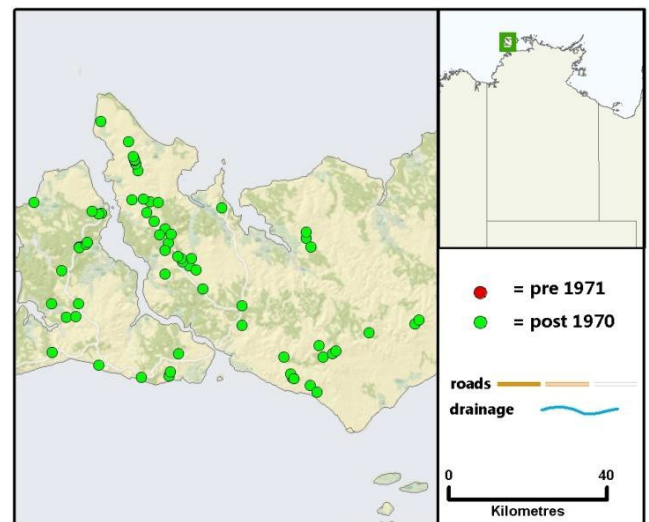
None.

Ecology

The Tiwi Masked Owl occurs mainly in eucalypt tall open forests (especially those dominated by Darwin woollybutt *Eucalyptus miniata*, Darwin stringybark *E. tetradonta* and

Melville Island bloodwood *Corymbia nesophila*), but also

commonly roosts in monsoon rainforests, and forages also in more open vegetation types, including grasslands and “treeless plains” (shrublands dominated by *Grevillea pteridifolia*, *Melaleuca* spp., *Acacia* spp., *Banksia dentata*, and other species) (Woinarski et al. 2003).



Known locations of the Tiwi Masked Owl

Although it may roost in dense foliage, it more typically roosts, and nests, in tree hollows.

Most trees large enough to support nesting hollows are in rainforest areas. Mammals, up to the size of possums, constitute the bulk of its diet.

Although there is no detailed information for this subspecies, masked owls of other subspecies occupy large home ranges, estimated at 5-10 km² (Kavanagh and Murray 1996).

Conservation assessment

Based on extrapolation of densities and home range size from other subspecies, Garnett et al. (2011) estimated the total population at about 2 500 individuals, comprising a single subpopulation, within a total area of about 7 400 km² on the Tiwi Islands. They categorised the subspecies as Endangered.

Although there are no data available to assess trends in this population size, a major plantation forestry project on Melville Island cleared 260 km² of the highest quality habitat for this species. This is likely to have resulted in a population decline in the order of 5 per cent.

The Tiwi Masked Owl is categorised as **Endangered** (under criterion C2a(ii)) in the Northern Territory based on:

- population size estimated at fewer than 2 500 mature individuals;
- an inferred or projected decline in numbers of mature individuals; and
- at least 95 per cent of mature individuals within one subpopulation.

Threatening processes

Clearing of the species' habitat for plantation forestry on Melville Island has now ceased. However, activities associated with the maintenance and protection of plantations on Melville and Bathurst Islands may continue to degrade the habitat and threaten the species. These includes imposed fire regimes to protect plantations and greater spread of weeds (both African grassy weeds that potentially impact fire regimes and out-compete native grasses, and escapees of the plantation species *Acacia mangium* that alter

vegetation structure and outcompete native species). Pigs are increasing their range on Melville Island, resulting in damage to moister habitats, such as rainforests, and feral populations of buffalo and horses exert unnatural grazing pressures on native habitats. These factors may also threaten the subspecies indirectly through changing vegetation composition, resulting in changes in the abundance of native mammals, on which the owls rely for prey.

Conservation objectives and management

A national recovery plan for the Tiwi Masked Owl, and other birds, has been established (Woinarski 2004).

The main research priority is to derive more precise information on population size, home range and habitat requirements, and, using this information, to develop a usable population viability model.

The main management priorities are to:

- i. ensure the retention of adequate areas of prime habitat within a forestry management program; and
- ii. establish a monitoring program to assess the impacts of forestry development.

Some of these research and management actions are now being implemented by the Tiwi Land Council and the Tiwi Forestry Project. The Tiwi Forestry Strategic Plan (Hadden 2000) committed to maintaining native forests 100 m around known roost and/or nest sites.

Compiled by

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References

- Garnett, S.T., Szabo, J.K., and Dutson, G. (2011). The action plan for Australian Birds 2010. (CSIRO Publishing/Birds Australia, Melbourne.)
Hadden, K. (2000). Tiwi Islands Plantation Forestry Strategic Plan. (Tiwi Land Council, Darwin.)

Kavanagh, R.P., and Murray, M. (1996). Home range, habitat and behaviour of the masked owl *Tyto novaehollandiae* near Newcastle, New South Wales. *Emu* 96, 250-257.

Woinarski, J.C.Z. (2004). National multi-species Recovery Plan for the Partridge Pigeon [eastern subspecies] *Geophaps smithii smithii*; crested shrike-tit [northern (sub)-species] *Falcunculus (frontatus) whitei*; masked owl [north Australian mainland subspecies] *Tyto novaehollandae kimberli*; and masked owl [Tiwi Islands subspecies] *Tyto novaehollandiae melvillensis*, 2004-2008. (NT Department of Infrastructure Planning and Environment, Darwin.)

Woinarski, J., Brennan, K., Hempel, C., Armstrong, M., Milne, D., and Chatto, R. (2003). Biodiversity conservation on the Tiwi islands, Northern Territory. Part 2. Fauna. 127 pp. (Department of Infrastructure Planning and Environment, Darwin).