

## TAXON SUMMARY

# Barking Owl (southern)

1	Family	Strigidae
2	Scientific name	<i>Ninox connivens connivens</i> (Latham, 1802)
3	Common name	Barking Owl (southern)
4	Conservation status	Near Threatened: a

### 5 Reasons for listing

The area of occupancy of this subspecies has declined by more than 50% (Near Threatened: a). The subspecies is presumed to be abundant in Queensland, but even if the population is less than 10,000 and declining, it is not fragmented (so not Vulnerable: C2a) and birds in eastern and western Australia are presumed to belong to separate sub-populations (so not C2b).

	Estimate	Reliability
Extent of occurrence	3,000,000 km <sup>2</sup>	high
trend	stable	medium
Area of occupancy	75,000 km <sup>2</sup>	low
trend	decreasing	high
No. of breeding birds	15,000	low
trend	decreasing	high
Number of populations:	2	medium
Largest population:	14,500	low
Generation time	10 years	low

### 6 Intraspecific taxa

*N. c. peninsularis* (Pilbara, W. A., to Burdekin Lynd Divide, Qld) is Least Concern, as is the species. Two other subspecies occur in New Guinea and the Moluccas.

### 7 Past range and abundance

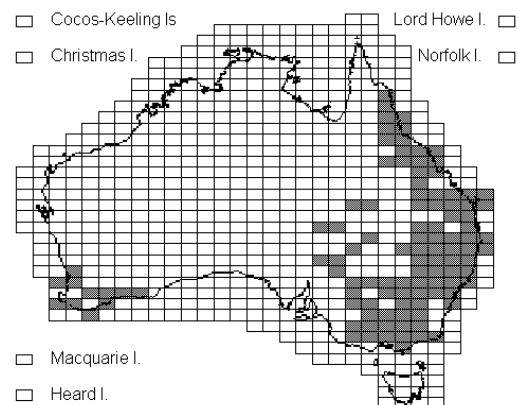
Sparsely distributed through temperate and semi-arid regions from Cooktown, Qld, to Flinders Ra., S. A., extending inland to the Lake Eyre, Bulloo and Murray Darling Basins. Also, coastal and subcoastal Western Australia from Esperance to Greenough R. (Schodde and Mason, 1997, Higgins, 1999, Johnstone and Storr, 1998, Kavanagh *et al.*, 1995a,b).

### 8 Present range and abundance

General distribution as above, but local declines or extinctions recorded in Herbert R. district, Qld (Young and De Lai, 1997), and then through much of New South Wales (Debus, 1997), Victoria (Silveira, 1997) and South Australia (Parker, 1988, Higgins, 1999), as well as in south-west Australia (Johnstone and Storr, 1998). Population size in Victoria estimated at 50 pairs (Silveira *et al.*, 1997). No birds located in recent survey of 100 sites in south-western Western Australia (R. Kavanagh).

### 9 Ecology

The southern subspecies of Barking Owl occurs primarily in dry sclerophyll woodland, particularly that associated with riparian vegetation in the south-west (Johnstone and Storr, 1998) and on forest edges in the south-east (Taylor and Kirsten, 2000). Nesting is in large hollows in live eucalypts, often near open country. Clutch size is 1-3 (Higgins, 1999, NSW NPWS, 1999). Diet is primarily insects the in non-breeding season with birds and mammals, particularly small gliders and rabbits, taken when the owls are breeding (Higgins, 1999).



### 10 Threats

Much of the habitat of the southern subspecies of Barking Owl has been cleared (Silveira, 1997, Higgins, 1999, NSW NPWS, 1999). Forestry practices, particularly those that include the felling of old-growth forests or over-mature trees, further threaten the species by reducing the availability of nesting and roosting hollows and shelter for breeding season prey (Kavanagh *et al.*, 1995b, Taylor and Kirsten, 2000). On private land, much of the remaining habitat is fragmented and subject to further clearing, firewood collection and grazing, and there has been little regeneration (Barrett *et al.*, 1994, Robinson and Traill, 1996, Debus, 1997, NSW NPWS, 1999). In north Queensland, a decline in the species was linked to use of Klerat as a rodenticide around cane farms (Young and De Lai, 1997), though this remains unproven (P. Olsen).

## 11 Recommended actions

- 11.1 Undertake genetic comparisons between populations in south-west and eastern Australia.
- 11.2 Clarify the distribution and obtain baseline estimates of abundance from sites throughout subspecies range, particularly Western Australia and Queensland.
- 11.3 Identify patch size necessary to sustain a population of subspecies.
- 11.4 Involve rural community in surveys and conservation efforts.
- 11.5 Protect all woodland from which subspecies has regularly been recorded from clearing, monitoring compliance biennially.
- 11.6 Secure public land on which the subspecies occurs with conservation management, particularly in timber reserves, transport corridors and local government land
- 11.7 Within the owl's range, manage at least 15% of the pre-European area of all woodland communities on public or private land for nature conservation, using incentives where necessary.
- 11.8 Using appropriate incentives, undertake extension with land-holders that have suitable woodland habitat to promote sound management of remnants and encourage greater connectivity between sub-populations.
- 11.9 Promote revegetation and land reclamation that recreates woodland habitat with a full complement of biodiversity, including the owl.
- 11.10 Control and reduce firewood collection from areas occupied by the subspecies, promoting wood-lot development close to markets, and reduce grazing densities where necessary.

## 12 Bibliography

- Barrett, G. W., Ford, H. A. and Recher, H. F. 1994. Conservation of woodland birds in a fragmented rural landscape. *Pac. Conserv. Biol.* 1:245-256.
- Debus, S. J. S. 1997. The Barking Owl in New South Wales. *Aust. Birds* 30:53-80.
- Higgins, P. J. (ed.) 1999. *Handbook of Australian, New Zealand and Antarctic Birds. Vol. 4. Parrots to Dollarbird.* Oxford University Press, Melbourne.
- Johnstone, R. E. and Storr, G. M. 1998. *Handbook of Western Australian Birds. Vol. 1. Non-passerines (Emu to Dollarbird).* W. A. Museum, Perth.
- Kavanagh, R. P., Debus, S. J. S., Rose, A. B. and Turner, R. J. 1995a. Notes on the diet and habitat of the Barking Owl *Ninox connivens* in New South Wales. *Aust. Bird Watcher* 16:137-144.

Kavanagh, R. P., Debus, S. J. S., Tweedie, T. and Webster, R. 1995b. Distribution of nocturnal forest birds and mammals in north-eastern New South Wales: relationships with environmental variables and management history. *Wildl. Res.* 22:359-377.

NSW NPWS 1999. Draft Barking Owl *Ninox connivens* Recovery Plan. New South Wales National Parks and Wildlife Service, Hurstville.

Parker, S. A. 1988. Records of the Barking Owl from South Australia. *S. Australian Ornithol.* 27:204-206.

Robinson, D. and Traill, B. J. 1996. Conserving woodland birds in the wheat and sheep belts of southern Australia. *RAOU Conservation Statement* 10.

Schodde, R. and Mason, I. J. 1997. Aves (Columbidae to Coraciidae). *Zoological Catalogue of Australia. Vol. 37.2.* W. W. K. Houston and A. Wells (eds). CSIRO Publishing, Melbourne.

Silveira, C. E. 1997. Targeted assessments of key threatened vertebrate fauna in relation to the North-east and Benalla-Mansfield Forest Management Area (NE FMA), Victoria: Barking Owl *Ninox connivens*. Report to Arthur Rylah Institute, Heidelberg.

Silveira, C. E., Yen, A. L., Bennett, A. F., Brown, G. W., Hinkley, S. D., Loyn, R. H., Lumsden, L. F. and Smith, W. 1997. Fauna of the Box-Ironbark study area. Report to the Land Conservation Council, Melbourne.

Taylor, I. R. and Kirsten, I. 1999. Woodland survivors. *Wingspan* 9(4):8-11.

Young, J. and De Lai, L. 1997. Population declines of predatory birds coincident with the introduction of Klerat rodenticide in north Queensland. *Aust. Bird Watcher* 17:160-167.

### Comments received from

John Blyth, Allan Burbidge, Stephen Debus, Rod Kavanagh, Richard Loyn, Penny Olsen, Paul Peake, Doug Robinson.