

TAXON SUMMARY

Partridge Pigeon (eastern)

1	Family	Columbidae
2	Scientific name	<i>Geophaps smithii smithii</i> (Jardine & Selby, 1830)
3	Common name	Partridge Pigeon (eastern)
4	Conservation status	Near Threatened: a

5 Reasons for listing

The extent of occurrence has contracted by more than 50% (Near Threatened: a), but, if continuing, is slow and gradual (so not Vulnerable: A).

	Estimate	Reliability
Extent of occurrence	250,000 km ²	medium
trend	stable	low
Area of occupancy	5,000 km ²	low
trend	stable	low
No. of breeding birds	15,000	low
trend	decreasing	low
No. of sub-populations	1	medium
Generation time	5 years	low

6 Intraspecific taxa

G. s. blaauwi (Kimberley Region, north-west Western Australia) is Vulnerable. Global status of the species is Near Threatened.

7 Past range and abundance

Recorded from Kununurra, W. A., east to McArthur R., N. T., and on Melville and Bathurst Is (Storr, 1977, Blakers *et al.*, 1984, Higgins and Davies, 1996, Schodde and Mason, 1997). Assumed to breed throughout range (Higgins and Davies, 1996).

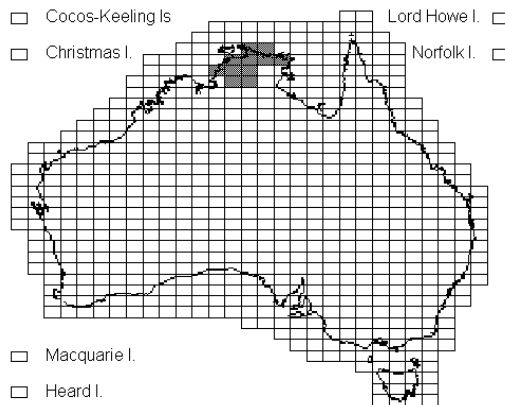
8 Present range and abundance

Severe range contractions from western, eastern and southern parts of former distribution, mostly occurring early in the 20th century (Higgins and Davies, 1996, Schodde and Mason, 1997), though possibly continuing slowly (J. Woinarski). Now recorded only in sub-coastal northern Northern Territory, principally from Kakadu or between Katherine and Darwin (though these are the most accessible parts of its range) and the Tiwi Is (J. Woinarski), also recorded near the McKinley, Daly and Finnis Rivers and west of Katherine.

9 Ecology

This subspecies of Partridge Pigeon lives primarily in open forest and woodland dominated by Darwin Stringybark *Eucalyptus tetradonta* and Darwin Woollybutt *E. miniata* that has a structurally diverse understorey (Braithwaite, 1985, F. Fraser). Breeding occurs during the dry season, between March and October. The nests are made on the ground, most often at the base of a clump of grass (Frith, 1982). The

species generally lays two eggs (Frith, 1982, Higgins and Davies, 1996). Partridge Pigeons feed on seeds taken from bare ground, often amidst sparse grasses, but commonly where the ground layer has been removed by fire (Frith, 1982, Braithwaite and Estbergs, 1988, F. Fraser). They may largely avoid extensive areas of annual sorghum (F. Fraser).



10 Threats

This species is found over less than half its former distribution. Changing fire regimes are implicated as the main threat. Aboriginal people formerly burnt in a way that produced a mosaic of fire intensities, fire seasons, between-fire intervals, and thus a spatial diversity of vegetation structures (Haynes, 1985, Russell-Smith *et al.*, 1997a). Although early fires burn some nests, their neglect means that late dry season fires promote a uniform vegetation of tall annual sorghum. Most areas in which this subspecies persists are still under Aboriginal management or a fire regime that promotes a mosaic of fire ages (Press, 1988, Russell-Smith *et al.*, 1997b), including wet season burns, which control sorghum (Stocker and Sturtz, 1966). Degradation of waterholes by cattle, traditional hunting or predation by feral cats, cited as possible threats in Braithwaite and Garnett (1992) are now considered insignificant causes of death (F. Fraser).

11 Recommended actions

- 11.1 Investigate effects of sorghum invasion on pigeon behaviour and abundance.
- 11.2 Develop robust monitoring techniques.
- 11.3 Manage land with a tight mosaic of burning over entire range of species.

11.4 Monitor abundance in landscapes under different management.

12 Bibliography

Blakers, M., Davies, S. J. J. F. and Reilly, P. N. 1984. *The Atlas of Australian Birds*. RAOU and Melbourne University Press, Melbourne.

Braithwaite, R. W. 1985. The Kakadu fauna survey: an ecological survey of Kakadu National Park. Unpubl. report, Australian National Parks and Wildlife Service, Canberra.

Braithwaite, R. W. and Estbergs, J. 1988. Firebirds of the Top End. *Aust. Nat. Hist.* 22:298-302.

Braithwaite, R. W. and Garnett, S.T. 1992. Partridge pigeon (eastern subspecies). Pp. 73-74 in *Threatened and Extinct Birds of Australia*. RAOU Report 82. S.T. Garnett (ed.). Royal Australasian Ornithologists Union, Melbourne, and Australian National Parks and Wildlife Service, Canberra.

Frith, H. J. 1982. *Pigeons and Doves of Australia*. Rigby, Adelaide.

Haynes, C. D., 1985. The pattern of *munwag*. Traditional Aboriginal fire regimes in north-central Arnhemland. *Proc. Ecol. Soc. Aust.* 13:203-14.

Higgins, P. J. and Davies, S. J. J. F. (eds) 1996. *Handbook of Australian, New Zealand and Antarctic Birds*. Vol. 3. *Snipe to Pigeons*. Oxford University Press, Melbourne.

Press, A. J. 1988. Comparisons of the extent of fire in different land management systems in the top end of

the Northern Territory. *Proc. Ecol. Soc. Aust.* 15:167-175.

Russell-Smith, J., Lucas, D., Gapindi, M., Gunbunuka, B., Kapirigi, N., Namingam, G., Lucas, K. and Chaloupka, G. 1997a. Aboriginal resource utilisation and fire management practice in western Arnhemland, monsoonal northern Australia. Notes for prehistory, lessons for the future. *Human Ecology* 25:159-196.

Russell-Smith, J., Ryan, P. G. and Durieu, R. 1997b. A LANDSAT MSS-derived fire history of Kakadu National Park, monsoonal northern Australia, 1980-94: seasonal extent, frequency and patchiness. A LANDSAT MSS-derived fire history of Kakadu National Park, monsoonal northern Australia, 1980-94: seasonal extent, frequency and patchiness. *J. Appl. Ecol.* 34:748-766.

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.

Stocker, G. C. and Sturtz, J. D. 1966. The use of fire to establish Townsville lucerne in the Northern Territory. *Australian Journal of Experimental Agriculture and Animal Husbandry* 6: 277-279.

Storr, G. M. 1977. Birds of the Northern Territory. *W. Aust. Mus. Spec. Publ.* 7:1-130.

Text adapted from

Braithwaite and Garnett (1992).

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