

The Orange-footed Scrubfowl *Megapodius reinwardt* as an Urban Bird in Darwin, Northern Territory

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Summary

We report observations of Orange-footed Scrubfowl *Megapodius reinwardt* in 23 of 30 suburbs of Darwin, Northern Territory, with nest-mounds in eight. Occupation of the suburbs by Scrubfowl appears to have occurred in the last decade or so. It is unclear whether the urban population of Scrubfowl is self-sustaining or supported by overflow from nearby monsoon-rainforest patches.

Introduction

Loss of habitat, along with their large size and ground-dwelling and mound-building habits, renders megapodes vulnerable to a variety of threatening processes; consequently, two species are endangered (one critically) and seven are vulnerable (Dekker *et al.* 2000). However, the Australian Brush-turkey *Alectura lathami* is faring relatively well and has even adopted suburbia as habitat (Jones & Everding 1991, Jones *et al.* 2004). The Orange-footed Scrubfowl *Megapodius reinwardt* remains locally common in coastal northern Queensland and the Northern Territory (Barrett *et al.* 2003), and also occurs in northern Western Australia, Indonesia, and New Guinea. However, it is normally considered to be a shy species associated with rainforest, vine-thicket and associated (non-urban) habitats (Marchant & Higgins 1993).

Darwin (12°27' S, 130°50' E) in the Northern Territory is a coastal city of approximately 90 000 people. Its mean annual rainfall of 1650 mm falls mostly between November and March inclusive. Notwithstanding a 60% loss of monsoon-rainforest area since 1945 because of urban development and a combination of cyclone damage, weed invasion and fire, some 204 ha of spring-fed rainforest and coastal vine-thicket (collectively, monsoon rainforests) remain within and around the fringes of the city, mostly within conservation reserves (Panton 1993). These monsoon-rainforest patches are well known to support breeding populations of Scrubfowl (Crawford 1972, Thompson & Goodfellow 1987, Palmer *et al.* 2000). In this note, we briefly document the adoption of urban habitat by Scrubfowl in the city of Darwin.

Methods

In addition to our own (numerous) observations, we actively sought records of Scrubfowl and their nest-mounds in and around Darwin from three sources during 1998: (1) from members of the Darwin-based Northern Territory Field Naturalists Club; (2) from professional colleagues including Wildlife Rescue staff (Parks & Wildlife, Northern Territory); and (3) from the public via two interviews on local radio stations.

Table 1

Suburbs of Darwin for which reports of Orange-footed Scrubfowl *Megapodius reinwardt* during or before 1998 were received, with the number of reports for each. * = suburb for which a mound has been reported. + = suburb adjacent to monsoon-rainforest patches known to support breeding populations of Scrubfowl.

Alawa	2	Larrakeyah	5	Parap *	3
Berrimah	4	Leanyer +	2	Rapid Creek **	4
Brinkin	1	Ludmilla *	3	Stuart Park *	6
Central Business District	2	Malak	2	The Gardens	3
Coconut Grove **	4	Marrara	1	The Narrows	2
Fannie Bay **	5	Millner	22	Tiwi +	1
Jingili *	2	Nakara	1	Wanguri	1
Karama +	1	Nightcliff *	5		

Suburbs without Scrubfowl records: Anula, Casuarina, Moil, Palmerston, Wagaman, Winnellie, Wulagi.

Results

We obtained 82 records of Scrubfowl from 23 of 30 named suburbs in Darwin (Table 1), a tally that specifically excludes records from bushland reserves. Mounds were reported from eight suburbs. There were no records from the satellite city of Palmerston, 15 km inland from the Darwin Central Business District (CBD).

This survey undoubtedly has geographic and other biases, but several trends are evident. Most records, and all reported mounds, were in the older, western, coastal and subcoastal suburbs, from the CBD 11 km north to Rapid Creek, and in at least some of these suburbs Scrubfowl are clearly resident. In the suburb of Nightcliff, which lacks monsoon-rainforest patches, the nocturnal calls of the Scrubfowl have been regularly heard over a 5-year period, and birds have been observed flying to nocturnal roosts at dusk on many occasions (DCF pers. obs.). Scrubfowl are abundant in the Darwin Botanic Gardens (McCrie & Watson 2003). Reports of Scrubfowl in the more easterly suburbs (north and south of the airport) were mostly isolated records of birds spending little time in the area, as no additional records from observers were made in these suburbs. Nearly all records were of adults, but at least one was of a juvenile. Many records describe Scrubfowl walking across roads and foraging on open lawns, and there are three records of birds entering buildings. Nest-mounds were mostly in private gardens but one record was from a small urban park. These birds are not shy.

The Wildlife Rescue Unit of Parks & Wildlife has received many calls from the public for Scrubfowl injured by cars or pets, and also from residents unhappy with the garden-raking habits of the species (W. Bergen pers. comm.). As with the Brush-turkey in Brisbane, Qld (Jones & Everding 1991), not everyone appreciates the urbanisation of unusual wildlife.

Discussion

The occurrence of Scrubfowl in suburban Darwin appears to be a recent (post-1990) phenomenon, as this species was considered by Crawford (1972) and Thompson & Goodfellow (1987) to be restricted to monsoon rainforests. We speculate that two factors have promoted a recent expansion. The first is the rapid growth of suitably moist and well-vegetated gardens in the tropical climate, with

the modern expansion of Darwin and in particular its recovery since Cyclone Tracey devastated the city in December 1974. Secondly, occupation of well-vegetated suburbs may have been facilitated by high juvenile survival in adjacent monsoon-rainforest reserves during the mid-to-late 1990s, when three of the four wettest years on record occurred. With its seasonal extremes of rainfall, the monsoonal climate imposes a regimen that includes markedly lower levels of insects (e.g. Dawes-Gromadzki & Spain 2003) and fruit (Bach 2002) in the dry season, which may well pose problems for a litter-foraging omnivore such as juvenile Scrubfowl.

Nevertheless, the occupation of suburban Darwin by Scrubfowl is far from complete, with indications that newer suburbs and those farther from remnant monsoon-rainforest patches are less likely to be occupied. Furthermore, we are perplexed by the relatively few reports of the obvious mounds in urban areas, perhaps suggesting some limitation to the Scrubfowl's ability to breed there.

Urban habitat is not threatened and, as gardens mature, the newer suburbs of Darwin appear destined to become as well-vegetated as the older ones. The species' ability to exploit this habitat may serve to consolidate and connect otherwise fragmented monsoon-rainforest populations. On the other hand, it is also possible that the urban area is primarily a population sink for excess young from nearby monsoon rainforests that may seek breeding territories of their own, though with limited success, as they mature.

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