



## Surveys of birds at Duggan Park, Toowoomba, Queensland, by A Rocha Australia in 2024

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**Introduction.** A Rocha Australia <sup>1</sup> is part of the A Rocha family of Christian environmental conservation organizations active in over 20 countries across six continents, and is a registered charity in Australia. It focuses on environmental science and research, practical nature conservation, environmental education, creation care and advocacy. The cluster of A Rocha members in the Toowoomba area volunteers alongside Friends of the Escarpment Parks Toowoomba Inc. (FEP), in control of invasive plants and documenting biodiversity values in bushland parks owned and managed by Toowoomba Regional Council (TRC).

Since 2021, A Rocha has developed a systematic inventory of bird species in Duggan Park occurring in weeded open forest with tall shrub understorey. This reserve of about 8 hectares is at the interface of Toowoomba's urban area and the east-facing escarpment of the Great Dividing Range, (altitude ca. 700 m). It remains relatively well-connected to extensive bushland along the escarpment although it has gradually become almost surrounded by houses. Wise holistic management of bushland requires deep understanding of its biodiversity and of the ecological processes that support it; the project delivers information to TRC and FEP for park management.

This report addresses the fourth year of bird surveys. It should be read in conjunction with the report on 2023 surveys because some descriptions, maps and data have not been repeated here.

Methods. Location maps and a description of the survey site are in the 2023 surveys report.

The bird survey method applied by A Rocha at Duggan Park has been the 2-hectare, 20-minute area search. This is a type of standardised woodland survey preferred by BirdLife Australia, in which all bird species confidently identified within or overflying the survey plot are counted and data are entered to an online national database known as Birdata <sup>2</sup>. Birdata records from across the range of occurrence of a bird species can be analysed to detect trends in its population.

Whereas monthly bird surveys were conducted at Duggan Park from August 2021 to the end of 2023, in 2024 the primary approach changed to conducting quarterly visits, with surveys at four times of day—including a nocturnal search. This delivered 16 surveys in the year, covering all four seasons, supplemented with some additional 2ha-20min surveys and incidental records.

Rainfall in Toowoomba in 2024 was significantly above average though less so than in 2022; this sustained the lush dense understorey and ground cover of the survey plot. Succession was evident in the increased height of red ash and brush box saplings, decline of poison peach shrubs and the (anticipated) collapse of many pole-like Acacias that had reached the end of their lives.

**Results.** Due to some extra efforts made in summer, which is typically an under-represented season in local bird surveys, and in autumn, a total of 23 standardised (2ha-20min) surveys was achieved by A Rocha at Duggan Park in 2024; also, one incidental survey.

A list of birds recorded in 2024 is in Table 1, with number of records and highest count.

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https://australia.arocha.org/

<sup>&</sup>lt;sup>2</sup> https://birdata.birdlife.org.au/home





L to R: Dusky Woodswallow, Grey Goshawk & Yellow-faced Honeyeater



The following are some of the highlights of results from 2024:

- 58 bird species were recorded including 23 species of small bush bird.
- Ten species were recorded for the first time in this plot: Australian Wood Duck, Eastern Koel, Grey Goshawk, Boobook, Musk Lorikeet, Blue-faced Honeyeater, Rufous Whistler, Dusky Woodswallow, Spangled Drongo, and Torresian Crow. Cumulative total: now **70 bird species**.
- One listed species (EPBC Act 1999): Rufous Fantail, Migratory, with 3 records, up to 3 birds.
- Abundant winter visitors: on 17 August, 24 Dusky Woodswallows flew overhead heading south, with another 50 counted outside the 20-minute period; 14 Yellow-faced Honeyeaters and 17 Grey Fantails were counted in the plot on 20 April (cf. 16 Grey Fantails on 15/4/23).
- A breeding record of Brush-turkey (2 juveniles); and Australian Wood Duck and Oriental Dollarbird probably nested in some of the site's large dead trees.
- Uncommon species: Grey Goshawk (on 19 December), Painted Button-quail (2 January), & Regent Bowerbird (17 August).
- Nocturnal species: Southern Boobook and Tawny Frogmouth.
- Only two records of Noisy Miner actually in the densely wooded plot; up to 2 individuals.
- The average number of species in 2ha plot surveys (n = 23) in 2024 was 14 (cf. 13 in 2023).
- The bower of Satin Bowerbird in the plot persisted despite occasional damage incurred.
- 266 bird records were contributed to the Birdata national database.

**Conclusions.** The several conclusions stated in the report on surveys from 2021 to 2023 largely were reconfirmed as a result of the 2024 surveys and are summarised/updated as follows:

- 1. Methods applied for the project remained effective; four rounds (seasons) of four daily surveys has been equally if not more productive than single monthly surveys.
- 2. As predicted, additional bird species were recorded in the survey plot in 2024; still more species may be detected in follow up surveys—which are recommended to continue.
- 3. Additional information that confirms differences in the bird faunas of Duggan Park and nearby Nielsen Park has been obtained, notably the greater number and abundance of small bush birds and lesser influence of Noisy Miners, at Duggan Park.
- 4. Relatively few birds have been found breeding in these surveys but the method (20-minute time limit) is not conducive to patient watching and searching for evidence of breeding.
- 5. Despite some natural changes to understorey vegetation, no obvious gross changes to the bird fauna of Duggan Park have occurred over the project duration (2021-2024), which cannot be readily explained, e.g. due to transient occurrences, or to survey methods.
- 6. Apart from one record, Painted Button-quail seemed to be absent from Duggan Park in 2023 and 2024, such that their presence and breeding in 2021-22 may have been episodic.
- 7. Future surveys should watch for a few 'resident' species (White-throated Treecreeper, Redbrowed Finch, Wonga Pigeon) that were recorded in 2021-23 but not in 2024.
- 8. The project has reconfirmed in a systematic way, that Duggan Park remains an important component of the bushland park estate on Toowoomba's eastern escarpment.

Table 1. List of bird species recorded by A Rocha Australia, number of records, and highest count, in 23 surveys of a 2.0 hectare plot in open forest at Duggan Park, Toowoomba, in calendar year 2024.

		No. of	Highest			No. of	Highest
Common Name	Scientific Name	records,	number	Common Name	Scientific Name	records,	number
		all surveys	counted			all surveys	counted
Australasian Figbird	Sphecotheres vieilloti	1	1	Noisy Miner	Manorina melanocephala	2	2
Australian Brush-turkey	Alectura lathami	3	2	Olive-backed Oriole	Oriolus sagittatus	5	2
Australian King-Parrot	Alisterus scapularis	6	2	Oriental Dollarbird	Eurystomus orientalis	6	3
Australian Magpie	Gymnorhina tibicen	6	3	Painted Button-quail	Turnix varius	1	1
Australian Wood Duck	Chenonetta jubata	1	2	Pale-headed Rosella	Platycercus adscitus	10	3
Bar-shouldered Dove	Geopelia humeralis	3	1	Pied Currawong	Strepera graculina	9	3
Black-faced Cuckoo-shrike	Coracina novaehollandiae	5	3	Rainbow Lorikeet	Trichoglossus moluccanus	6	11
Blue-faced Honeyeater	Entomyzon cyanotis	1	1	Red Wattlebird	Anthochaera carunculata	4	2
Brown Cuckoo-Dove	Macropygia phasianella	4	1	Regent Bowerbird	Sericulus chrysocephalus	1	1
Brown Thornbill	Acanthiza pusilla	15	5	Rose Robin	Petroica rosea	1	1
Common Cicadabird	Edolisoma tenuirostre	1	1	Rufous Fantail	Rhipidura rufifrons	3	3
Dusky Woodswallow	Artamus cyanopterus	1	24	Rufous Whistler	Pachycephala rufiventris	1	1
Eastern Koel	Eudynamys orientalis	1	1	Sacred Kingfisher	Todiramphus sanctus	4	2
Eastern Spinebill	Acanthorhynchus tenuirostris	3	1	Satin Bowerbird	Ptilonorhynchus violaceus	9	2
Eastern Whipbird	Psophodes olivaceus	5	2	Scaly-breasted Lorikeet	Trichoglossus chlorolepidotus	8	4
Eastern Yellow Robin	Eopsaltria australis	7	4	Scarlet Honeyeater	Myzomela sanguinolenta	1	1
Galah	Eolophus roseicapilla	8	3	Silvereye	Zosterops lateralis	11	8
Golden Whistler	Pachycephala pectoralis	8	2	Southern Boobook	Ninox boobook	1	1
Grey Butcherbird	Cracticus torquatus	2	1	Spangled Drongo	Dicrurus bracteatus	1	1
Grey Fantail	Rhipidura albiscapa	9	17	Spotted Pardalote	Pardalotus punctatus	10	3
Grey Goshawk	Accipiter novaehollandiae	1	1	Striated Pardalote	Pardalotus striatus	6	2
Grey Shrike-thrush	Colluricincla harmonica	3	1	Sulphur-crested Cockatoo	Cacatua galerita	3	2
Laughing Kookaburra	Dacelo novaeguineae	3	2	Tawny Frogmouth	Podargus strigoides	2	2
Leaden Flycatcher	Myiagra rubecula	2	1	Torresian Crow	Corvus orru	2	1
Lewin's Honeyeater	Meliphaga lewinii	19	7	Variegated Fairy-wren	Malurus lamberti	3	4
Little Corella	Cacatua sanguinea	3	2	Welcome Swallow	Hirundo neoxena	1	3
Magpie-lark	Grallina cyanoleuca	2	1	White-browed Scrubwren	Sericornis frontalis	7	2
Musk Lorikeet	Glossopsitta concinna	1	1	White-naped Honeyeater	Melithreptus lunatus	1	1
Noisy Friarbird	Philemon corniculatus	5	5	Yellow-faced Honeyeater	Caligavis chrysops	18	14