



**Macedon
Ranges**
Shire Council

Macedon Ranges Bird Survey Report 2020



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Background

The Macedon Ranges Shire Council Biodiversity Strategy recommends the implementation of a shire wide biodiversity monitoring program that incorporates citizen science and utilises a focal species approach to assess landscape health. Birds surveys are one of the monitoring approaches proposed.

Birds are useful environmental indicators of change and aid in assessing the health of an ecosystem. Different birds tend to use different habitats – and their presence or absence may act as indicators of habitat type and quality. This data will help Council monitor what changes in biodiversity are potentially occurring across the Macedon Ranges.

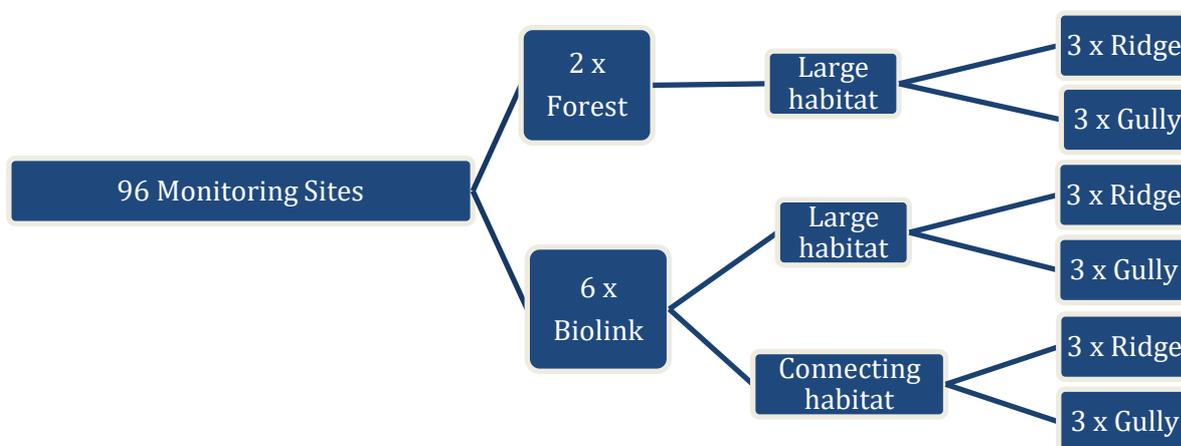
This report provides a basic summary of the results of the bird surveys that occurred in 2020. Further analysis of the data will be undertaken once consecutive surveys are completed in future years.

Aims

- Monitor changes in biodiversity with the development of a long-term data set.
- Provide opportunities for the broader public to be involved in the surveys to improve environmental educational outcomes and appreciation for natural assets.
- Contribute all data collected to the Victorian Biodiversity Atlas.
- Develop a greater understanding of bird populations in the Macedon Ranges.

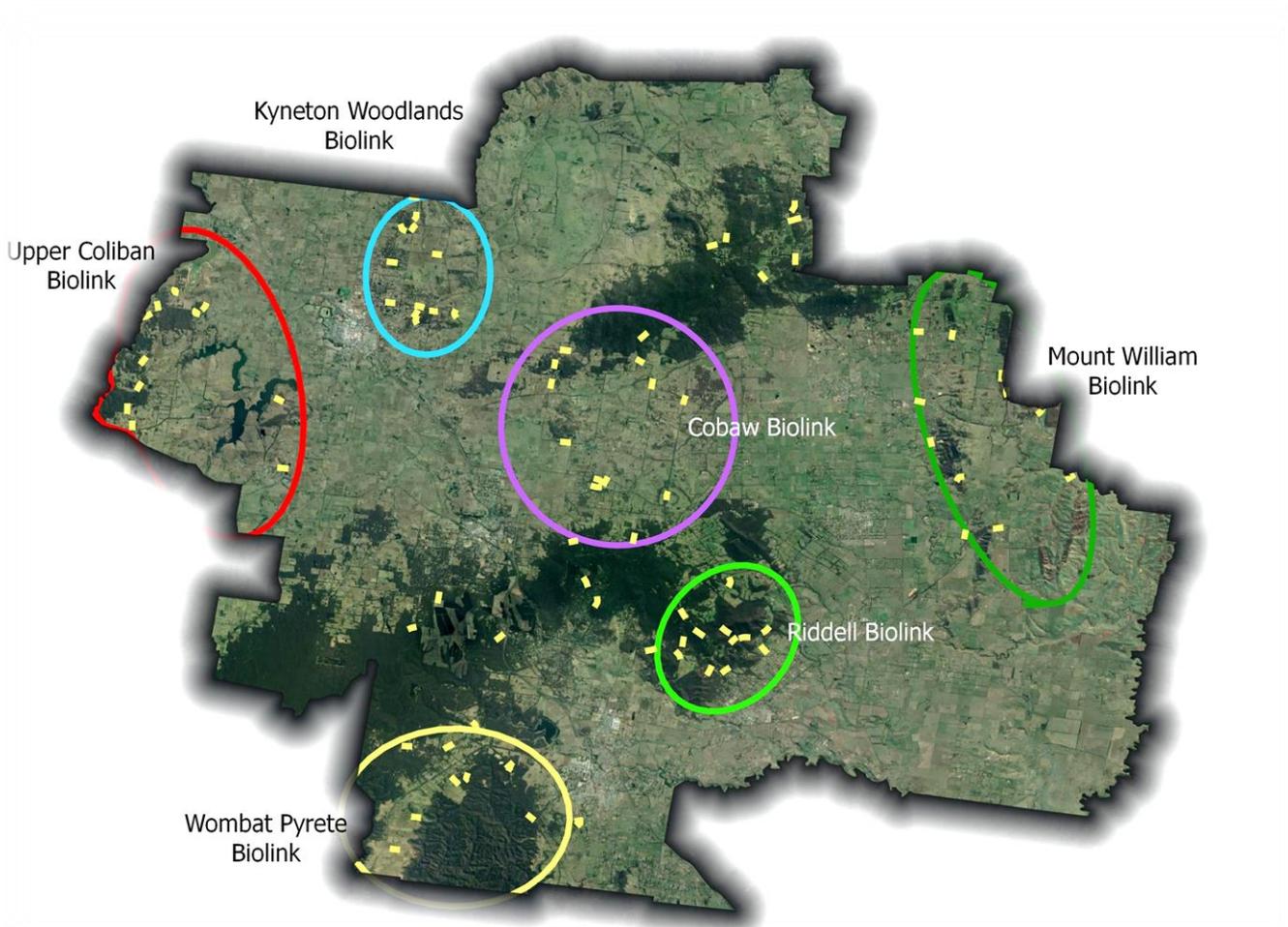
Methodology

Monitoring sites were carefully selected by using a stratification of the six biolink areas plus two forest blocks (Wombat, Cobaw), patch size (large patch, connecting site), and vegetation type (dry ridge, wet gully) giving 32 combinations of treatments. A minimum of three sites per treatment were selected. In the two large forest patches (Cobaw and Macedon) only large habitat sites were selected resulting in six survey sites.



Bird surveys were completed by using the standardized Birdlife two-hectare method in which an area of this size has all birds recorded within a 20 minute period. Surveys were completed in early spring. The surveys were manually recorded using a datasheet. The sheet also allowed for recording of incidental birds seen outside of the two-hectare study sites or outside of the permitted 20 minute timeframe. All birds recorded were added to the Victorian Biodiversity Atlas.

Map of survey sites and biolinks



Survey Site identification

Each survey site was given a unique code and wooden stakes were placed at either end of each bird monitoring transect to signify a start and a finish location.

Citizen science - the Macedon Ranges Bird Blitz

The Macedon Ranges Bird Blitz aims to engage a broad range of people to be able to participate and contribute to the bird surveys. Small groups of volunteers assisted with surveying 3 to 4 sites. Each group had at least one 'leader' who was confident with bird identification from both sight and sound.

Timing

The 2020 Bird Blitz took place on Sunday 18 October 2020. Unlike surveys undertaken in 2019, the Covid - 19 requirements meant that large groups of people could not participate. Instead, the surveys involved individuals working along to undertake the surveys.

While the majority of bird surveys were completed during the Bird Blitz, additional surveys were completed in the following week by Council's Environmental Programs and Engagement Officer in partnership with the Woodend Bird Observers Group and other volunteers.

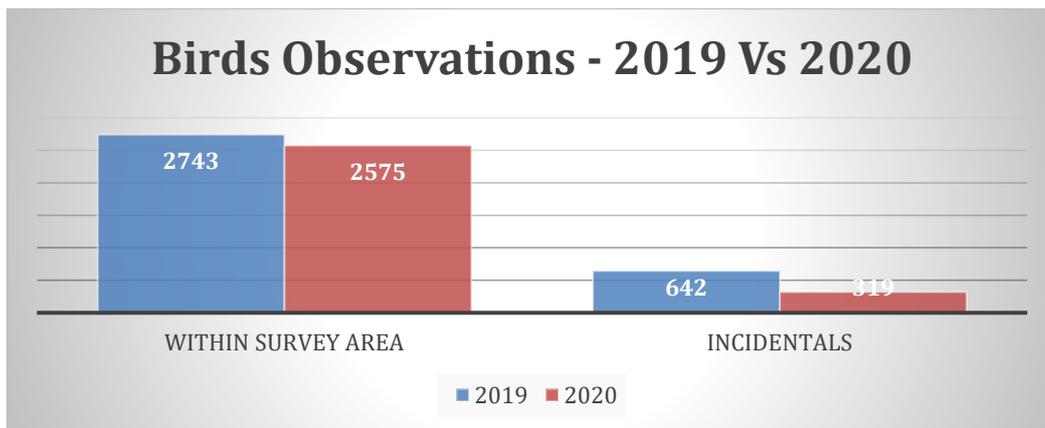


Results of the 2020 surveys

In total **94** species were recorded including five threatened species at twelve sites. A full list of species is provided in Appendix 1. The surveys recorded **2,575** individual bird observations including **2,256** inside of the two-hectare study areas and another **319** recorded as incidentals.

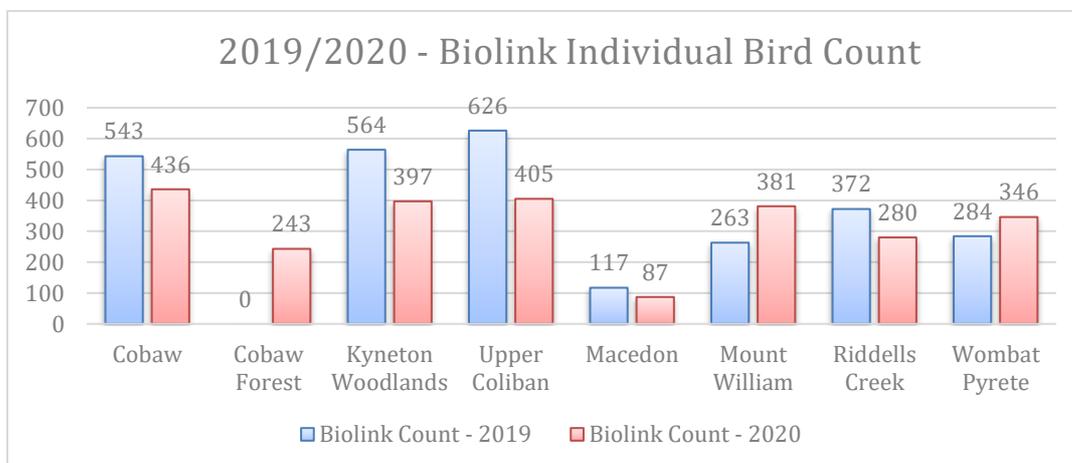
Number of Birds Observed

Results from the bird blitz shows a higher number of birds was observed in 2019.



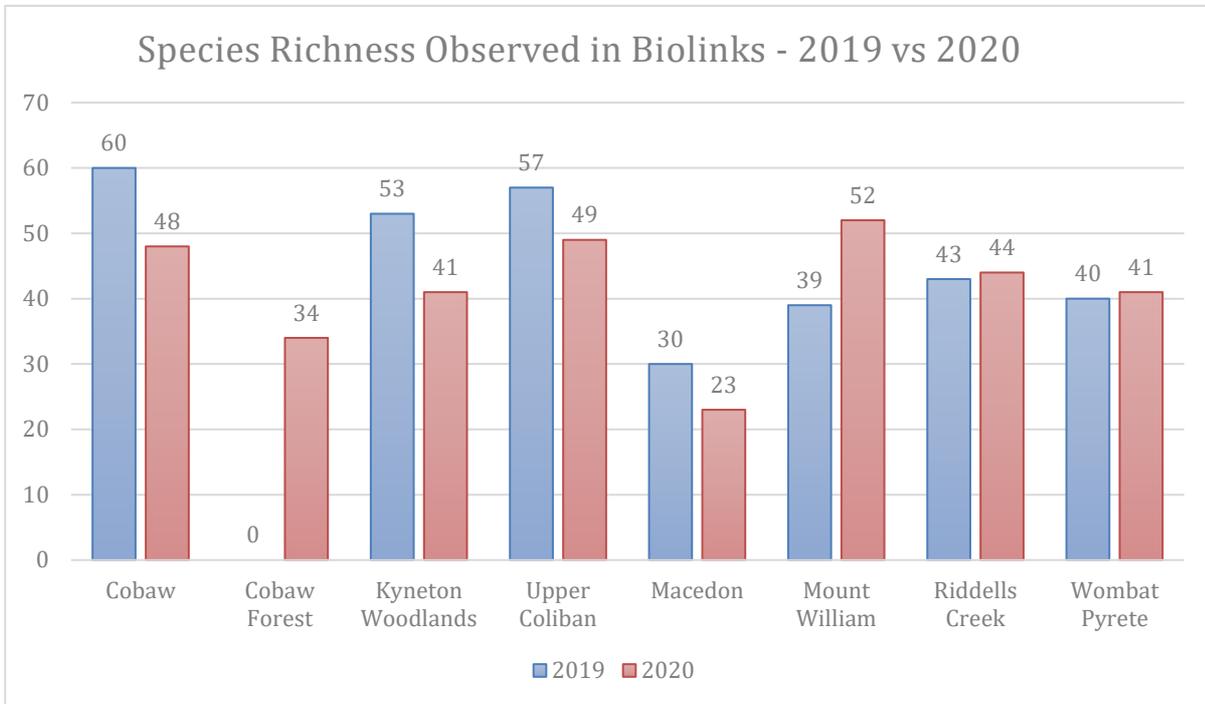
Comparison of the records for individual biolinks shows bird observations were higher in both years in Cobaw, Kyneton Woodlands and the Upper Coliban biolinks. These biolinks all have significant existing connecting habitat and remain a priority for restoration efforts.

It should be noted that there are only six monitoring sites in the Cobaw Forest and Macedon biolinks which influences the total numbers of birds counted. In addition, the Cobaw Forest sites were not surveyed in 2019 but were included in the 2020 Bird Blitz.



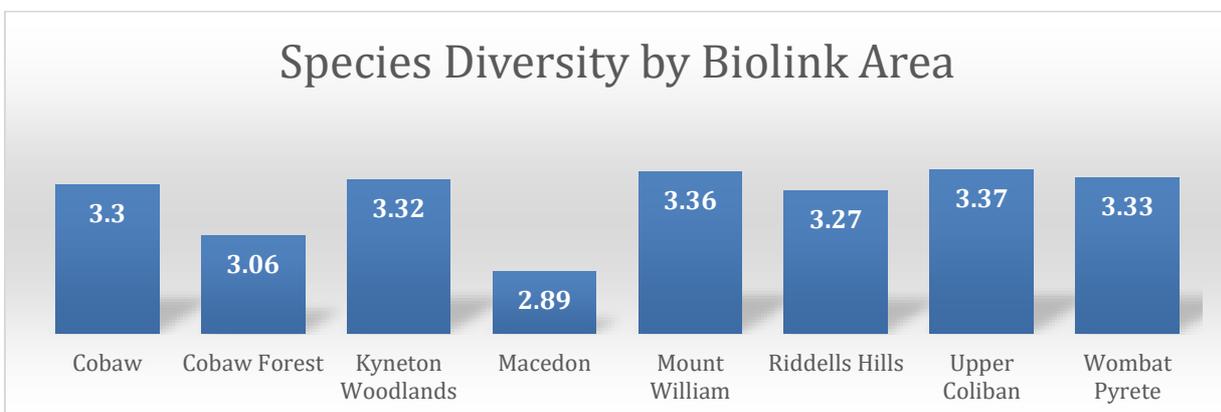
Species Richness

94 species of birds were observed across the Shire – 16 less than the 2019 Bird Blitz. The Crimson Rosella and Australian Magpie were the two most observed species. The Australian Magpie is a disturbance specialist thriving in both rural and urban settings. Crimson Rosella numbers appear to have remained stable. The highest number of species was found in the Mount William biolink where 52 species were observed. Cobaw and Upper Coliban biolinks had the next highest number of species observed.



Species Diversity

Species diversity was measured using the Shannon diversity index indicating the abundance and evenness of species present at each individual Biolink. Data compared across each of the biolink sites shows the Macedon Biolink rates lowest on the species diversity index with a rating of 2.89 and 23 species observed during the survey. The Upper Coliban is rated at 3.37 with 49 species being observed. These trends will be monitored to help understand any significant changes that may occur across biolinks and their relationships with species diversity.



Individual and Threatened Species

Five threatened species were recorded at twelve sites including the Brown Treecreeper, Pied Cormorant and Nankeen Night Heron. Another species, the Brown-headed Honeyeater is listed as being threatened as part of the woodland bird community listing.

A number of locally uncommon birds (White-winged Triller, Western Gerygone and Black-chinned Honeyeater) which were recorded last year did not show in the surveys in 2020. However, other unusual visitors also appeared such as the Nankeen Night Heron and the Scarlet Honeyeaters.

Crimson Rosella was the most commonly recorded species at 76% of site. Other species of note include White-throated Treecreepers observed at 52% of sites, Superb Fairywrens on 48% of sites and Sacred Kingfishers recorded at 16% of sites.

A rare visitor in 2016 has again returned to the area in big numbers, the Scarlet Honeyeaters were abundant in the Lancefield district.

A nesting pair of Brush-Bronzewing Pigeons were records near Mount William. This is the first official record of the species in the Macedon Ranges.

Introduced Species

Many introduced bird species thrive in cleared agricultural areas, disturbed areas and open woodlands. Compared to 2019, the Common Starling was observed in low numbers. Species like the Common Starling can be known to nest in hollows and compete with native parrots and other native nesting-hollow species during breeding season. Numbers of Indian Myna were slightly increased.



Top 20 Bird List

2019		2020	
Species	Total	Species	Total
Australian Magpie	277	Crimson Rosella	231
Crimson Rosella	231	Australian magpie	216
Sulphur Crested Cockatoo	195	Grey Fantail	159
Grey Fantail	176	Yellow-faced Honeyeater	155
Yellow-faced Honeyeater	152	Striated Thornbill	126
Striated Pardalote	122	Spotted Pardalote	111
Striated Thornbill	110	Striated Pardalote	105
Red Wattlebird	105	Little Raven	99
Spotted Pardalote	92	Superb Fairywren	97
Superb Fairy Wren	88	Sulphur Crested Cockatoo	92
White-throated Treecreeper	81	White-throated Treecreeper	81
Kookaburra	75	Red Wattlebird	77
Little Raven	72	Brown Thornbill	72
White-naped Honeyeater	72	Grey Shrike-thrush	69
Brown Thornbill	58	White-naped Honeyeater	62
Long-billed Corella	55	Long-billed Corella	59
White-winged Chough	49	Wood Duck	58
Grey Shrike-thrush	46	White-winged Chough	57
Rufous Whistler	42	White-browed Scrubwren	54
White-browed Scrubwren	41	Kookaburra	48

Nankeen Night Heron was found in Newham



Sacred Kingfisher at Jim Road, Newham



Conclusion

This report provides a summary of the key results for Macedon Ranges Shire Council's 2021 Bird Blitz surveys.

In the 2020 Macedon Ranges Bird Blitz, **94** species were recorded including five threatened species across twelve sites. The surveys recorded **2,575** individual bird observations. All records have been uploaded to the Victorian Biodiversity Atlas.

There were some interesting sightings including five threatened species, the first official record of Brush-Bronzewing Pigeons, and the occurrence of unusual visitors such as the Nankeen Night Heron and Scarlet Honeyeaters. Future surveys will help determine if these species represent a growing trend in bird movements or if these were isolated observations.

It is suggested that longer term trends and landscape scale patterns be assessed following the 2021 Bird Blitz.

Any enquires can be directed to the Council's Environment Team by emailing environment@mrsc.vic.gov.au



Scarlet Honeyeaters were an unusual visitor to the area. Photo W Terry.

Acknowledgements

Macedon Ranges Shire Council wishes to acknowledge the efforts of the many volunteers that assisted with the surveys during the Bird Blitz, and the additional surveys.

Our survey leaders deserve a special thank you: Mark Buckby, Amy Navaisha, Jen Firestone, Jane Rusden, Sue Boekel, Robin Ford, Ian Temby, Caitlin Griffiths, Tony Mew, Kathy Newing, John Shaw, Peter Webb and William Terry.



Superb Fairywren amongst the Gorse in Pipers Creek. Photo W Terry.

Appendix 1. Summary of birds recorded

Recorded threatened species are listed under the Flora and Fauna Guarantee Act (FFG) and/or the DELWP Threatened Fauna Advisory listings.

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Rufous Whistler	42	White-browed Scrubwren	54
White-browed Scrubwren	41	Kookaburra	48
Tree Martin	40	Rufous Whistler	45
Fairymartin	30	White-eared Honeyeater	36
Welcome Swallow	28	Galah	30
Galah	26	Pied Currawong	30
Maned Duck	25	Australian Raven	29
Common Starling	22	Yellow-rumped Thornbill	26
Common Blackbird	21	Common Blackbird	24
Pied Currawong	20	Sacred Kingfisher	20
White-winged Triller	18	Golden Whistler	20
New Holland Honeyeater	17	Buff-rumped Thornbill	16
Black-faced Cuckoo Shrike	16	Common Myna	14
Eurasian Coot	16	Grey Currawong	14
European Goldfinch	16	Black-faced Cuckoo-Shrike	13
Yellow-Rumped Thornbill	16	Fantail Cuckoo	13
Eastern Yellow Robin	15	Welcome Swallow	12
White-eared Honeyeater	15	New Holland Honeyeater	11
Australian Raven	14	Shining Bronze Cuckoo	10
Grey Currawong	14	Eastern yellow robin	9
Common Myna	13	White-faced Heron	9
Black Swan	12	Brown-headed Honeyeater (FFG)	7
Australian Golden Whistler	11	Scarlet Honeyeater	7
Buff-Rumped Thornbill	10	Yellow Thornbill	7
Dusky Woodswallow	10	Noisy Miner	6
Masked Lapwing	10	Silvereye	6
Pallid Cuckoo	10	Eastern Rosella	5

Sacred Kingfisher	10	Grey Teal	5
Magpie Lark	9	Pacific Black Duck	5
Black-chinned Honeyeater	8	Bronzewing Pigeon	4
Scarlet Robin	8	Common Starling	4
Wedge-tailed Eagles	8	Eastern Spinebill	4
Australian White-Ibis	7	European Goldfinch	4
Common Bronzewing	6	Dusky Woodswallow	4
Horsfield's Bronze Cuckoo	6	Australian Reed Warbler	3
Olive-back Oriole	6	Masked Lapwing	3
Silvereeye	6	Purple Swamphen	3
Eastern Rosella	5	Eurasian Coot	3
Fantail Cuckoo	5	Australasian Grebe	2
Hardhead Duck	5	Australian Golden Whistler	2
Shining Bronze Cuckoo	5	Brown Treecreeper (FFG, DEWLP)	2
Willie Wagtail	5	Bush Bronzewing Pigeon	2
Yellow Thornbill	5	Flame Robin	2
Pacific Black Duck	4	Horsfield's Bronze Cuckoo	2
Australian Grebe	3	Magpie Lark	2
Brown Goshawk	3	Pallid Cuckoo	2
Brown-headed Honeyeater	3	Rose Robin	2
Crested Shriketit	3	Scarlet Robin	2
Eastern Spinebill	3	Variet Sittella	2
Nankeen Kestrel	3	Weebill	2
White-faced Heron	3	Willie Wagtail	2
Brown Treecreeper	2	Yellow-tailed Black Cockatoo	2
Little Corella	2	Pied Cormorant (DEWLP)	2
Australian King Parrot	1	Pelican	2
Australian Pied Cormorant	1	Australian White Ibis	1
Australasian Pipit	1	Black Cormorant	1
Brown Falcon	1	Collared Sparrowhawk	1
Fuscous Honeyeater	1	Crested Shriketit	1
Gang Gang Cockatoo	1	Dusky Moorhen	1
Grey Crested Grebe	1	Eurasian Skylark	1
Hoary Headed Grebe	1	House sparrow	1
Jacky Winter	1	Nankeen Night Heron (FFG)	1
Noisy Miner	1		
Pelican	1		
Peregrine Falcon	1		
Red Rumped Parrot	1		
Red-browed Finch	1		
Red-browed Treecreeper	1		
Restless Flycatcher	1		
Rufous Fantail	1		
Satin Flycatcher	1		
Skylark	1		
Spotted Dove	1		
Straw-necked Ibis	1		
Varied Sitella	1		
Weebill	1		
Western Gerygone	1		
White-bellied Sea-eagle	1		