



# BIRD STUDY QLD & NSW, AUSTRALIA

School and Community Citizen Science Project

## Abstract

A study of the birds observed in Brisbane was carried out over a 3-week period in June and July 2022, using eBird for data collection. The study showed a significant diversity of birds in different habitats and revealed many adaptations to their specific environments.

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## Introduction

This research is part of the School and Community Citizen Science Project in which birds will be studied both in Australia and Papua New Guinea. This will allow a deeper understanding of the birds in the different countries, as well as contributing to the eBird worldwide data collective. This then allows scientists to develop a deeper understanding of the species found in different areas, their migratory patterns, and help understand changes in bird populations to develop appropriate ecological management strategies.

## Materials

The resources that were utilised for the conduction of results in this experiment include;

- eBird (mobile app used for logging bird sightings)
- Merlin Bird ID (mobile app used for identifying unknown bird species)

## Method

Students and staff collected both quantitative and qualitative data over a period of 3 weeks, recording information about observed birds using the eBird app. The data was then collated and is analysed in this report.

## Results

Urban		Water		Bushland	
Australian Brushturkey	1	Australasian Darter	2	Australian Magpie	4
Australian Magpie	18	Australian Brushturkey	2	Black Swan	1
Blue-faced Honeyeater	2	Australian Ibis	2	Galah	7
Bush Thick-knee	2	Australian Magpie	4	Gray Butcherbird	2
Crested Pigeon	1	Black Swan	3	Gray Fantail	1
Galah	8	Blue-faced Honeyeater	1	Laughing Kookaburra	1
Laughing Kookaburra	3	Brown Honeyeater	4	Maned Duck	12
Magpie-lark	3	Dusky Moorhen	34	Pied Butcherbird	2
Maned Duck	7	Eastern Whipbird	1	Spangled Drongo	1
Masked Lapwing	3	Eurasian Coot	1	Spotted Pardalote	6
Noisy Miner	34	Great Egret	1	Torresian Crow	2
Pied Butcherbird	3	Little Black Cormorant	26	Willie-wagtail	3
Rainbow Lorikeet	41	Little Pied Cormorant	2		
Sulphur-crested Cockatoo	2	Magpie-lark	5		
Tawny Frogmouth	1	Maned Duck	6		
Torresian Crow	4	Noisy Miner	33		
Variigated Fairywren	1	Pacific Black Duck	39		
Welcome Swallow	3	Peaceful Dove	1		
		Pied Cormorant	1		
		Pied Currawong	1		
		Rainbow Lorikeet	5		
			1		

		Red-backed Fairywren	8		
		Rock Pigeon (Feral Pigeon)	1		
		Royal Spoonbill	1		
		Sacred Kingfisher	0		
		Scarlet Myzomela	2		
		Spotted Pardalote	7		
		Straw-necked Ibis	5		
		Superb Fairywren	6		
		Torresian Crow	11		
		Welcome Swallow	1		
		Willie-wagtail			

Figure 1 Table to show total number of each species of bird found in three environments (bushland, urban and waterways)

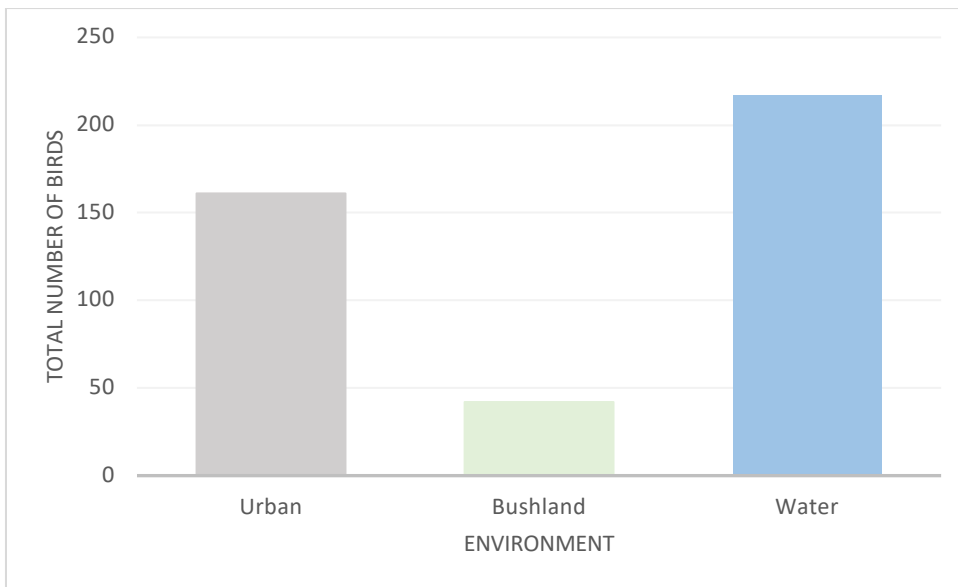


Figure 2 Graph to show total number of birds in each environment (waterways, urban and bushland)

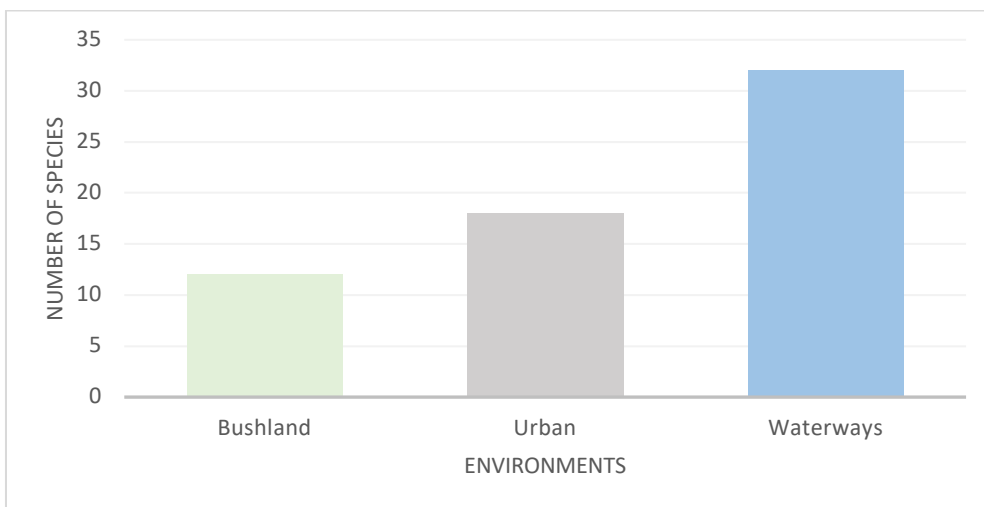


Figure 3 Graph showing number of species in different Brisbane environments (urban, waterway and bushland)

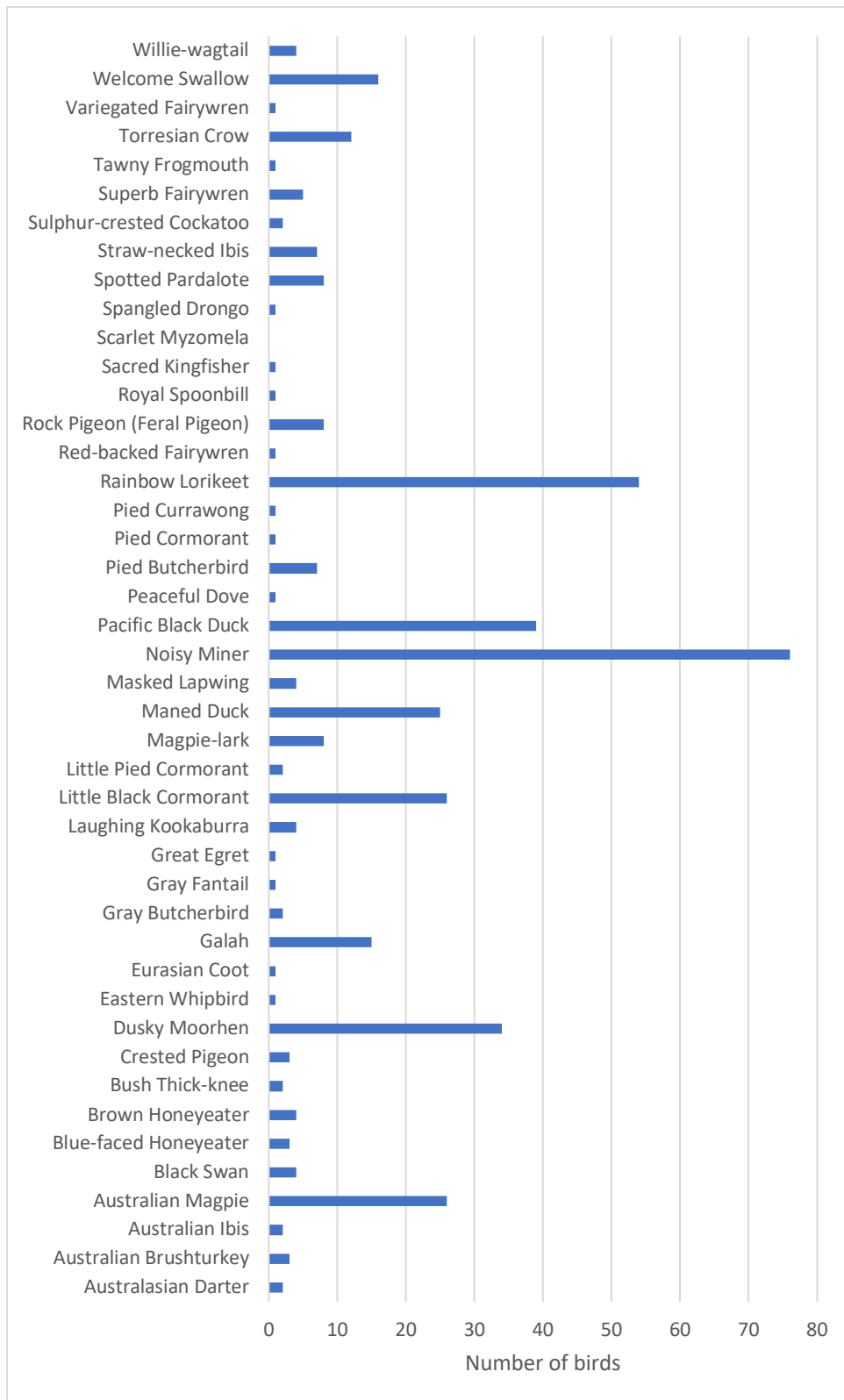


Figure 3 Bar graph showing total number of birds of each species seen in a 3 week period (June/July 2022) in Brisbane, Australia, in a range of environments.

## Discussion

Studies of birds in the Brisbane area were carried out over a 3-week period. Birds were identified and classified into 3 main environments: waterways, urban and bushland.

In total 44 species were observed: 12 species in bushland, 32 in waterways and 18 in urban, with some species appearing in multiple habitats.

The total number of birds observed in these environments were 42 in bushland, 217 in waterways and 161 in urban.

This suggests the waterways is particularly well suited to bird life, possibly due to the range of plant life around the water, providing food and shelter for the birds, as well as the large numbers of insects and other food sources available. Whilst there were relatively few species observed in the bushland, this was biased due to a smaller number of samples in these areas, and also it was harder to observe and identify the birds as they were able to hide in the trees, many being camouflaged in this environment. Within the urban environment there are a few species of bird that dominated these environments, including noisy miner, rainbow lorikeets, galahs and Australian magpies. These have all adapted to being around humans and some such as the crows benefit from the urban environment, scavenging for human food scraps.

## Conclusion

This study revealed the variety of birds that can be observed in the Brisbane area, identifying 44 species over a 3-week period. Different environments had differing numbers of species, with waterways having the most diversity and abundance of birds. Adaptations was observed, as the birds in the bushland were mainly smaller and brown, forming camouflage in the environment. Some of the waterways' birds were adapted to feeding on or in the water, such as the ducks and cormorants, whilst others were adapted to living on the banks of the water and feeding on insects, such as the superb blue fairy wren and Welcome swallows. Future studies could use this data to identify changes in bird populations, such as due to migration or environmental changes, such as following natural disasters.

## References and Acknowledgements

*eBird - Discover a new world of birding...* (2022). Ebird.org. <https://ebird.org/home>

*School and Community Citizen Science Project Teacher Guide and Student Workbook (2022)*, PNGAus Partnership in conjunction with Zoos Victoria Education and Port Moresby Nature Park.

## Appendix

### Raw data:

Full data

Common Name	Scientific Name	Count	Location	Date	Time	
Australian Brushturkey	<i>Alectura lathami</i>	1	2 Hoffman Street, McDowall, Queensland, AU (-27.382, 152.998)	6/28/2022	4:48 PM	Grey = urban
Tawny Frogmouth	<i>Podargus strigoides</i>	1	2 Hoffman Street, McDowall, Queensland, AU (-27.382, 152.998)	6/28/2022	4:48 PM	Blue = waterway
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	2	2 Hoffman Street, McDowall, Queensland, AU (-27.382, 152.998)	6/28/2022	4:48 PM	Green = bushland
Galah	<i>Eolophus roseicapilla</i>	2	2 Hoffman Street, McDowall, Queensland, AU (-27.382, 152.998)	6/28/2022	4:48 PM	
Rainbow Lorikeet	<i>Trichoglossus moluccanus</i>	2	2 Hoffman Street, McDowall, Queensland, AU (-27.382, 152.998)	6/28/2022	4:48 PM	
Noisy Miner	<i>Manorina melanocephala</i>	5	2 Hoffman Street, McDowall, Queensland, AU (-27.382, 152.998)	6/28/2022	4:48 PM	
Rainbow Lorikeet	<i>Trichoglossus moluccanus</i>	8	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/19/2022	1:49 PM	
Noisy Miner	<i>Manorina melanocephala</i>	3	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/19/2022	1:49 PM	
Pied Butcherbird	<i>Cracticus nigrogularis</i>	2	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/19/2022	1:49 PM	
Australian Magpie	<i>Gymnorhina tibicen</i>	1	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/19/2022	1:49 PM	
Torresian Crow	<i>Corvus orru</i>	1	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/19/2022	1:49 PM	
Masked Lapwing	<i>Vanellus miles</i>	1	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Galah	<i>Eolophus roseicapilla</i>	2	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	2	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Rainbow Lorikeet	<i>Trichoglossus moluccanus</i>	4	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Variegated Fairywren	<i>Malurus lamberti</i>	1	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Noisy Miner	<i>Manorina melanocephala</i>	4	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Pied Butcherbird	<i>Cracticus nigrogularis</i>	2	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Australian Magpie	<i>Gymnorhina tibicen</i>	5	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Torresian Crow	<i>Corvus orru</i>	2	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Welcome Swallow	<i>Hirundo neoxena</i>	2	26 Bisset Place, McDowall, Queensland, AU (-27.385, 152.991)	6/24/2022	12:06 PM	
Maned Duck	<i>Chenonetta jubata</i>	7	3 Marilyn Tce, Eatons Hill AU-QLD -27.33427, 152.95642	#####	1:24 PM	
Rainbow Lorikeet	<i>Trichoglossus moluccanus</i>	3	3 Marilyn Tce, Eatons Hill AU-QLD -27.33427, 152.95642	#####	12:33 PM	

Noisy Miner	Manorina melanocephala	4	3 Marylin Tce, Eatons Hill AU-QLD -27.33427, 152.95642	#####	12:33 PM
Australian Magpie	Gymnorhina tibicen	4	3 Marylin Tce, Eatons Hill AU-QLD -27.33427, 152.95642	#####	12:33 PM
Galah	Eolophus roseicapilla	4	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/18/2022	4:12 PM
Rainbow Lorikeet	Trichoglossus moluccanus	2	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/18/2022	4:12 PM
Noisy Miner	Manorina melanocephala	2	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/18/2022	4:12 PM
Welcome Swallow	Hirundo neoxena	1	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/18/2022	4:12 PM
Masked Lapwing	Vanellus miles	1	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/20/2022	3:29 PM
Rainbow Lorikeet	Trichoglossus moluccanus	3	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/20/2022	3:29 PM
Noisy Miner	Manorina melanocephala	3	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/20/2022	3:29 PM
Pied Butcherbird	Cracticus nigrogularis	1	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/20/2022	3:29 PM
Australian Magpie	Gymnorhina tibicen	1	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/20/2022	3:29 PM
Magpie-lark	Grallina cyanoleuca	3	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/20/2022	3:29 PM
Crested Pigeon	Ocyphaps lophotes	1	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/21/2022	10:58 AM
Rainbow Lorikeet	Trichoglossus moluccanus	2	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/21/2022	10:58 AM
Noisy Miner	Manorina melanocephala	2	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/21/2022	10:58 AM
Australian Magpie	Gymnorhina tibicen	2	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/21/2022	10:58 AM
Torresian Crow	Corvus orru	1	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/21/2022	10:58 AM
Welcome Swallow	Hirundo neoxena	2	45 De Mille Street, McDowall, Queensland, AU (-27.384, 152.995)	6/21/2022	10:58 AM
Crested Pigeon	Ocyphaps lophotes	2	9 Ifield Street, McDowall, Queensland, AU (-27.387, 152.996)	6/11/2022	4:49 PM
Noisy Miner	Manorina melanocephala	5	9 Ifield Street, McDowall, Queensland, AU (-27.387, 152.996)	6/11/2022	4:49 PM
Noisy Miner	Manorina melanocephala	10	96 Bunya Park Dr, Eatons Hill AU-QLD -27.34018, 152.95390	#####	12:09 PM
Blue-faced Honeyeater	Entomyzon cyanotis	2	96 Bunya Park Dr, Eatons Hill AU-QLD -27.34018, 152.95390	#####	11:48 AM
Black Swan	Cygnus atratus	3	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM
Pacific Black Duck	Anas superciliosa	7	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM
Peaceful Dove	Geopelia placida	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM
Dusky Moorhen	Gallinula tenebrosa	25	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM
Australasian Darter	Anhinga novaehollandiae	2	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM
Little Pied Cormorant	Microcarbo melanoleucos	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM
Little Black Cormorant	Phalacrocorax sulcirostris	22	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM
Pied Cormorant	Phalacrocorax varius	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM

Great Egret	<i>Ardea alba</i>	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Australian Ibis	<i>Threskiornis molucca</i>	2	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Royal Spoonbill	<i>Platalea regia</i>	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Sacred Kingfisher	<i>Todiramphus sanctus</i>	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Rainbow Lorikeet	<i>Trichoglossus moluccanus</i>	3	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Superb Fairywren	<i>Malurus cyaneus</i>	4	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Red-backed Fairywren	<i>Malurus melanocephalus</i>	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Noisy Miner	<i>Manorina melanocephala</i>	6	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Scarlet Myzomela	<i>Myzomela sanguinolenta</i>	0	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Brown Honeyeater	<i>Lichmera indistincta</i>	4	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Blue-faced Honeyeater	<i>Entomyzon cyanotis</i>	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Spotted Pardalote	<i>Pardalotus punctatus</i>	2	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Australian Magpie	<i>Gymnorhina tibicen</i>	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Willie-wagtail	<i>Rhipidura leucophrys</i>	1	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Magpie-lark	<i>Grallina cyanoleuca</i>	3	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Torresian Crow	<i>Corvus orru</i>	3	Black Duck Hole (Murrumba Downs)	6/22/2022	11:55 AM	
Black Swan	<i>Cygnus atratus</i>	1	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Maned Duck	<i>Chenonetta jubata</i>	12	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	1	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Galah	<i>Eolophus roseicapilla</i>	5	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Pied Butcherbird	<i>Cracticus nigrogularis</i>	2	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Australian Magpie	<i>Gymnorhina tibicen</i>	4	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Willie-wagtail	<i>Rhipidura leucophrys</i>	2	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Torresian Crow	<i>Corvus orru</i>	2	Bunyaville Conservation Park	9/07/2022	5:00 PM	
Spotted Pardalote	<i>Pardalotus punctatus</i>	6	Chermside Hills Reserve	6/18/2022	3:55 PM	
Gray Fantail	<i>Rhipidura albiscapa</i>	1	Chermside Hills Reserve	6/18/2022	3:55 PM	
Spangled Drongo	<i>Dicrurus bracteatus</i>	1	Chermside Hills Reserve	6/18/2022	3:55 PM	
Pacific Black Duck	<i>Anas superciliosa</i>	9	D'Aguilar National Park--Araucaria Circuit (Enoggera Reservoir)	7/07/2022	2:29 PM	
Australian BrushTurkey	<i>Alectura lathami</i>	2	D'Aguilar National Park--Araucaria Circuit (Enoggera Reservoir)	7/07/2022	2:29 PM	
Dusky Moorhen	<i>Gallinula tenebrosa</i>	3	D'Aguilar National Park--Araucaria Circuit (Enoggera Reservoir)	7/07/2022	2:29 PM	



Eurasian Coot	Fulica atra	1	D'Aguiar National Park--Araucaria Circuit (Enoggera Reservoir)	7/07/2022	2:29 PM	
Little Black Cormorant	Phalacrocorax sulcirostris	4	D'Aguiar National Park--Araucaria Circuit (Enoggera Reservoir)	7/07/2022	2:29 PM	
Eastern Whipbird	Psophodes olivaceus	1	D'Aguiar National Park--Araucaria Circuit (Enoggera Reservoir)	7/07/2022	2:29 PM	
Bush Thick-knee	Burhinus grallarius	2	Home	1/07/2022	6:26 PM	
Australian Magpie	Gymnorhina tibicen	3	Home	#####	11:23 AM	
Maned Duck	Chenonetta jubata	6	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Pacific Black Duck	Anas superciliosa	11	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Rock Pigeon (Feral Pigeon)	Columba livia (Feral Pigeon)	8	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Dusky Moorhen	Gallinula tenebrosa	6	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Little Pied Cormorant	Microcarbo melanoleucos	1	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Straw-necked Ibis	Threskiornis spinicollis	7	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Rainbow Lorikeet	Trichoglossus moluccanus	2	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Superb Fairywren	Malurus cyaneus	1	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Noisy Miner	Manorina melanocephala	27	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Australian Magpie	Gymnorhina tibicen	3	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Magpie-lark	Grallina cyanoleuca	2	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Torresian Crow	Corvus orru	3	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Welcome Swallow	Hirundo neoxena	11	Kedron Brook Bikeway (Kedron section)	6/23/2022	1:40 PM	
Laughing Kookaburra	Dacelo novaeguineae	1	McDowall, Queensland, AU (-27.385, 152.993)	6/11/2022	4:57 PM	
Rainbow Lorikeet	Trichoglossus moluccanus	25	McDowall, Queensland, AU (-27.385, 152.993)	6/11/2022	4:57 PM	
Noisy Miner	Manorina melanocephala	4	McDowall, Queensland, AU (-27.385, 152.993)	6/11/2022	4:57 PM	
Galah	Eolophus roseicapilla	2	Sargent Reserve (Eatons Hill)	#####	3:25 PM	
Gray Butcherbird	Cracticus torquatus	2	Sargent Reserve (Eatons Hill)	#####	3:25 PM	
Willie-wagtail	Rhipidura leucophrys	1	Sargent Reserve (Eatons Hill)	#####	3:25 PM	
Pacific Black Duck	Anas superciliosa	12	South Pine River at Cashes Crossing, Eatons Hill	6/07/2022	8:37 AM	
Pied Currawong	Strepera graculina	1	South Pine River at Cashes Crossing, Eatons Hill	6/07/2022	8:37 AM	
Masked Lapwing	Vanellus miles	2	South Pine Sports Complex, Brendale AU-QLD -27.33328, 152.96739	#####	1:34 PM	
Noisy Miner	Manorina melanocephala	1	South Pine Sports Complex, Brendale AU-QLD -27.33328, 152.96739	#####	1:34 PM	
Australian Magpie	Gymnorhina tibicen	2	South Pine Sports Complex, Brendale AU-QLD -27.33328, 152.96739	#####	1:34 PM	

