Aussie Backyard Bird Count 2020 Results:

Wingecarribee Shire Council

Brolga Package with Add-ons

standing together to stop extinctions

birdlife AUSTRALIA

BirdLife Australia

BirdLife Australia was founded in 1901 and is a charity working to conserve native birds and biological diversity in Australasia and Antarctica, through the study and management of birds and their habitats, and the education and involvement of the community.

BirdLife Australia produces a range of publications, including *Emu*, a quarterly scientific journal; *Australian BirdLife*, a quarterly magazine; *Conservation Statements*; *BirdLife Australia Monographs*; the *BirdLife Australia Report series*; and the *Handbook of Australian, New Zealand and Antarctic Birds.* It also maintains a comprehensive ornithological library and several scientific databases covering bird distribution and biology.

Membership of BirdLife Australia is open to anyone interested in birds and their habitats and concerned about the future of our avifauna. For further information about membership, subscriptions and database access, contact

BirdLife Australia
60 Leicester Street, Suite 2-05
Carlton VIC 3053
Australia

Tel: (03) 9347 0757
E-mail: info@birdlife.org.au

Recommended citation:
BirdLife Australia. 2020. Aussie Backyard Bird Count 2020 results: Wingecarribee Shire Council. Unpublished report for the Wingecarribee Shire Council.

Disclaimers:
This publication may be of assistance to the purchaser and every effort has been undertaken to ensure that the information presented within is accurate. BirdLife Australia does not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error or other consequences that may arise from you relying on any information in this report.

This report is prepared without prejudice to any governmental or council applications or activities. The results published in this report are reflective only of the trends during National Bird Week as submitted by the public. Trends described in the report may therefore not be a true representative of actual bird trends within the area.

Published by BirdLife Australia, Suite 2-05, 60 Leicester Street, Carlton, Victoria 3053, Australia.

This report was prepared by: Oakley Germech and Joris Driessen

Contents

1. Introduction

1.1 Aussie Backyard Bird Count

In 2014, as part of BirdLife Australia's National Bird Week celebrations, BirdLife Australia ran the first ever Aussie Backyard Bird Count — now one of the largest citizen science projects in Australia. The Aussie Backyard Bird Count provides an opportunity for everyone — from school children and their families to senior citizens and community groups — to become citizen scientists for one week every October. Over 85% of Australians live in urban environments, making the Aussie Backyard Bird Count a great way to get outside and connect with nature.

The data collected by these citizen scientists plays a vital role in providing important information to BirdLife Australia. We know more about threatened bird species than we do about our common backyard birds and the Aussie Backyard Bird Count helps to fill this critical knowledge gap. The Aussie Backyard Bird Count also helps raise the profile of bird species throughout Australia, highlighting their cultural and ecological importance and promoting a national passion for Australian birds.

Each year this national passion is confirmed, with the Aussie Backyard Bird Count attracting significant interest from eager members of the public. In 2020, over one hundred thousand Australians participated in the count, helping to contribute to our growing knowledge of Australian birds. Public involvement in the Aussie Backyard Bird Count continues to increase year on year, with the number of birds counted also increasing at a similar pace. Involvement from local councils has also risen consistently across the years, with more bird-focused events being held during Bird Week, improving public awareness of the importance of local birds within these communities. Furthermore, with the release of lesson plans that encourage students to participate both at school and at home, the number of schools taking part in the Aussie Backyard Bird Count continues to grow.

The national focus on birds is extremely important: data shows Australian backyards have been shrinking since the 1990s, and populations of some of our most familiar birds, like the Laughing Kookaburra, have shrunk with them. While data collected from the Aussie Backyard Bird Count is currently only a baseline for monitoring, results from the past five years show that Australian backyards — in all their shapes and sizes — continue to attract a range of birds, giving us hope that even as the iconic Aussie backyard shrinks, many native birds can and do remain. Past results from the Aussie Backyard Bird Count support the decline in kookaburra numbers over the years, while aggressive species such as the Noisy Miner appear to be increasing. With growing national and international concern for the welfare of our iconic Australian birds, citizen science projects such as the Aussie Backyard Bird Count provide an important insight into how Aussie birds are faring, and results from these projects can help formulate subsequent management decisions. The next Aussie Backyard Bird Count will take place from 18 - 24 October 2021.

1.2 Birds in Backyards

BirdLife Australia's Urban Bird Program has a 20+ year history of working with partners and with the community to create urban landscapes that are a haven for native birds, people, and biodiversity as a whole.

Urbanisation is one of the most dramatic and rapidly expanding forms of man-made change to our landscapes. As our urban habitats change, our bird life does as well. The loss of urban bird diversity has both ecological and human/cultural consequences. With over 90% of Australians living in urban and regional centres, for many people, the only place where they connect with the natural world is in their own backyards. We have seen the importance of that connection to place really come to the forefront in the last 12 months. Birding at home has become a refuge for many.

Birds in Backyards is the cornerstone of our Urban Bird Program and builds knowledge, skills and practical support to develop action-oriented responses to the decline of bird diversity. Birds in Backyards began in 1998 and celebrated its 20th year as a national citizen science program in 2018. Underpinned by bird monitoring and habitat assessments, The Birds in Backyards Program encourages people to take conservation action for birds wherever they enjoy them – home, school, work, or local parks and reserves.

In 2017, our surveys joined BirdLife Australia's data portal Birdata. This survey data is used to inform policies, best practice guidelines, and provide advocacy for threatened species. We want people taking action for birds, informed by their own data. Data from these ongoing surveys can allow local councils to increase engagement amongst their residents, inform land management decisions and monitor the success of planting efforts in urban spaces.

The Urban Bird Program wants to see a diverse urban native bird community achieved by behavioural change through action-based research, education for sustainability and advocacy. Through our dedicated citizen scientists and our partners, we empower people to make changes at all levels (from individuals in a patch to government at landscape scales) to create and maintain habitat for birds. Local councils can partner with BirdLife Australia's Urban Bird Program to achieve education and conservation outcomes for our urban birds through our range of projects and education tools – let's get our communities taking action together!

2. 2020 Aussie Backyard Bird Count Statistics

The following statistics summarise the results of the 2020 Aussie Backyard Bird Count for the **Wingecarribee Shire Council**. The count ran from the **19th** to **25th October 2020**.

- **391** observers participated in the bird count, submitting **798** checklists (Table 1).
- Submitted checklists ranged from between **one** and **ten** per registered user (average of **2.61** per registered user).
- Observers counted birds for a combined duration of **250** hours and **30** minutes.
- Observers recorded a total of **20,364** individual birds during Bird Week.
- **163** bird species were recorded (Table 2).
- The reporting rate for individual species (percentage of total surveys a species was detected in) ranged from **0.13%** (representing a single observation) to **63.78%** (Table 2). Low reporting rates for species with high counts indicate that many birds of these species were reported within single surveys (i.e., seen in family groups or large flocks).

Table 1: Comparison of summary statistics from the 2018, 2019, and 2020 Aussie Backyard Bird Counts for the Wingecarribee Shire Council. Additional council-level data vetting was carried out in 2020, so species numbers may differ markedly for some councils in 2020 despite similar or increased participation.

	Year		
	2018	**2019**	**2020**
Number of observers	261	376	391
Total bird count	9,284	14,280	19,156
Total surveys	423	595	798
Total species	143	175	163
Minimum checklists per user	1	1	1
Maximum checklists per user	11	11	10
Average checklists per user	2.32	2.74	2.61
Survey length (hours)	136.02	191.58	250.5

Table 2: Total count and reporting rate (%) of all 163 bird species observed within the Wingecarribee Shire Council boundaries during the 2020 Aussie Backyard Bird Count.

* Introduced species; RA = Rare; NT = Near Threatened; VU = Vulnerable; En = Endangered, CE = Critically Endangered (based on IUCN listings; BirdLife Australia, 2019).

Bird Species	Count	Reporting rate (%)	Bird Species	Count	Reporting rate (%)
Little Corella	3050	24.31	Buff-rumped Thornbill	14	1
Sulphur-crested Cockatoo	1716	51.63	Golden Whistler	13	1.13
Australian Magpie	1579	63.78	Red-rumped Parrot	13	0.38
Crimson Rosella	1205	53.38	Rufous Whistler	12	1.25
Noisy Miner	897	26.82	Spotted Pardalote	12	1.38
Australian Wood Duck	865	13.53	Black Swan	12	0.63
Galah	825	27.82	Little Black Cormorant	12	0.75
Pied Currawong	783	35.34	Domestic Goose *	11	0.25
Australian King-Parrot	698	32.46	Emu	11	0.25
Common Myna *	440	17.79	White-eared Honeyeater	11	0.88
Magpie-lark	439	26.57	White-necked Heron	11	1
Australian Raven	432	24.94	Bar-shouldered Dove	9	0.5
Superb Fairy-wren	356	14.41	Latham's Snipe	8	0.88
Pacific Black Duck	312	10.78	Olive-backed Oriole	8	0.88
House Sparrow *	302	8.9	Hoary-headed Grebe	7	0.13
Red Wattlebird	298	19.55	Brush Cuckoo	7	0.75
Eastern Rosella	292	14.41	Little Lorikeet (VU)	7	0.38
Laughing Kookaburra	285	22.68	Rockwarbler	7	0.38
Crested Pigeon	282	16.29	White-headed Pigeon	7	0.63
Common Starling *	260	7.64	White-naped Honeyeater	7	0.5
Satin Bowerbird	248	16.04	Chestnut Teal	6	0.13
Common Blackbird *	217	8.77	Grey Currawong	6	0.63
Welcome Swallow	165	6.02	Scarlet Honeyeater	6	0.38
Little Wattlebird	147	10.53	Australian Shelduck	5	0.38
Willie Wagtail	145	8.4	Black-winged Stilt	5	0.13
Grey Butcherbird	140	13.16	Brown Goshawk	5	0.63
Little Raven	137	9.02	Muscovy Duck *	5	0.25
Bell Miner	122	1.5	Musk Duck	5	0.13
Eurasian Coot	105	2.51	Varied Sittella (VU)	5	0.13
Red-browed Finch	102	3.13	Cattle Egret	4	0.25
Eastern Koel	87	10.15	Beautiful Firetail	4	0.13
Eastern Spinebill	84	7.64	Australian Pelican	4	0.5
Silvereye	81	2.38	White-cheeked Honeyeater	4	0.25
Eastern Whipbird	73	5.26	Fan-tailed Cuckoo	4	0.38
Purple Swamphen	70	2.88	Tawny Frogmouth	3	0.38
Rainbow Lorikeet	68	3.76	Variegated Fairy-wren	3	0.25
Grey Fantail	65	4.39	Brown Treecreeper (VU)	3	0.38
Yellow-tailed Black-Cockatoo	62	2.63	Collared Sparrowhawk	3	0.25

White-browed Scrubwren	58	3.26	Crescent Honeyeater	3	0.25
Brown Gerygone	56	2.63	Northern Mallard *	3	0.25
Striated Thornbill	56	2.38	Pied Cormorant	3	0.38
Masked Lapwing	54	4.01	Yellow-tufted Honeyeater	3	0.25
Yellow-faced Honeyeater	53	3.88	Straw-necked Ibis	2	0.25
Brown Thornbill	50	3.26	Australasian Grebe	2	0.25
Common Bronzewing	50	2.88	Musk Lorikeet	2	0.13
Dusky Moorhen	46	1.75	Southern Boobook	2	0.25
Long-billed Corella	46	1	Great Cormorant	2	0.25
White-winged Chough	44	1	Rufous Fantail	2	0.25
Gang-gang Cockatoo	44	2.88	White-throated Gerygone	2	0.13
Hardhead	43	1	Bassian Thrush	2	0.13
Superb Lyrebird	40	3.01	Black-fronted Dotterel	2	0.13
Lewin's Honeyeater	38	2.38	Blue-billed Duck (VU)	2	0.25
Dollarbird	35	2.88	Diamond Firetail (VU)	2	0.13
New Holland Honeyeater	34	2.13	Grey Goshawk	2	0.13
Spotted Dove *	33	2.76	Peregrine Falcon	2	0.25
Topknot Pigeon	32	2.51	Square-tailed Kite (VU)	2	0.25
Black-faced Cuckoo-shrike	30	3.01	Australasian Darter	1	0.13
Channel-billed Cuckoo	30	2.76	Nankeen Night-Heron	1	0.13
Dusky Woodswallow (VU)	30	0.88	Brown-headed Honeyeater	1	0.13
Grey Shrike-thrush	29	3.38	Fuscous Honeyeater	1	0.13
White-faced Heron	29	3.38	Scarlet Robin (VU)	1	0.13
Australian White Ibis	26	1.38	Yellow-throated Scrubwren	1	0.13
Domestic Duck *	26	0.5	Little Grassbird	1	0.13
European Goldfinch *	26	0.75	Yellow-billed Spoonbill	1	0.13
Yellow-rumped Thornbill	26	1.13	Australian Hobby	1	0.13
Australian Reed-Warbler	25	1.63	Black Kite	1	0.13
Large-billed Scrubwren	24	0.38	Crested Shrike-tit	1	0.13
Noisy Friarbird	23	1.38	Red-browed Treecreeper	1	0.13
Glossy Ibis	22	0.25	Whistling Kite	1	0.13
Wonga Pigeon	20	2.01	Black-faced Monarch	1	0.13
Glossy Black-Cockatoo (VU)	20	1.13	Buff-banded Rail	1	0.13
Wedge-tailed Eagle	19	1.5	Golden-headed Cisticola	1	0.13
Grey Teal	18	0.5	Mistletoebird	1	0.13
Little Pied Cormorant	18	1	Nankeen Kestrel	1	0.13
Striated Pardalote	17	1.75	Olive Whistler (VU)	1	0.13
White-throated Treecreeper	17	1.63	Pacific Baza	1	0.13
Eastern Yellow Robin	16	1.38	Pallid Cuckoo	1	0.13
Double-barred Finch	16	0.25	Royal Spoonbill	1	0.13
Rock Dove *	15	0.88	Satin Flycatcher	1	0.13
Jacky Winter	15	0.5	Shining Bronze-Cuckoo	1	0.13
Sacred Kingfisher	15	1.5	White-winged Triller	1	0.13
Brown Cuckoo-Dove	14	1			

3. Distribution Map

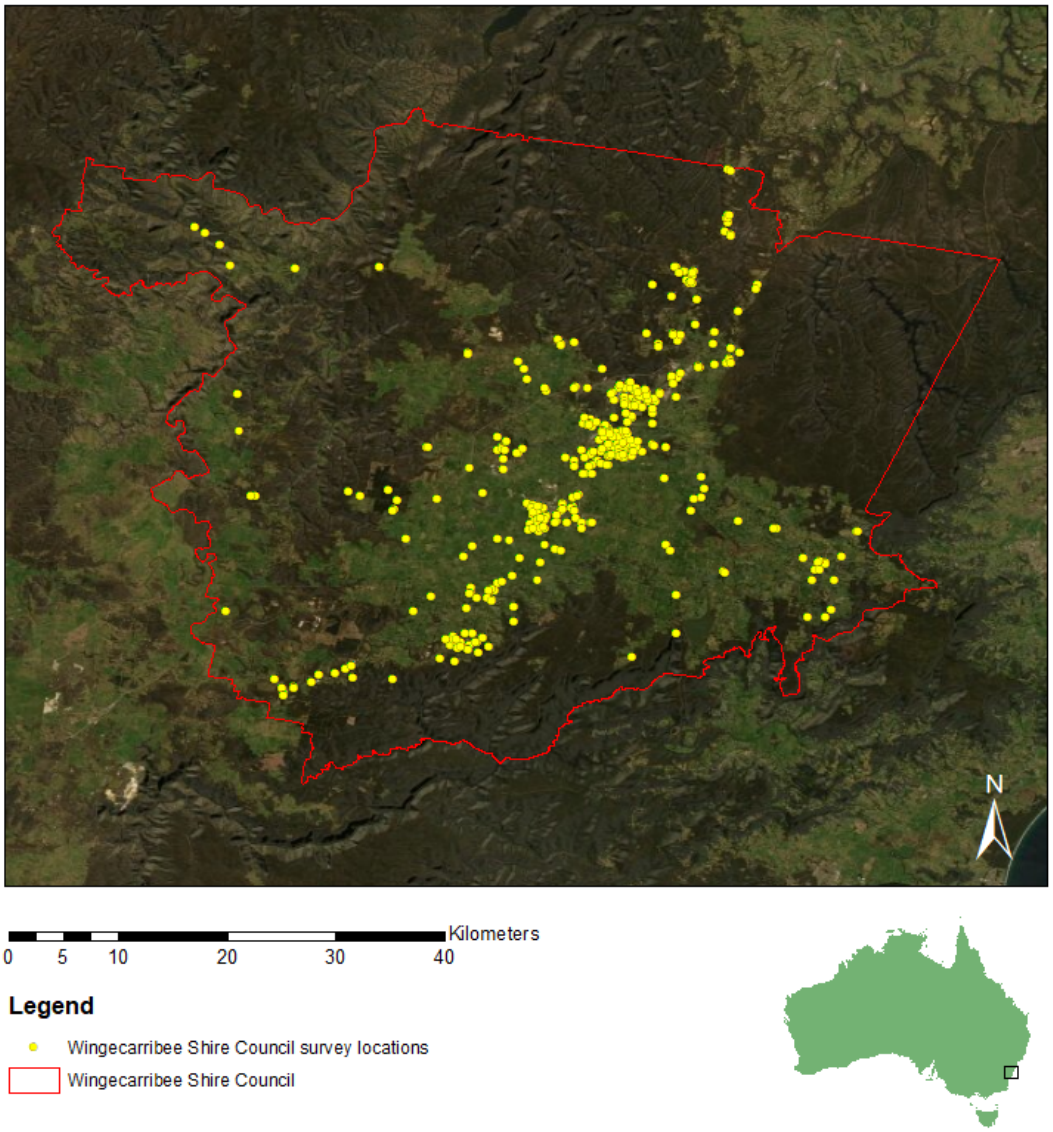


Figure 1: Bird observations recorded within Wingecarribee Shire Council boundaries during the 2020 Aussie Backyard Bird Count. Bird observations that were recorded in a single survey overlap due to having the same GPS co-ordinates, so each yellow circle represents a single complete survey.

4. Species List: Least Common

The least commonly observed bird species recorded within the Wingecarribee Shire Council boundaries all corresponded to one single survey observation and included:

- Australasian Darter
- Australian Hobby
- Bassian Thrush
- Beautiful Firetail
- Black Kite
- Black-faced Monarch
- Black-fronted Dotterel
- Black-winged Stilt
- Brown-headed Honeyeater
- Buff-banded Rail
- Chestnut Teal
- Crested Shrike-tit
- Diamond Firetail (VU)
- Fuscous Honeyeater
- Golden-headed Cisticola
- Grey Goshawk
- Hoary-headed Grebe
- Little Grassbird
- Mistletoebird
- Musk Duck
- Musk Lorikeet
- Nankeen Kestrel
- Nankeen Night-Heron
- Olive Whistler (VU)
- Pacific Baza
- Pallid Cuckoo
- Red-browed Treecreeper
- Royal Spoonbill
- Satin Flycatcher
- Scarlet Robin (VU)
- Shining Bronze-Cuckoo
- Varied Sittella (VU)
- Whistling Kite
- White-throated Gerygone
- White-winged Triller
- Yellow-billed Spoonbill
- Yellow-throated Scrubwren

All **37** bird species reported only once are native to Australia. Four of the 37 native species are classified as threatened in New South Wales. Six of the 37 species are raptors, and several are associated with aquatic habitats such as lakes and wetlands. The remaining species are largely urban-avoidant and restricted to inaccessible habitats like heathlands, native woodlands, and wet forests. The behaviours and habitat requirements of these species may account for the lack of reports during Bird Week, especially if most surveys occurred in people's backyards.

5. Species List: Most Common

Nine of the ten most abundant bird species recorded within the Wingecarribee Shire Council boundaries are native to New South Wales, while the Common Myna (10th place) is introduced. Bird abundances ranged from **440** to **3,050** individual birds (Figure 2). All nine native species are considered to have secure populations in New South Wales.

The Little Corella was the most counted species in Wingecarribee Shire Council, the tenth-most counted species in New South Wales, and 14th-most counted species nationally. The reporting rate for the Little Corella was lower than most of the other species in the Top 10, reflecting the fact these birds are often seen in very large flocks (in fact, half the count came from a single flock of almost 1,500 corellas). The second-most counted species, the Sulphur-crested

Cockatoo, placed third state-wide and fourth nationally. The third-most abundant species, the Australian Magpie, was the fourth-most abundant species in New South Wales, and third nationally. The Rainbow Lorikeet, while the most-counted species in the state, was ranked just 36th in Wingecarribee Shire Council. However, all of the Top 10 species in the council ranked highly in the state averages. The Crimson Rosella, Pied Currawong and Australian King-Parrot all ranked in the Top 10, being slightly over-represented at a state level. All three species are most common in moist habitats, and in the hills of the Great Dividing Range; Wingecarribee Shire Council matches both criteria.

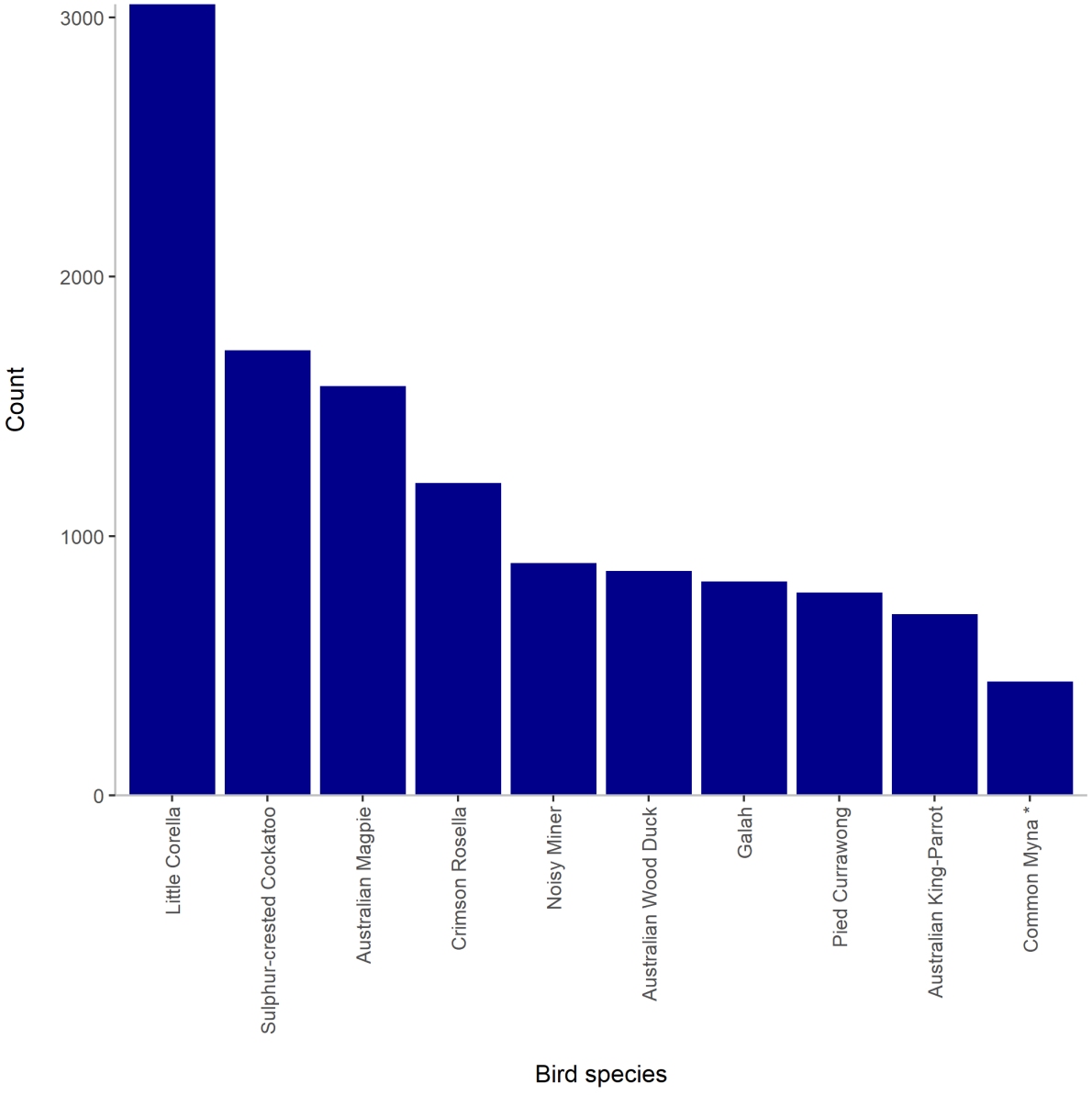


Figure 2: The ten most abundant bird species within the Wingecarribee Shire Council boundaries during the 2020 Aussie Backyard Bird Count. * indicates introduced species.

Nine of the ten most frequently recorded species within Wingecarribee Shire Council boundaries were reported at higher rates than both the state and national average, with the sole exception being the Noisy Miner (Figure 3). The Australian King-Parrot, Crimson Rosella, Little Corella, and Pied Currawong were all reported at particularly high rates. The Little Corella has expanded its range and abundance considerably in recent years, moving into coastal and montane regions where human development has thinned native vegetation. The Australian King-Parrot, Crimson Rosella and Pied Currawong (as noted previously) are most abundant along the Great Dividing Range, explaining their local prominence.

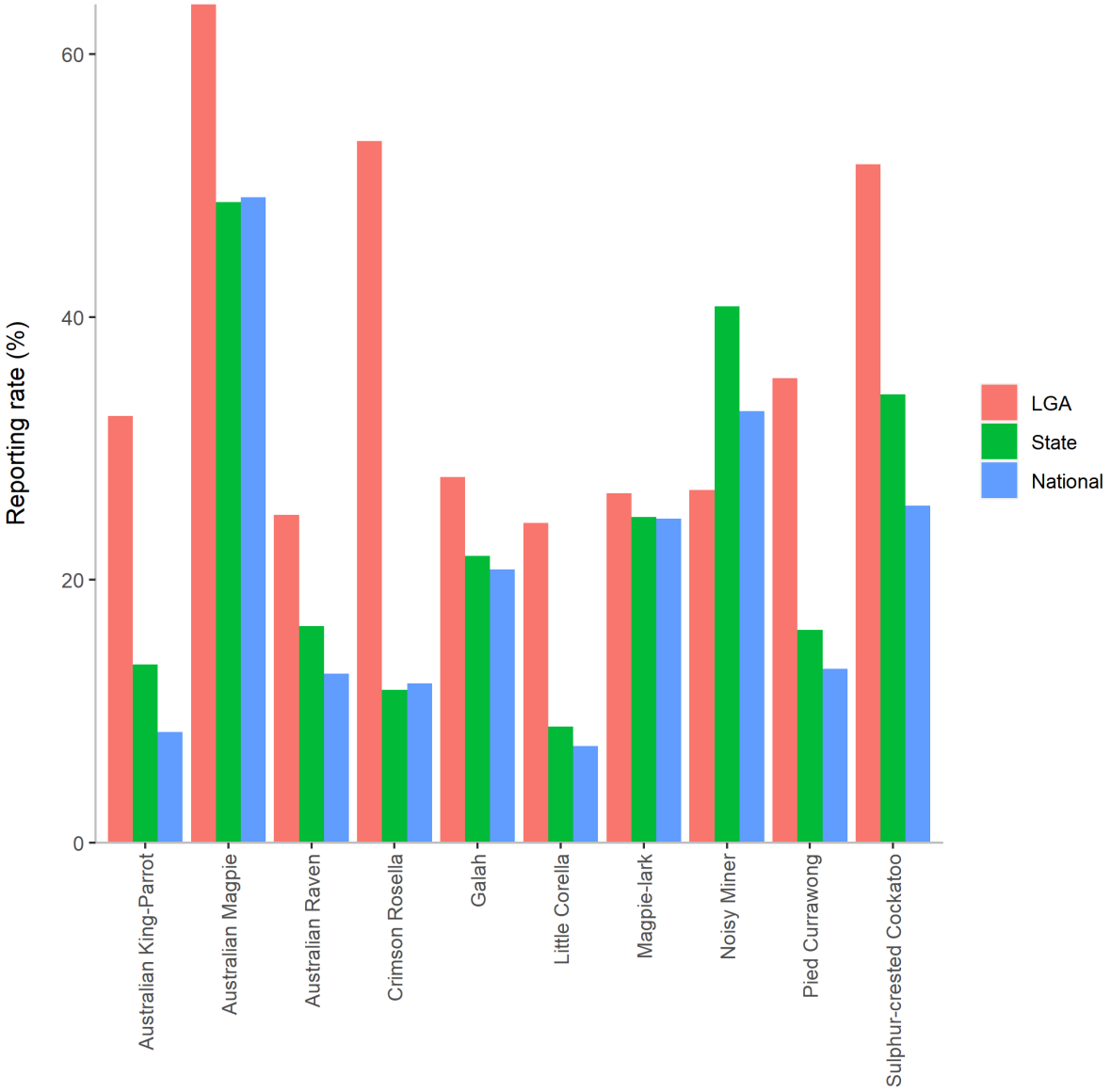


Figure 3: Comparison of the reporting rates (%) of the ten most frequently recorded species during the 2020 Aussie Backyard Bird Count within the Wingecarribee Shire Council boundaries, with New South Wales and national reporting rates.

6. Introduced Species

Eleven introduced bird species were recorded within the council boundaries during the 2020 Aussie Backyard Bird Count (Table 3, Figure 4). However, the Domestic Duck is a domesticated descendant of the Northern Mallard and not a truly distinct species. Introduced species records were spread mainly in a north-east to south-west line across Wingecarribee Shire Council, with very few records from forested regions and the north-west (Figure 4). While several species were not reported from the peripheries of the council, it should be noted that very few surveys were submitted from these areas, and the distribution map is likely to reflect this survey bias.

The Common Myna (17.79%), House Sparrow (8.9%), and Common Blackbird (8.77%) were the introduced species reported in the highest proportion of surveys within the council boundaries, though the Common Starling was also reported in over 7% of surveys. The Spotted Dove and Rock Dove, both very common in much of the state, were reported from a very modest proportion of surveys in this council. Figure 4 gives an overall indication of introduced species distribution across Wingecarribee Shire Council, but individual species distributions are difficult to discern due to the overlap of records. Accordingly, individual distribution maps for each introduced species have been provided in **Appendix 1**.

Table 3: Survey statistics for the introduced bird species recorded within Wingecarribee Shire Council boundaries during the 2020 Aussie Backyard Bird Count.

Species	Count	Proportion of total count (%)	Number of surveys detected in	Reporting rate (%)
Common Myna	440	2.3	142	17.79
House Sparrow	302	1.58	71	8.9
Common Blackbird	217	1.13	70	8.77
Common Starling	260	1.36	61	7.64
Spotted Dove	33	0.17	22	2.76
Rock Dove	15	0.08	7	0.88
European Goldfinch	26	0.14	6	0.75
Domestic Duck	26	0.14	4	0.5
Domestic Goose	11	0.06	2	0.25
Muscovy Duck	5	0.03	2	0.25
Northern Mallard	3	0.02	2	0.25

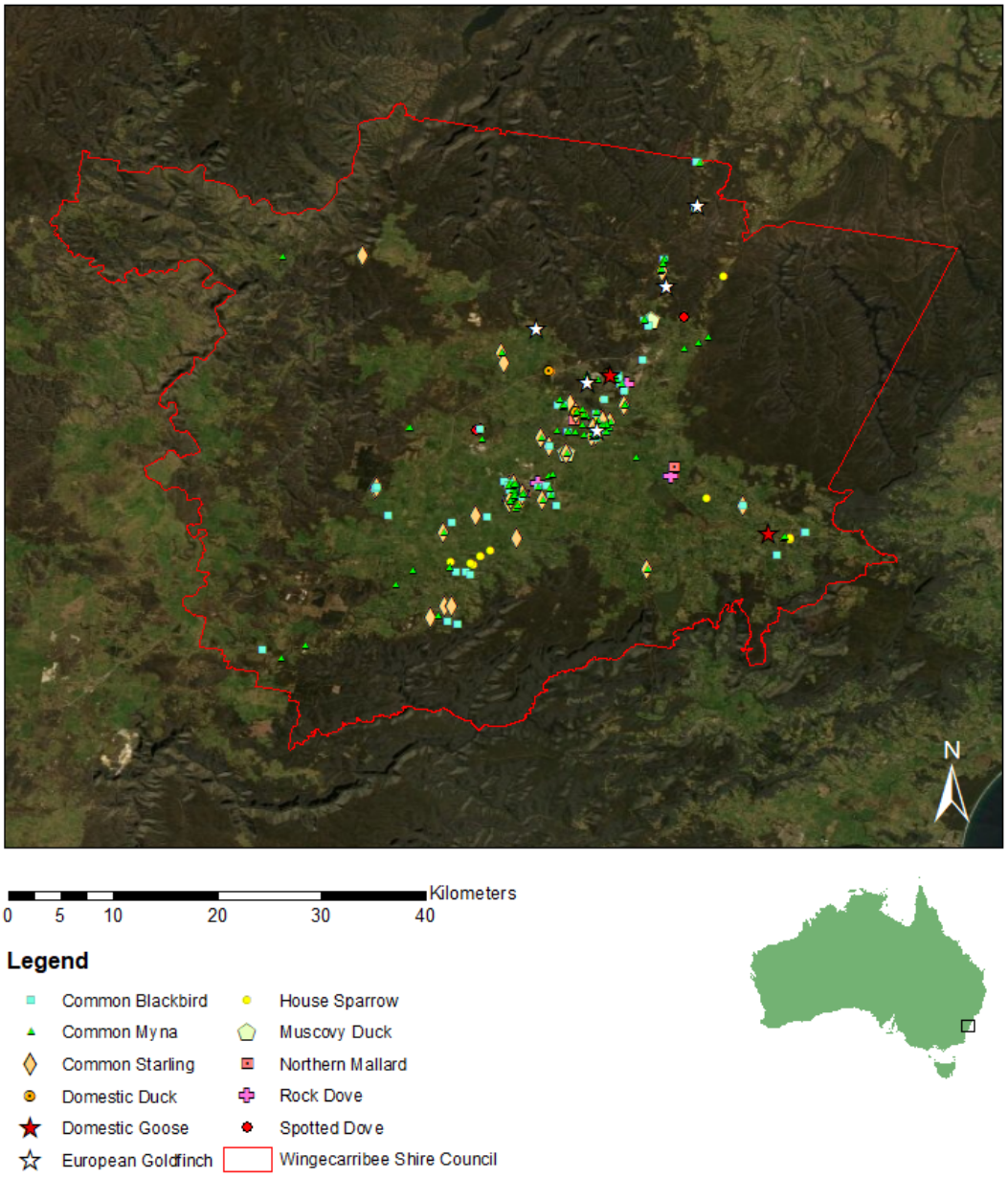


Figure 4: Distribution of the introduced bird species recorded within Wingecarribee Shire Council boundaries during the 2020 Aussie Backyard Bird Count. Bird observations that were recorded in a single survey overlap due to having the same GPS co-ordinates.

7. Native Species of Management Concern

European colonisation has had a large impact on the conservation status of Australian birds. Approximately 234 species of Australian bird are now classified by the International Union for Conservation of Nature (IUCN) as Extinct, threatened with extinction or Near Threatened (Garnett *et al*, 2011). It is critical that we gain an understanding of where these threatened species persist so that we can implement appropriate management actions in these areas. The Aussie Backyard Bird Count provides an opportunity for community members to participate in this important work.

In total**, ten** species of bird listed as threatened were recorded within the council boundaries (Table 4, Figure 6). The Glossy Black-Cockatoo was reported in over 1% of surveys. Figure 5 gives an overall indication of threatened species distribution across Wingecarribee Shire Council, but individual species distributions are difficult to discern due to the overlap of records. Accordingly, individual distribution maps for each threatened species have been provided in **Appendix 2**.

Table 4: List of threatened species recorded within Wingecarribee Shire Council boundaries.

Bird Species	Status	Count	Reporting rate (%)
Blue-billed Duck	(VU)	2	0.25
Brown Treecreeper	(VU)	3	0.38
Diamond Firetail	(VU)	2	0.13
Dusky Woodswallow	(VU)	30	0.88
Glossy Black-Cockatoo	(VU)	20	1.13
Little Lorikeet	(VU)	7	0.38
Olive Whistler	(VU)	1	0.13
Scarlet Robin	(VU)	1	0.13
Square-tailed Kite	(VU)	2	0.25
Varied Sittella	(VU)	5	0.13

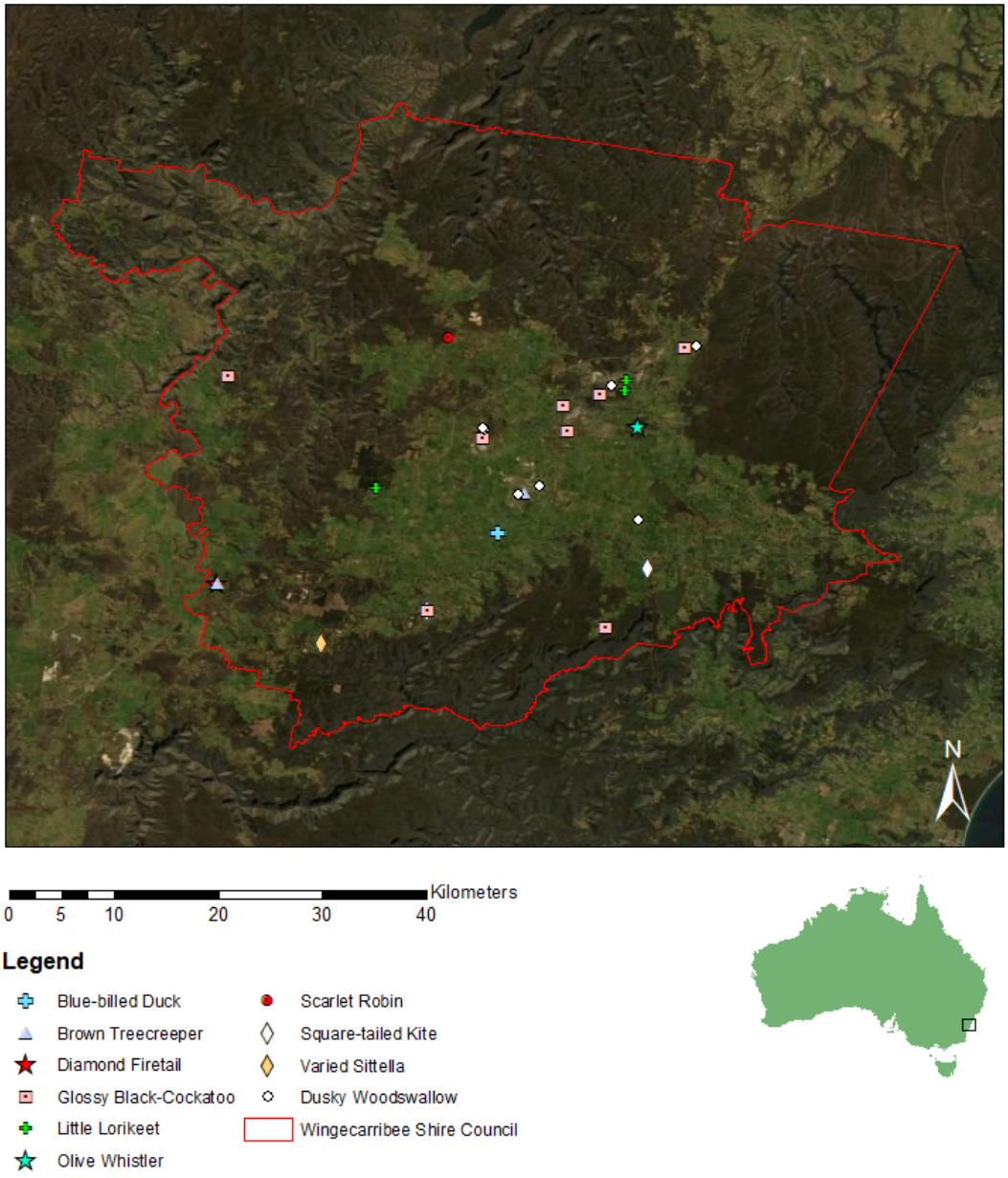


Figure 5: Distribution of the threatened bird species within the Wingecarribee Shire Council boundaries during the 2020 Aussie Backyard Bird Count. Bird observations that were recorded in a single survey overlap due to having the same GPS co-ordinates.

One species of threatened waterbird was recorded within the Wingecarribee Shire Council boundaries in 2020:

- Blue-billed Duck (Vulnerable)

Numerous Australian waterfowl and wetland-associated birds are threatened due to the continual loss and degradation of wetlands and natural waterways, through practices such as water diversion, river regulation, land clearing and changes in salinity (BirdLife Australia, 2015).

One threatened raptor species was recorded within the Wingecarribee Shire Council boundaries in 2020:

- Square-tailed Kite (Vulnerable)

A number of Australian raptor species are threatened due to habitat destruction and fragmentation, loss of nesting hollows, declining prey availability, and the use of rodenticides.

Two threatened parrot species were recorded within the Wingecarribee Shire Council boundaries in 2020:

- Glossy Black-Cockatoo (Vulnerable)
- Little Lorikeet (Vulnerable)

Numerous native parrot species are threatened in Australia, with each species facing its own set of conservation challenges. However, many parrot species are experiencing population declines due to the lack of reliable food access and suitable nesting sites, particularly mature tree hollows, which are essential for successful breeding. Habitat loss and modification is decreasing the number of suitably sized tree hollows available for threatened parrot species to nest in, and the hollows that do remain are subject to fierce competition. These hollows are often won and subsequently used by more aggressive bird species (e.g., Crimson Rosellas, Galahs, Rainbow Lorikeets and Common Starlings), European honeybees, and marsupials (BirdLife Australia, 2015).

Six threatened woodland-associated bird species were recorded within the Wingecarribee Shire Council boundaries in 2020:

- Brown Treecreeper (Vulnerable)
- Diamond Firetail (Vulnerable)
- Dusky Woodswallow (Vulnerable)
- Olive Whistler (Vulnerable)
- Scarlet Robin (Vulnerable)
- Varied Sittella (Vulnerable)

Since European settlement, over 80% of Australia's temperate woodlands have been cleared, resulting in many woodland-dependent bird species experiencing population declines and being reclassified as threatened (BirdLife Australia, 2015). The temperate south-eastern regions of Australia have experienced the largest number of woodland species declines. In response to the documented declines in woodland bird species, BirdLife Australia has implemented the

Woodland Birds for Biodiversity Project to enhance the conservation of declining and threatened woodland bird species. This project builds on the recovery efforts of the Critically Endangered Regent Honeyeater which has been the focus of long-term intensive recovery initiatives by BirdLife Australia and, due to its high profile, acts as a flagship species for the conservation of other threatened woodland birds. The *Woodland Birds for Biodiversity Project* aims to:

- Monitor habitat restoration activities and bird populations to determine priority habitat sites and population trends.
- Identify and monitor climate change impacts on woodland habitat and woodland-dependent bird species.
- Improve the management and protection of woodland habitat on private and public land.
- Restoration and revegetation of areas to improve the amount of available habitat and connectivity of this habitat.
- Community education and involvement in survey efforts and monitoring.

8. Species-specific Results

8.1 Laughing Kookaburra

285 Laughing Kookaburras were counted within the council boundaries during the 2020 Aussie Backyard Bird Count, making them the 18th-most abundant species in the region. Laughing Kookaburra records were spread across the council, including in urban centres, but were alsocommon at the edges of forested habitat.

The total count of Laughing Kookaburra was about 200 higher than in 2019, and almost twice as high as in 2018. However, this increased abundance seems to be a reflection of increased participation rather than more birds; the reporting rate of Laughing Kookaburra in 2020 (22.68%) was lower than the previous two years (27.66% and 24.37%). The reporting rate for the species (22.68%) was on par with the state (22.31%) average, and higher than the national (16.11%) average.

Table 5: Species-specific statistics for the Laughing Kookaburra showing the total number of surveys conducted in the council, the total number of birds observed and the reporting rate of the species for the years 2018 – 2020 inclusive.

Laughing Kookaburra	2018	2019	2020
Total surveys (all)	423	595	798
Bird Count	199	259	285
Reporting Rate (%)	27.66	24.37	22.68

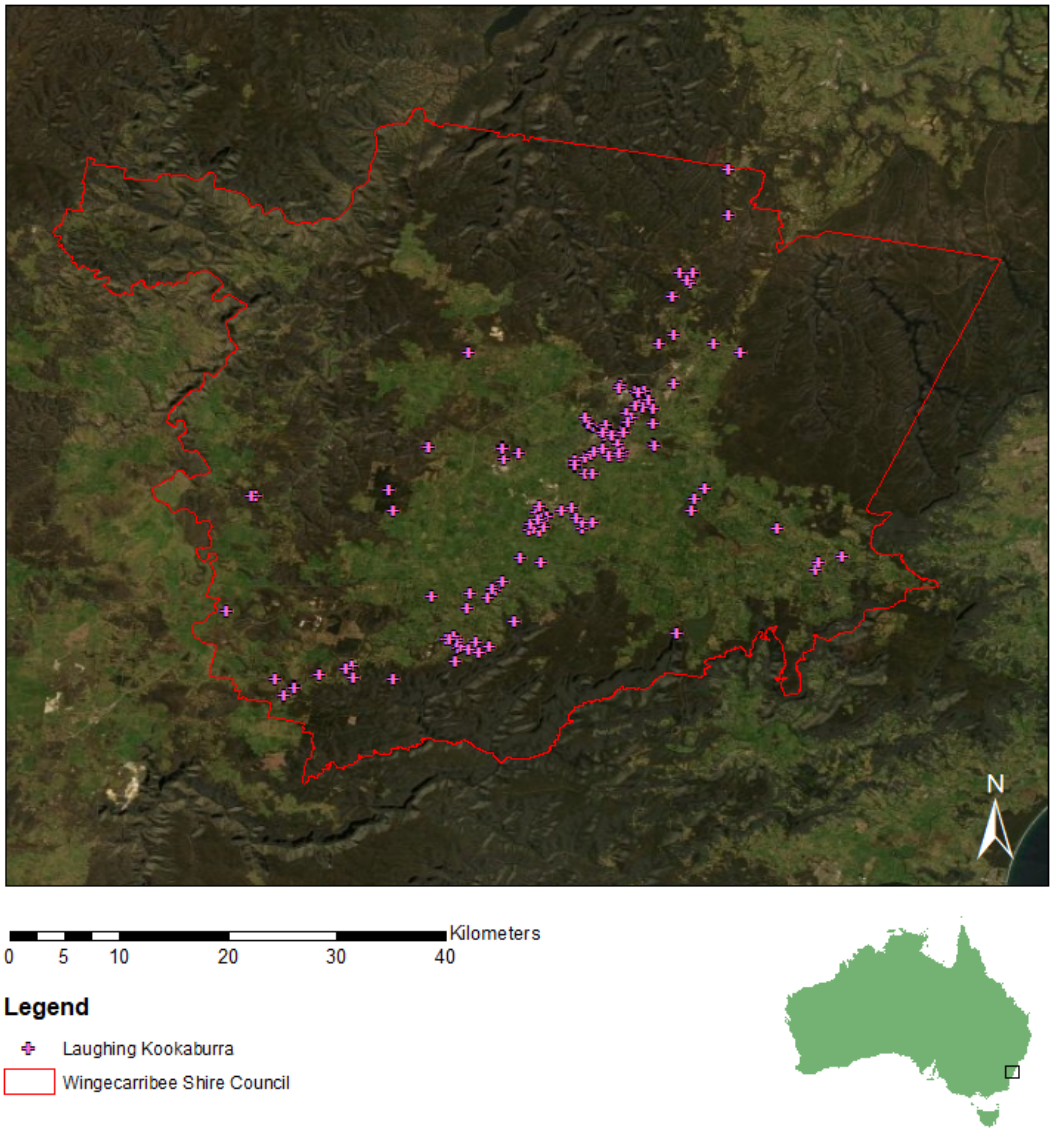


Figure 6: Distribution of Laughing Kookaburra within the council boundaries (red line) during the 2020 Aussie Backyard Bird Count. Bird observations from the same general area will overlap as they have the same, or similar, GPS coordinates.

8.2 Eastern Spinebill

84 Eastern Spinebills were counted within the council boundaries during the 2020 Aussie Backyard Bird Count, making them the 32nd-most abundant species in the region. There were 62 separate records of the species this year, scattered throughout the council but with the majority coming from areas adjacent to native forest or remnant vegetation (Figure 7).

The total count of Eastern Spinebill was slightly lower than the counts from both 2018 and 2019, despite the significant increase in participation in 2020 (Table 6). This is reflected in the reporting rate, which decreased from 11.11% in 2018 to 7.64% in 2020. The 2020 council reporting rate (7.64%) is still notably higher than the state reporting rate (4.18%), as well as the South Australian (2.98%), Victorian (3.66%), and Tasmanian (5.67%) reporting rates. The Eastern Spinebill is rare at sea level in Queensland, and not found in Western Australia or the Northern Territory, so a full national comparison may be less appropriate, but the national reporting rate was 2.90%.

Table 6: Species-specific statistics for the Eastern Spinebill showing the total number of surveys conducted in the council, the total number of birds observed and the reporting rate of the species for the years 2018 – 2020 inclusive.

Eastern Spinebill	2018	2019	2020
Total surveys (all)	423	595	798
Bird Count	91	94	84
Reporting Rate (%)	11.11	8.57	7.64

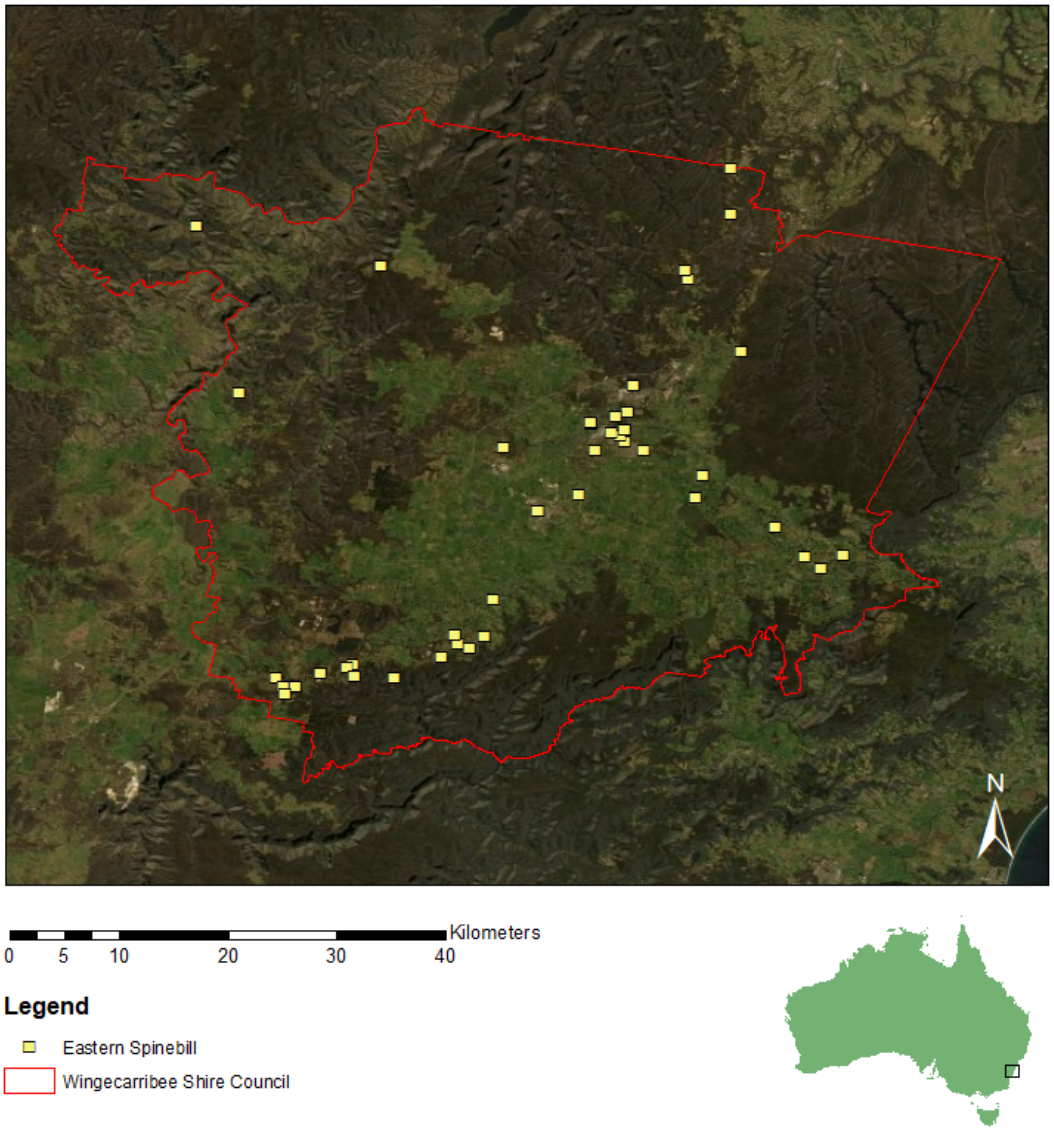


Figure 7: Distribution of Eastern Spinebill within the council boundaries (red line) during the 2020 Aussie Backyard Bird Count. Bird observations from the same general area will overlap as they have the same, or similar, GPS coordinates.

8.3 Masked Lapwing

54 Masked Lapwings were counted within the council boundaries during the 2020 Aussie Backyard Bird Count, making them the 42nd-most abundant species in the region. Records were almost all of singles or pairs, scattered quite evenly through the central parts of the council, but with surprisingly few reports from central urban areas (Figure 8). There were no records from the western peripheries of the council.

The total count of Masked Lapwing was roughly double the count from 2018 (26), and slightly higher than the 2019 count (50) (Table 7). Even adjusting for the increased participation in 2020, the 2020 reporting rate (4.01%) was slightly higher than in the two preceding years (3.31% and 3.7%). The reporting rates for the Wingecarribee Shire Council in 2020 were considerably lower than both state (8.81%) and national (8.01%) values.

Table 7: Species-specific statistics for the Masked Lapwing showing the total number of surveys conducted in the council, the total number of birds observed and the reporting rate of the species for the years 2018 – 2020 inclusive.

Masked Lapwing	2018	2019	2020
Total surveys (all)	423	595	798
Bird Count	26	50	54
Reporting Rate (%)	3.31	3.7	4.01

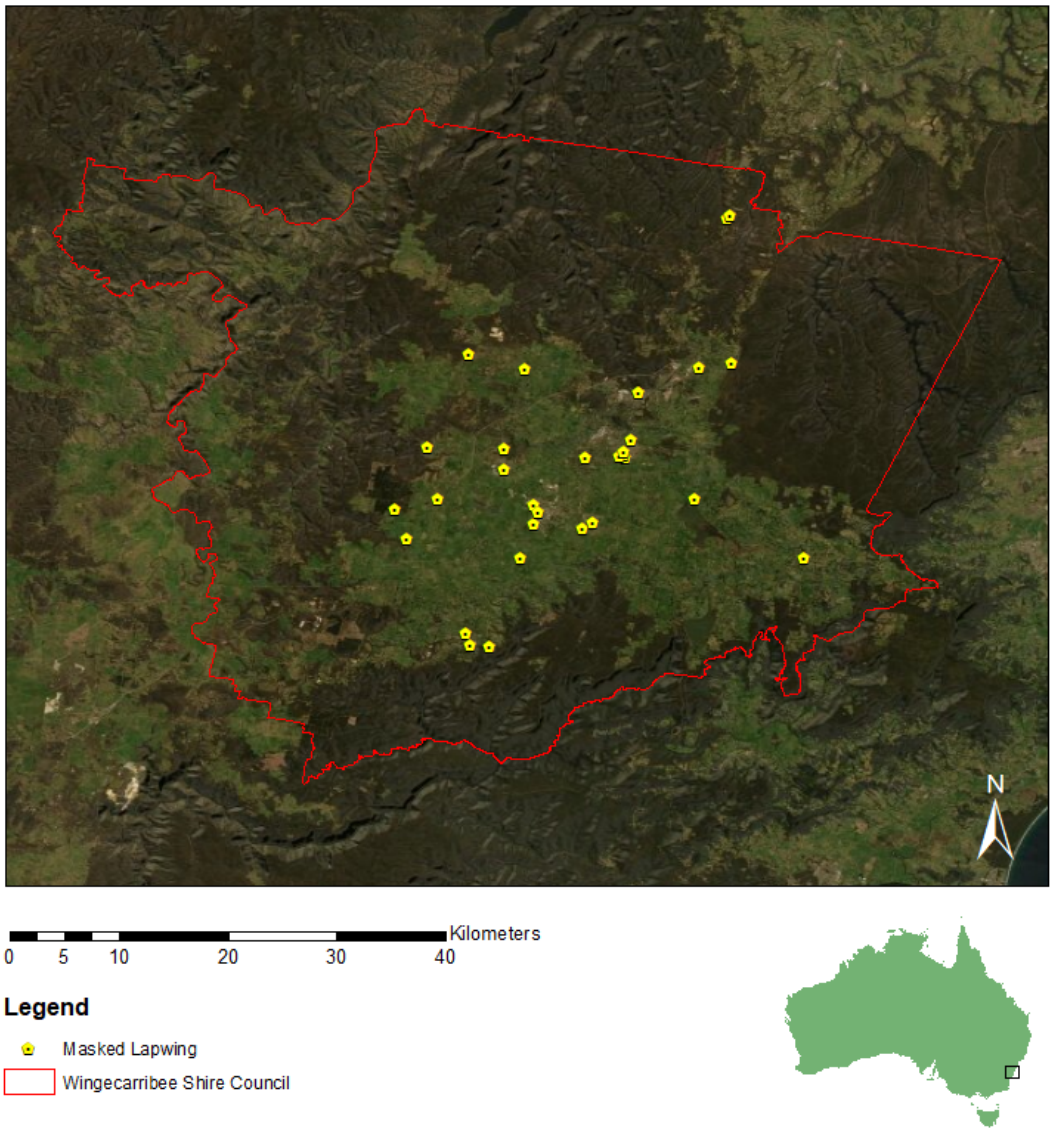


Figure 8: Distribution of Masked Lapwing within the council boundaries (red line) during the 2020 Aussie Backyard Bird Count. Bird observations from the same general area will overlap as they have the same, or similar, GPS coordinates.

9. Data Limitations

The Aussie Backyard Bird Count has the potential to be an extremely valuable long-term monitoring tool for Australian bird species and communities. Data collected over several years in regions of interest can be used to assess population trends for target species, guilds, and ecological communities. These data can also inform local management decisions: for example, increased control of introduced species with an upward population trend, or implementation of additional conservation actions for native species with downward population trends.

However, caution should be taken when interpreting the results from the Aussie Backyard Bird Count. The backyards surveyed for the Count will not constitute a random selection of Australian backyards. Previous analyses of similar surveys suggest that participants are more likely to have 'bird-friendly' gardens, which can support a higher abundance and diversity of birds, than the average citizen (Dunn et al., 2005; Spurr, 2012). Additionally, participants are more likely to record bird species that favour habitat associated with urban parks and gardens than those specialised to other habitat types. Urban-avoidant species, and species confined to habitats like wetlands or coastlines, are unlikely to be recorded in backyard environments. The absence of these species from the Count may not imply low abundance or restricted distributions, but rather that the specific habitats of these species were under-surveyed.

The number of counted birds may also be over-inflated due to the potential for observers to count the same bird/s multiple times during a single 20-minute survey, or across the one-week survey period. Remote and regional parts of Australia are also likely to be under-represented in surveys (or not represented at all), making data interpretation for these regions more difficult. The Aussie Backyard Bird Count is also restricted to a single week in late October, so data from the count cannot be used to determine seasonal trends in species abundance, and migratory species absent from certain regions during this time period will not be represented in the final dataset for those regions.

GPS coordinates from participant surveys should also be used with caution, as several factors may influence their accuracy and precision. Participants may select their location incorrectly when starting a 20-minute survey in the Backyard Bird Count app, though the coordinates will usually fall within the general boundaries of the surveyed area. Excluding user error, the accuracy of these coordinates should fall within 5-50 metres of the true survey start point. In some environments, the app may be unable to obtain an accurate GPS fix; this is most relevant for surveys submitted from indoor environments, near tall buildings or under heavy cloud cover. Wi-Fi connections usually provide fast and accurate GPS results, but in rare cases, surveys submitted by connecting to moving Wi-Fi hotspots (e.g., a nearby Wi-Fi-enabled car) can return highly inaccurate GPS coordinates. If forced to use mobile towers, rather than Wi-Fi or GPS, to determine the position of the user, the app may return coordinates more than 1 km from the true location of a survey. Coordinates generated using computer IP addresses, for surveys submitted from personal computers not connected to a Wi-Fi network, can also be highly inaccurate.

The quality of survey results also depends on the experience and skill participants have with counting and identifying birds. The Aussie Backyard Bird Count app notifies users if they select species not found in their survey location, and the national dataset has been vetted by experienced observers to minimise the number of misidentifications. This year, an additional round of data vetting has been carried out at a local council level, but while every effort has been made to remove misidentifications, it is probable that some remain in the final council datasets. However, common and familiar backyard species are less likely to be misidentified than urban-avoidant species (Cannon, 1999), so survey results for these species can be analysed with relative confidence.

Finally, it may become apparent at the mapping stage for Brolga reports that some identifications of introduced, threatened or target species were incorrect (for example, records of local shorebirds on an urban street away from coastlines). However, it is unfeasible to update these records at the final mapping stage, so mapped species data should be analysed with this understanding.

10. What Birds in Backyards Can Offer

We are fortunate in Australia to have such a diverse and colourful range of native birds living amongst us in the urban landscape. These birds provide an opportunity for people to appreciate and connect with wildlife daily, and increasingly, research is linking access to biodiversity with a person's quality of life. This has been particularly important during the ongoing COVID-19 pandemic.

Urban spaces are not only for 'common' birds. Over 600 native bird species use urban areas, including 71 state and federally listed species. Better management of our urban spaces is critical for the conservation of Australia's birds. We can help both threatened birds AND keep the common birds common, just by working on our doorstep!

Changes in our gardening practices and increasing urbanisation are driving change in our bird life – for example, the simplification of our gardens and the loss of shrubs has removed important food, shelter and nesting locations. If vegetation in gardens is managed to promote a diversity of native bird species, it will provide a valuable secondary habitat for conserving native bird populations, particularly as our natural habitat continues to be destroyed. In the urban landscape, engaging with the wider community is necessary to turn around this trend of habitat loss, and provides a unique opportunity to engage large numbers of the general community actively in the conservation of biodiversity.

The Urban Bird Program has a range of projects that councils can engage with:

Birds In Backyards

Birds in Backyards encourages people to learn in their own space in order to establish an initial connection with the natural world in a somewhat unnatural setting. It is not simply about providing people with information about birds in their local area but it is about building on that initial interest and encouraging people to learn more and then take action for birds. Our program takes a three-pronged approach: LEARN about Aussie birds, PARTICIPATE in surveying, and CREATE habitat and change.

Birds in Backyards can work with your council to provide resources or collaborate on projects. For example:

- Hard copy materials such as 'A4 Backyard Birds of' posters (that can be made available in six languages), bookmarks, bird trading cards, and gardening advice brochures.
- 'Train the trainer' workshops and associated materials, or direct public workshops.
- Online learning opportunities via our new e-learning platform for residents to discover bird-friendly gardening, nest box building tips, or bird identification resources.
- Ongoing monitoring programs for participants via our Backyard Bird surveys, with feedback provided.

Birds in Schools

Birds in Schools (BIS) empowers primary students to build knowledge and understanding of wildlife and conservation by actively engaging them as citizen scientists. Outdoor learning and hands-on experiences result in the pupils getting a deeper and more involved understanding of their world. Teachers are supported to deliver lessons through our e-learning platform, allowing us to deliver BIS throughout the country. They don't go it alone though - our staff provide training and advice, as well as connecting to classrooms directly.

The students monitor the birds and habitat of their school or home, contributing to BirdLife Australia's Birdata platform and contributing to our understanding of birds throughout Australia. They then investigate their findings and develop an action plan that helps their local bird life based on their own discoveries with the council working with them to implement these plans.

Councils can work with us to create a network of BIS schools in your region.

Budding Birdos

Budding Birdos aims to introduce participants to birding and citizen science via an experienced facilitator and online coursework hosted on our e-learning platform. The program is a unique combination of LGA biodiversity and engagement priorities, that link to BirdLife Australia's monitoring and education resources by guiding participants through social events, e-learning and participation in bird surveying in a fun and relaxing way. The goal is to have an active, engaged, and enthusiastic community of people who are networked and inspired to build a better world for urban biodiversity. The course can be designed with specific goals in mind for the LGA – whether that is to create habitat in public or private space or set up ongoing monitoring in particular sites.

Powerful Owl Project

The Powerful Owl Project is a science-led community-based initiative that supports the conservation of Powerful Owls as an environmental indicator of the health of urban birds along the east coast of Australia. We have monitored and researched the ecology of urban Powerful Owls across Greater Sydney since 2011 and in South East New South Wales since 2016 - educating land managers and the general community about building habitat to conserve Powerful Owls and other urban birds and provided fine-scale ecological data about habitat use to advise appropriate land management practices associated with fire and vegetation management for this Threatened species.

Contact us for information about Powerful Owls that you may have in your LGA and conservation concerns or if you wish to look at engaging your residents in this citizen science activity.

For more information on these specific projects or others you are looking to develop, please contact Urban Birds Program Manager Dr. Holly Parsons at **holly.parsons@birdlife.org.au**.

11. References

BirdLife Australia (2019). *Working list of Australian birds v2.1*. Retrieved from http://BirdLife.org.au/conservation/science/taxonomy (accessed 16/02/2021).

Cannon, A. (1999). The significance of private gardens for bird conservation. *Bird Conservation International*, **9:** 287-297.

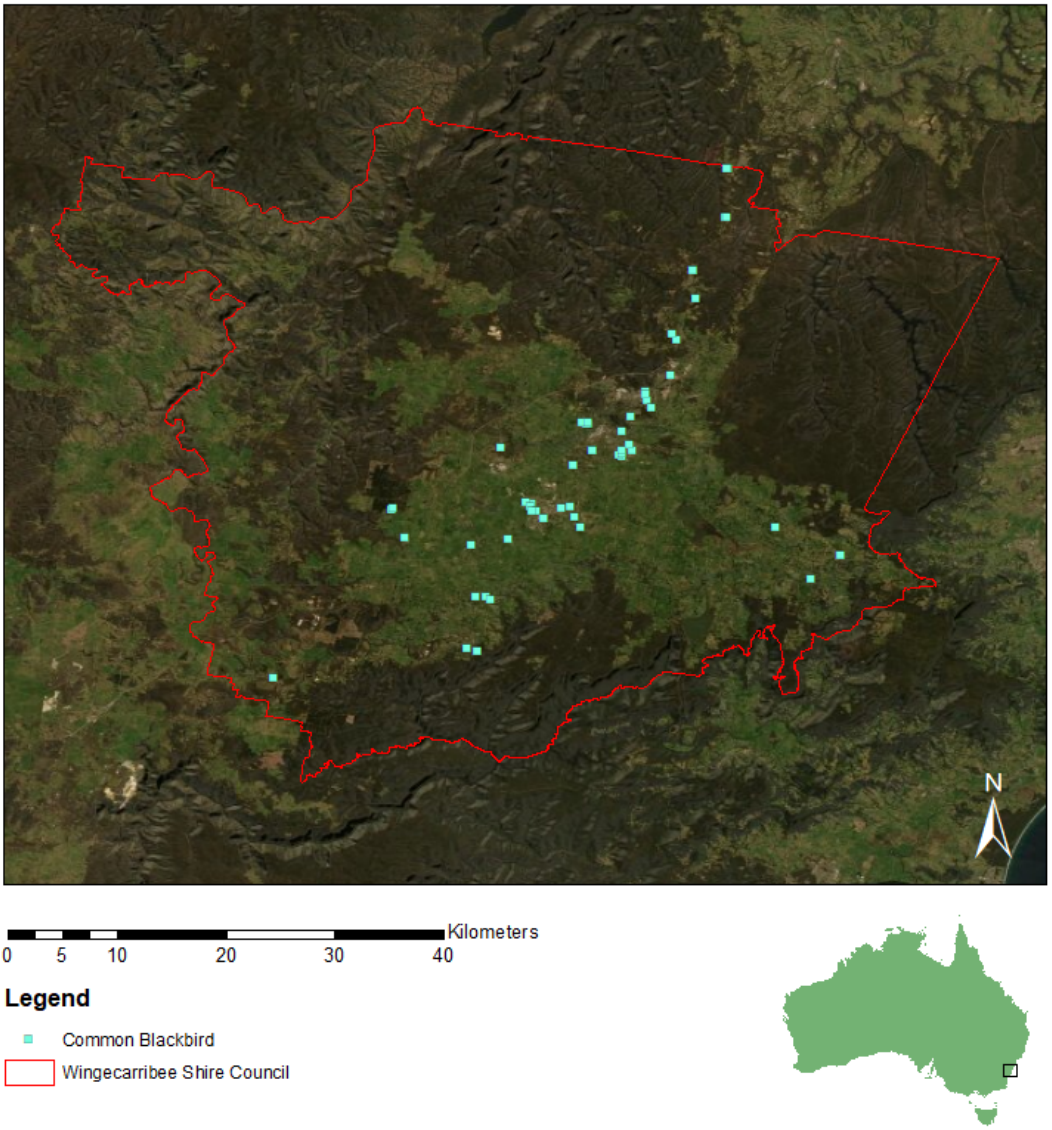
Dunn, E.H., Francis, C.M., Blancher, P.J., Drennan, S.R., Howe, M.A., Lepage, D., Robbins, C.S., Rosenberg, K.V., Sauer, JR., Smith, K.G. (2005). Enhancing the scientific value of the Christmas bird count. *The Auk*, **122:** 338-346.

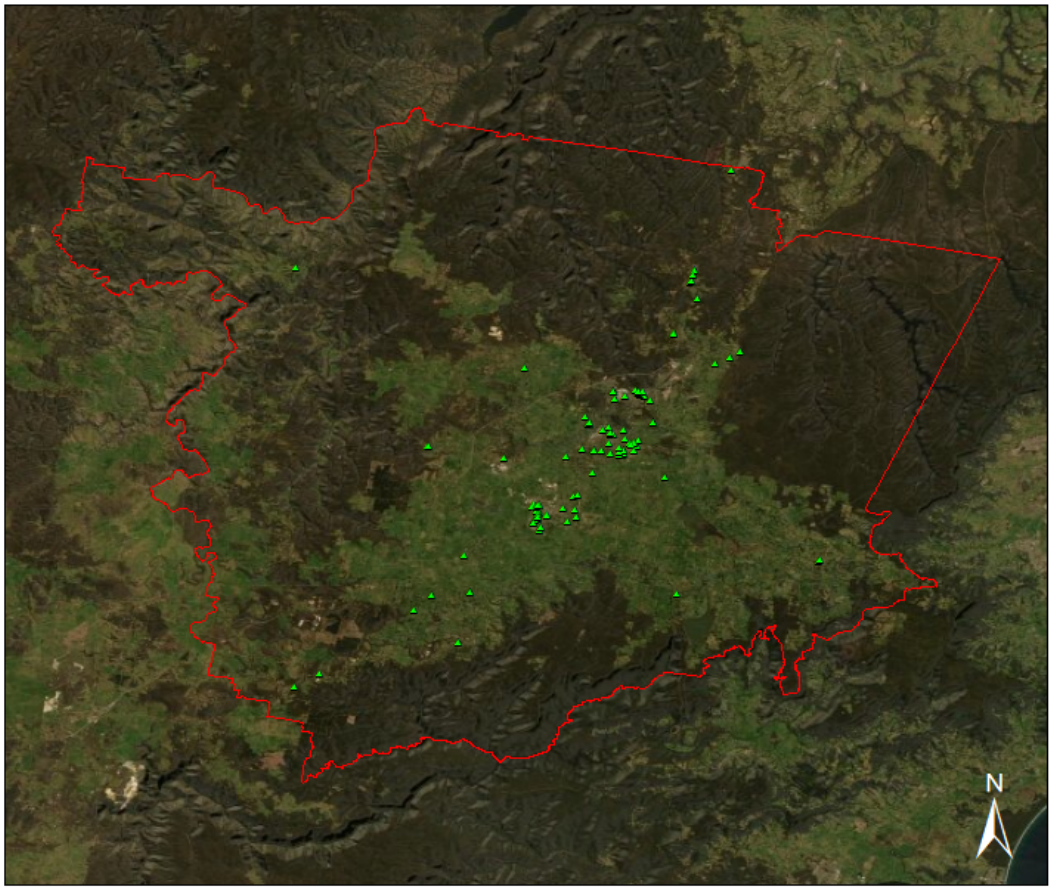
Garnett, S.T., Szabo, J.K., Dutson, G. (2011) The Action Plan for Australian Birds 2010. CSIRO Publishing, Australia.

Spurr, E.B. (2012). New Zealand garden bird survey – analysis of the first four years. *The New Zealand Journal* of *Ecology*, **36:** 1-13

12. Appendix One – Introduced Species Maps

The individual distribution maps for each introduced species recorded within council boundaries during the 2020 Aussie Backyard Bird Count, in alphabetical order, are presented in Appendix One. No figure captions have been provided, as the format is identical to that of Figure 5.





0 5 10 20 30 40 Kilometers

Legend

- Common Myna
- Wingecarribee Shire Council

Kilometers

0 5 10 20 30 40

Legend

Common Starling

Wingecarribee Shire Council

0 5 10 20 30 40 Kilometers

Legend

- Domestic Duck
- Wingecarribee Shire Council

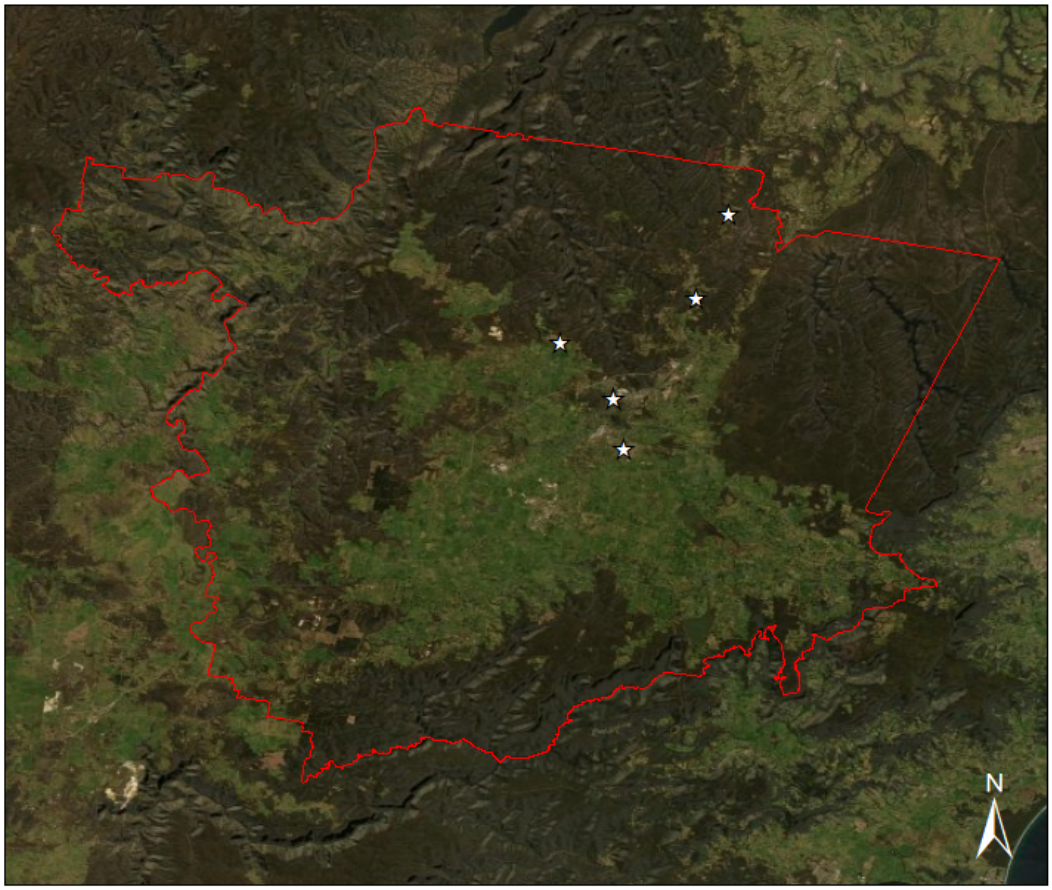
Kilometers

0 5 10 20 30 40

Legend

Domestic Goose

Wingecarribee Shire Council

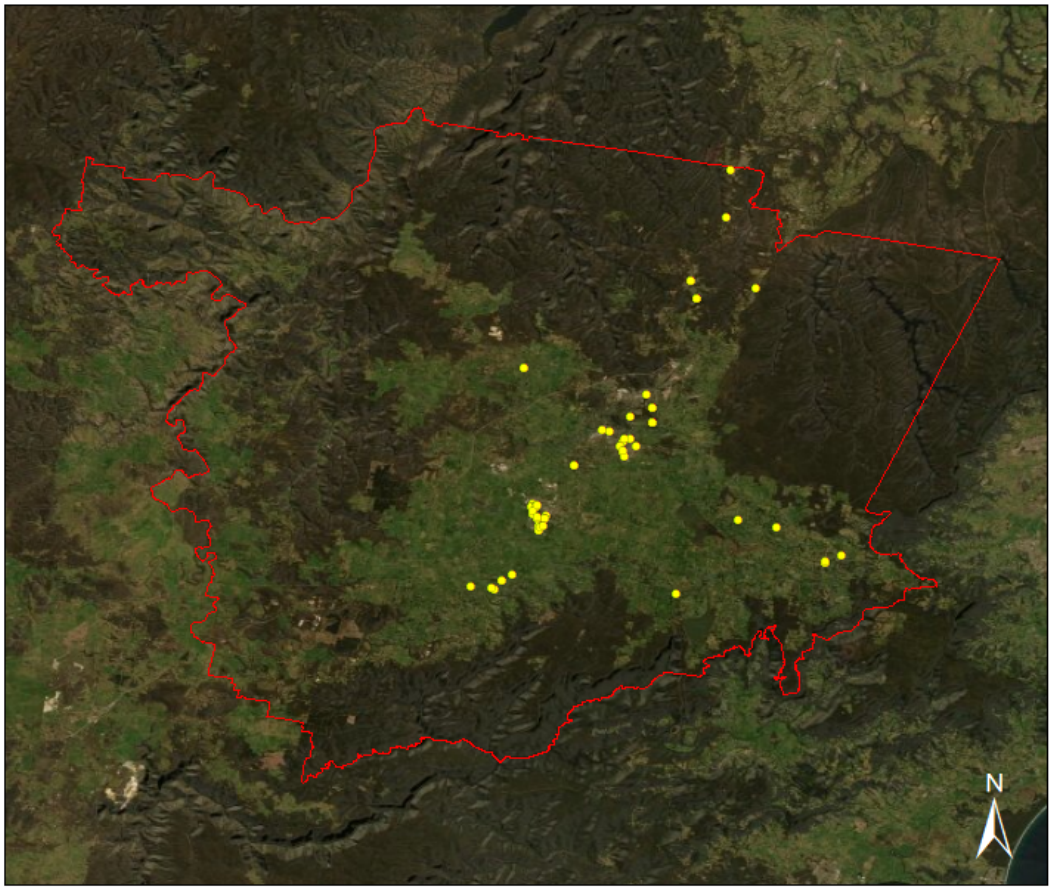


0 5 10 20 30 40 Kilometers

Legend

☆ European Goldfinch

Wingecarribee Shire Council

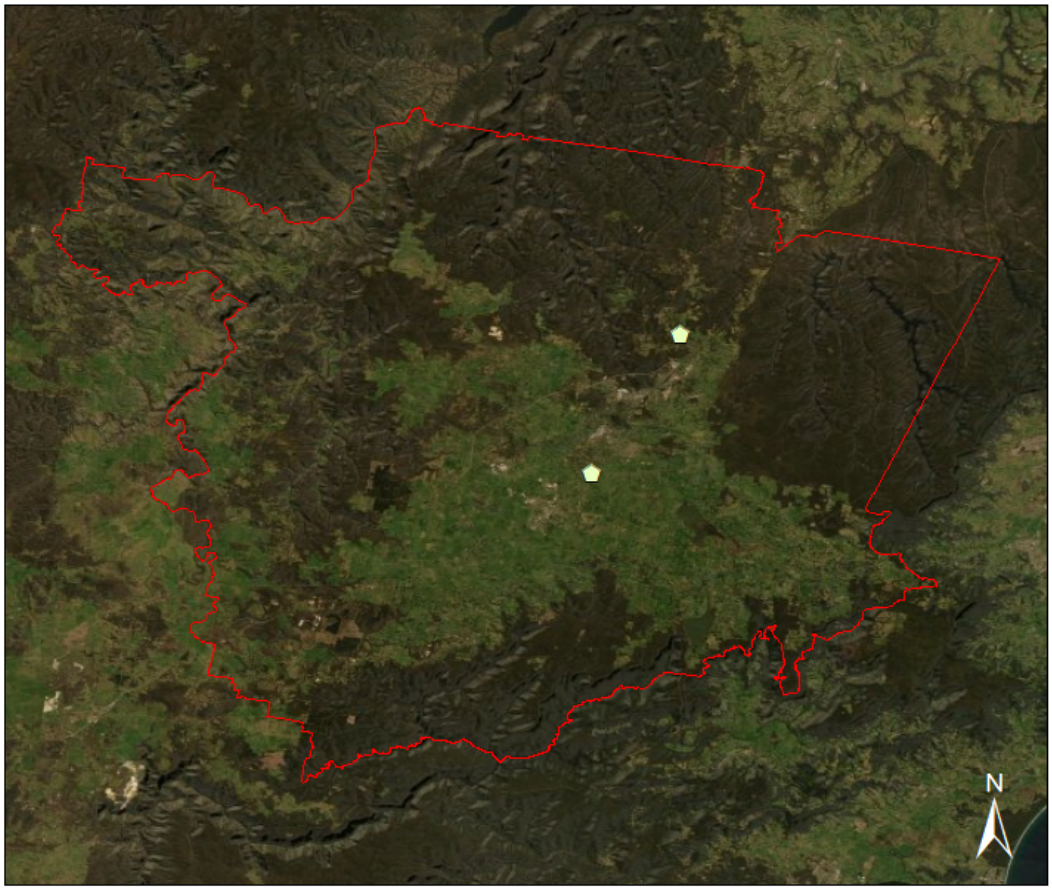


0 5 10 20 30 40 Kilometers

Legend

House Sparrow

Wingecarribee Shire Council



0 5 10 20 30 40 Kilometers

Legend

Muscovy Duck

Wingecarribee Shire Council

0 5 10 20 30 40 Kilometers

Legend

Northern Mallard

Wingecarribee Shire Council

0 5 10 20 30 40 Kilometers

Legend

- Rock Dove
- Wingecarribee Shire Council

Kilometers

0 5 10 20 30 40

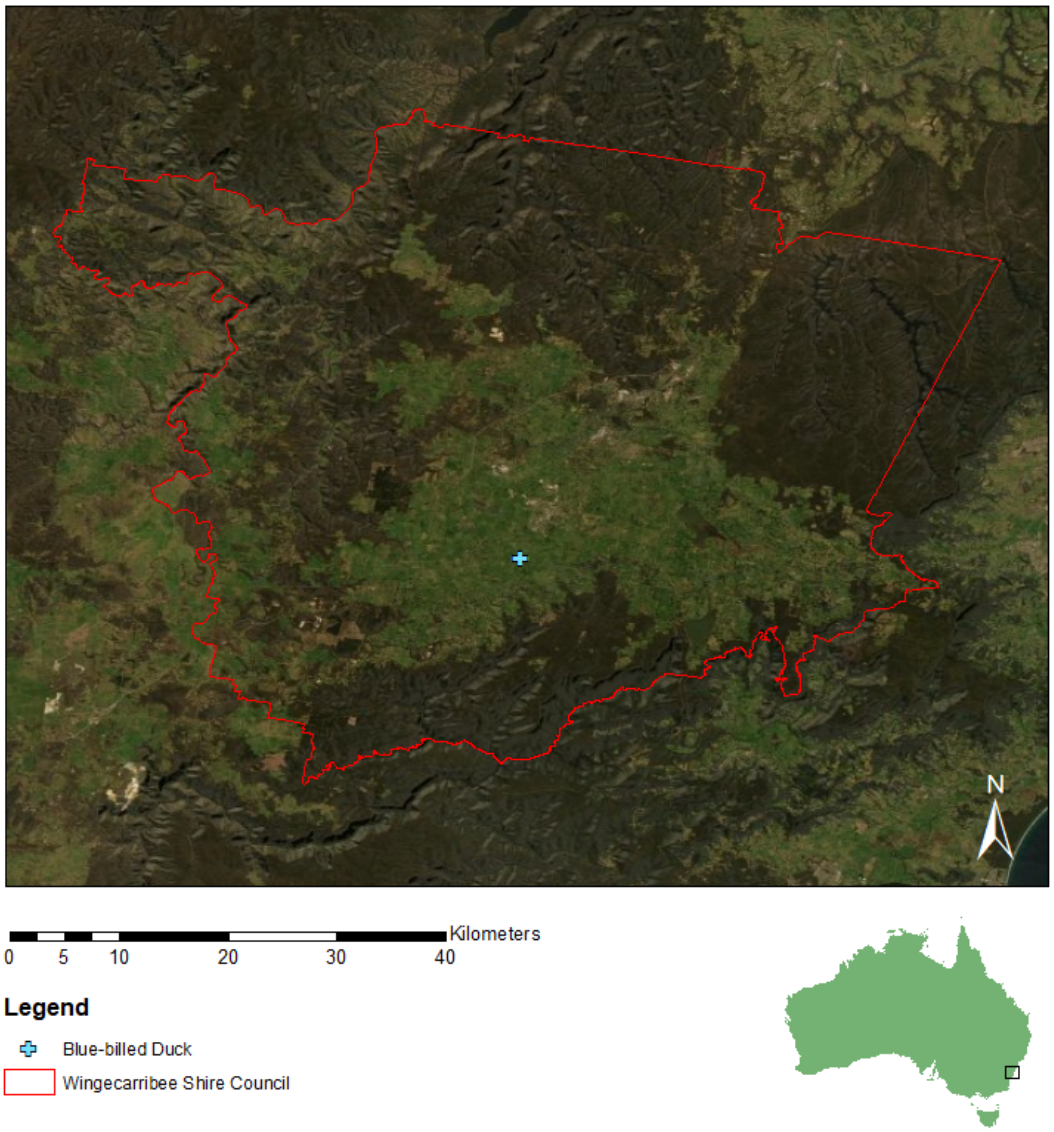
Legend

Spotted Dove

Wingecarribee Shire Council

13. Appendix Two – Threatened Species Maps

The individual distribution maps for each threatened species recorded within council boundaries during the 2020 Aussie Backyard Bird Count, in alphabetical order, are presented in Appendix Two. No figure captions have been provided, as the format is identical to that of Figure 5.



Kilometers

0 5 10 20 30 40

Legend

Brown Treecreeper

Wingecarribee Shire Council

Kilometers

0 5 10 20 30 40

Legend

Diamond Firetail

Wingecarribee Shire Council

0 5 10 20 30 40 Kilometers

Legend

- Dusky Woodswallow
- Wingecarribee Shire Council

Kilometers

0 5 10 20 30 40

Legend

Glossy Black-Cockatoo

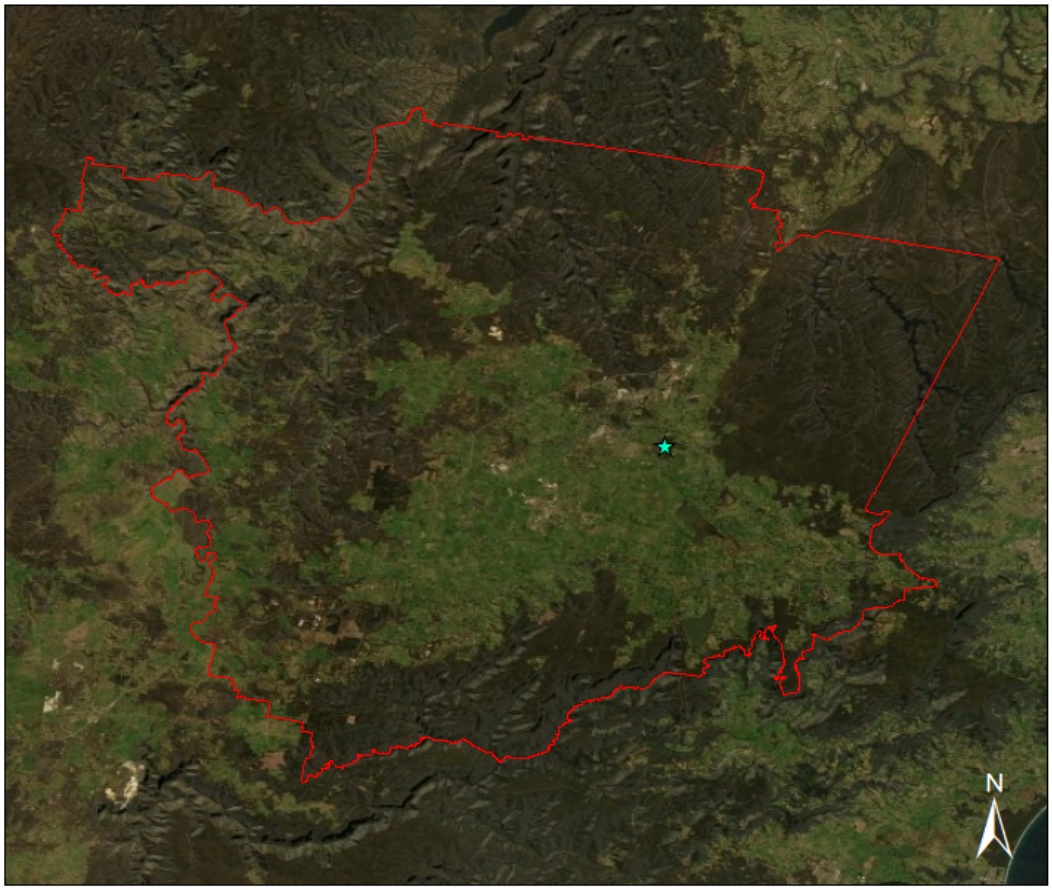
Wingecarribee Shire Council

0 5 10 20 30 40 Kilometers

Legend

Little Lorikeet

Wingecarribee Shire Council



0 5 10 20 30 40 Kilometers

Legend

Olive Whistler

Wingecarribee Shire Council

Kilometers

0 5 10 20 30 40

Legend

Scarlet Robin

Wingecarribee Shire Council

Kilometers

0 5 10 20 30 40

Legend

◊ Square-tailed Kite

Wingecarribee Shire Council

Kilometers

0 5 10 20 30 40

Legend

Varied Sittella

Wingecarribee Shire Council