Brolga Report

prepared for

Wingecarribee Shire

birdlife AUSTRALIA

AUSSIE BIRD COUNT

17–23 October 2022

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BirdLife Australia

BirdLife Australia was founded in 1901 and has been at the forefront of Australian bird conservation for over 120 years. We work with a vast network of volunteers and stakeholders to conserve native birds and biological diversity, and educate and engage communities across Australia. Our 2023-2032 Bird Conservation Strategy is available **here**.

BirdLife Australia also produces a range of publications, including *Australian Birdlife*, a quarterly magazine; *Australian Field Ornithology* and *Emu: Austral Ornithology*, peer-reviewed scientific journals; and the *Handbook of Australian, New Zealand and Antarctic Birds*. We maintain a comprehensive ornithological library and several scientific databases covering bird distribution and biology. Data shared by everyday bird lovers to our Birdata platform regularly features in scientific publications and government decision-making – and this includes bird surveys submitted by your own constituents.

Membership of BirdLife Australia is open to anyone interested in birds and their habitats and concerned about their future. For further information about membership, to enquire about community fundraising initiatives, or to donate to our crucial conservation work, please contact the Supporter Care Team at **support@birdlife.org.au**. You can also phone us at (03) 9347 0757 (dial 4).

Recommended citation:
BirdLife Australia. 2023. Aussie Backyard Bird Count 2022 results: Wingecarribee Shire. Unpublished report for the Wingecarribee Shire.

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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 representation of actual bird trends within the area and are not a replacement for robust, long-term scientific datasets for decision-making within council boundaries. Please reach out to **birdata@birdlife.org.au** to organise a free data extract if you require scientific data for these purposes.

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

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Contents

The Aussie Bird Count

In 2014, as part of BirdLife Australia's National Bird Week celebrations, BirdLife Australia ran the first ever **Aussie Bird Count** – now one of the largest citizen science events in Australia. The Aussie Bird Count provides an opportunity for everyone – from schoolkids to senior citizens, families, and community groups – to become citizen scientists for one week every October. With over 85% of Australians living in urban environments, and birds to be found in even the deepest reaches of the concrete jungle, the Aussie Bird Count is a great way to get outside and connect with nature. Birdwatching is a fantastic hobby to keep local communities active, healthy, and attuned to the world around them.

Why do counts count?

Data collected by citizen scientists – like the participants in the Aussie Bird Count – play a vital role in informing councils, scientists, and organisations like BirdLife Australia of the health of Australia's ecosystems. Surveys submitted to BirdLife Australia's national monitoring platform, Birdata, have helped us fill important knowledge gaps and increased our understanding of Australian bird species.

Many Aussie Bird Count participants catch the birdwatching bug and continue to survey their local birds across the year, helping our Urban Birds program to track the fate of bird species that live where people live. The Aussie Bird Count also helps raise the profile of Australia's most iconic and familiar bird species, highlighting their social and environmental importance and promoting a nationally shared passion for Australian birdlife.

Each year this natural passion is confirmed, with the Aussie Bird Count attracting significant interest from members of the general public who are keen to dip their toe in and help contribute to our growing knowledge of Australian birds.

Public involvement has skyrocketed since 2014 – even the record-breaking rains that plagued the eastern seaboard for the duration of the 2022 Aussie Bird Count did not deter people from taking part, while participation in sunny Western Australia continued its upward climb. Counters tallied almost four million birds in 2022, from urban backyards to sub-Antarctic territories.

Each year, more and more local councils hold bird-themed events during Bird Week, and bird-themed lesson plans from BirdLife Australia encourage local schools to get involved and engage with their natural environment.

This national focus on birds is extremely important, with studies showing that populations of many of our familiar urban birds – from Laughing Kookaburras to Willie Wagtails -are in decline (Campbell *et al.* 2022). Despite this, results from the Aussie Bird Count show that an incredible array of Australian birds continue to visit people's backyards, balconies, and bush blocks, and that local communities care deeply for our iconic birdlife.

With concern for the state of Australia's birds growing every day, citizen science projects like the Aussie Bird Count help provide an insight into how key species are faring and give regular people the passion and skills they need to share crucial survey data all year round. This movement is empowering citizens to make a meaningful contribution to the future of conservation, without having to venture beyond a local park or their very own garden fences.

Save the date – the next Aussie Bird Count will take place from 16–22 October 2023.

Aussie Bird Count results – 2022

Count summary

The following statistics summarise the results of the 2022 Aussie Bird Count for the **Wingecarribee Shire**. The count ran from **17–23 October 2022**.

- **452** observers participated in the Bird Count, submitting **737** counts (**Table 1**). This was a notable decrease in participation numbers compared to 2020 and 2021, with the persistent wet weather in the eastern states during 2022 Bird Week a likely contributing factor.
- Participants submitted between **one** and **twenty-two** surveys per registered account – an average of **2.66** surveys per account.
- Participants counted birds for a combined duration of **237** hours and **42** minutes.
- Participants recorded a total of **16,870** individual birds during Bird Week.
- **127** bird species were recorded, with the **Crimson Rosella** reported in **67.03%** of counts (**Table 2**).

Table 1: Comparative summary statistics from the 2019–2022 Aussie Bird Counts for the Wingecarribee Shire. Additional council-level vetting was carried out in 2020 and 2021, with further scrutiny in 2022, so species numbers may differ considerably for some councils in these years compared to others, despite similar or increased participation.

	Year			
	2019	**2020**	**2021**	**2022**
Number of observers	376	391	582	452
Total bird count	14,280	19,156	26,384	16,870
Total surveys	595	798	1,163	737
Total species	175	163	146	127
Minimum checklists per user	1	1	1	1
Maximum checklists per user	11	10	23	22
Average checklists per user	2.74	2.61	2.91	2.66
Survey length (hours)	191.58	250.5	366.4	237.7

Table 2: Total counts of all 127 bird species observed within the Wingecarribee Shire boundaries during the 2022 Aussie Bird Count. This list is based on BirdLife Australia's Working List of Australian Birds (Version 4), available here. **RR (%)** = reporting rate (percentage of all surveys submitted).

* = introduced species; RA = Rare; NT = Near Threatened; VU = Vulnerable; En = Endangered; CE = Critically Endangered; PR4 = Priority Four (WA) (based on IUCN listings; BirdLife Australia, 2020).

Bird species	Count	RR (%)	Bird species	Count	RR (%)
Sulphur-crested Cockatoo	1809	53.19	Sacred Kingfisher	17	1.63
Crimson Rosella	1763	67.03	Australian Reed-Warbler	16	1.22
Australian Magpie	1299	62.82	Grey Teal	16	0.68
Noisy Miner	1100	38.4	Common Bronzewing	15	0.95
Pied Currawong	1041	48.17	Eastern Yellow Robin	15	1.36
Little Corella	877	21.71	Glossy Black-Cockatoo (VU)	15	0.54
Galah	820	28.22	Noisy Friarbird	15	0.95
Australian Wood Duck	775	16.55	Channel-billed Cuckoo	14	1.36
Australian King-Parrot	770	38.81	White-eared Honeyeater	14	0.95
Eastern Rosella	497	19.4	Black Swan	13	0.27
Common Myna*	410	16.42	Brown Cuckoo-Dove	12	1.22
House Sparrow*	397	8.01	Little Pied Cormorant	12	1.09
Magpie-lark	393	26.46	Golden Whistler	9	0.81
Laughing Kookaburra	303	23.47	Oriental Dollarbird	9	0.81
Superb Fairy-wren	294	14.52	Yellow-rumped Thornbill	9	0.54
Australian Raven	286	19.54	Australian Pelican	7	0.81
Satin Bowerbird	283	17.5	Black Duck-Mallard hybrid*	7	0.27
Welcome Swallow	276	9.09	Cattle Egret	7	0.14
Crested Pigeon	271	17.64	Grey Currawong	7	0.81
Red Wattlebird	271	19.54	Topknot Pigeon	7	0.27
Pacific Black Duck	171	6.65	Weebill	7	0.54
Long-billed Corella*	131	2.58	White-throated Gerygone	7	0.54
Little Wattlebird	129	10.04	Bassian Thrush	6	0.54
Eastern Spinebill	125	8.28	Horsfield's Bronze-Cuckoo	6	0.41
Rainbow Lorikeet	120	6.38	Olive-backed Oriole	6	0.54
Grey Butcherbird	110	10.99	Rufous Fantail	5	0.54
Eastern Whipbird	103	9.63	Wedge-tailed Eagle	5	0.41
Little Raven	103	7.33	Australasian Shoveler	4	0.14
Common Blackbird*	102	9.91	Buff-banded Rail	4	0.41
Red-browed Finch	97	3.12	Chestnut Teal	4	0.14
Grey Fantail	95	6.92	Fairy Martin	4	0.14
Common Starling*	86	3.53	Great Pied Cormorant	4	0.27
Masked Lapwing	86	5.97	Red-rumped Parrot	4	0.14
Silvereye	72	2.71	White-headed Pigeon	4	0.41
Eastern Koel	71	7.46	Brown Goshawk	3	0.41
Willie Wagtail	64	4.61	Large-billed Scrubwren	3	0.27
Yellow-faced Honeyeater	59	4.07	Red-browed Treecreeper	3	0.27
Brown Thornbill	57	3.93	Southern Boobook	3	0.41
Yellow-tailed Black-Cockatoo	55	2.99	Tawny Frogmouth	3	0.27
Grey Shrike-thrush	47	4.07	Brown Falcon	2	0.14
Australian White Ibis	44	0.95	Buff-rumped Thornbill	2	0.27
White-browed Scrubwren	42	2.44	Nankeen Kestrel	2	0.27

New Holland Honeyeater	41	2.44	Shining Bronze-Cuckoo	2	0.27
Brown Gerygone	40	2.04	White-bellied Sea-Eagle (VU)	2	0.27
Dusky Woodswallow (VU)	39	1.22	Yellow-throated Scrubwren	2	0.14
Eurasian Coot	38	1.9	Yellow Thornbill	2	0.14
Dusky Moorhen	37	1.63	Australasian Darter	1	0.14
Spotted Dove*	35	3.12	Australasian Figbird	1	0.14
Black-faced Cuckoo-shrike	30	2.58	Australian Hobby	1	0.14
Striated Pardalote	30	2.04	Australian Owlet-nightjar	1	0.14
Superb Lyrebird	30	3.66	Azure Kingfisher	1	0.14
White-winged Chough	29	1.22	Barn Owl	1	0.14
White-throated Treecreeper	28	2.71	Brush Bronzewing	1	0.14
Lewin's Honeyeater	27	2.17	Flame Robin (VU)	1	0.14
Purple Swamphen	26	1.63	Great Egret	1	0.14
Gang-gang Cockatoo	25	1.63	Leaden Flycatcher	1	0.14
Fan-tailed Cuckoo	24	3.12	Little Black Cormorant	1	0.14
Striated Thornbill	22	1.76	Nankeen Night-Heron	1	0.14
Bell Miner	20	0.95	Rock Dove*	1	0.14
White-faced Heron	20	2.17	Scarlet Honeyeater	1	0.14
Australasian Grebe	19	0.68	Scarlet Robin (VU)	1	0.14
Spotted Pardalote	19	1.9	Variegated Fairy-wren	1	0.14
Wonga Pigeon	18	2.31	White-necked Heron	1	0.14
Rufous Whistler	17	1.36	Sacred Kingfisher	17	1.63

The Wingecarribee Shire is a regional boundary Local Government Area with substantial remnant areas of native habitat to support the ecosystems many of our threatened bird species depend on. However, large parts of the plateau have been cleared for farming.

Initiatives such as restoration of native habitat and promoting bird-friendly gardens may boost the number of birds, and number of bird species, reported by Aussie Bird Count participants in future years. Keen participants may like to get involved with the **Birds in Backyards** or **Birds in Schools** programs.

If you'd like to enquire about ways for your council to get constituents involved in bird conservation, you can contact the **Urban Birds** team here. Additional information about Birds in Backyards and Birds in Schools is also included further into this report.

Survey distribution – where did people count?

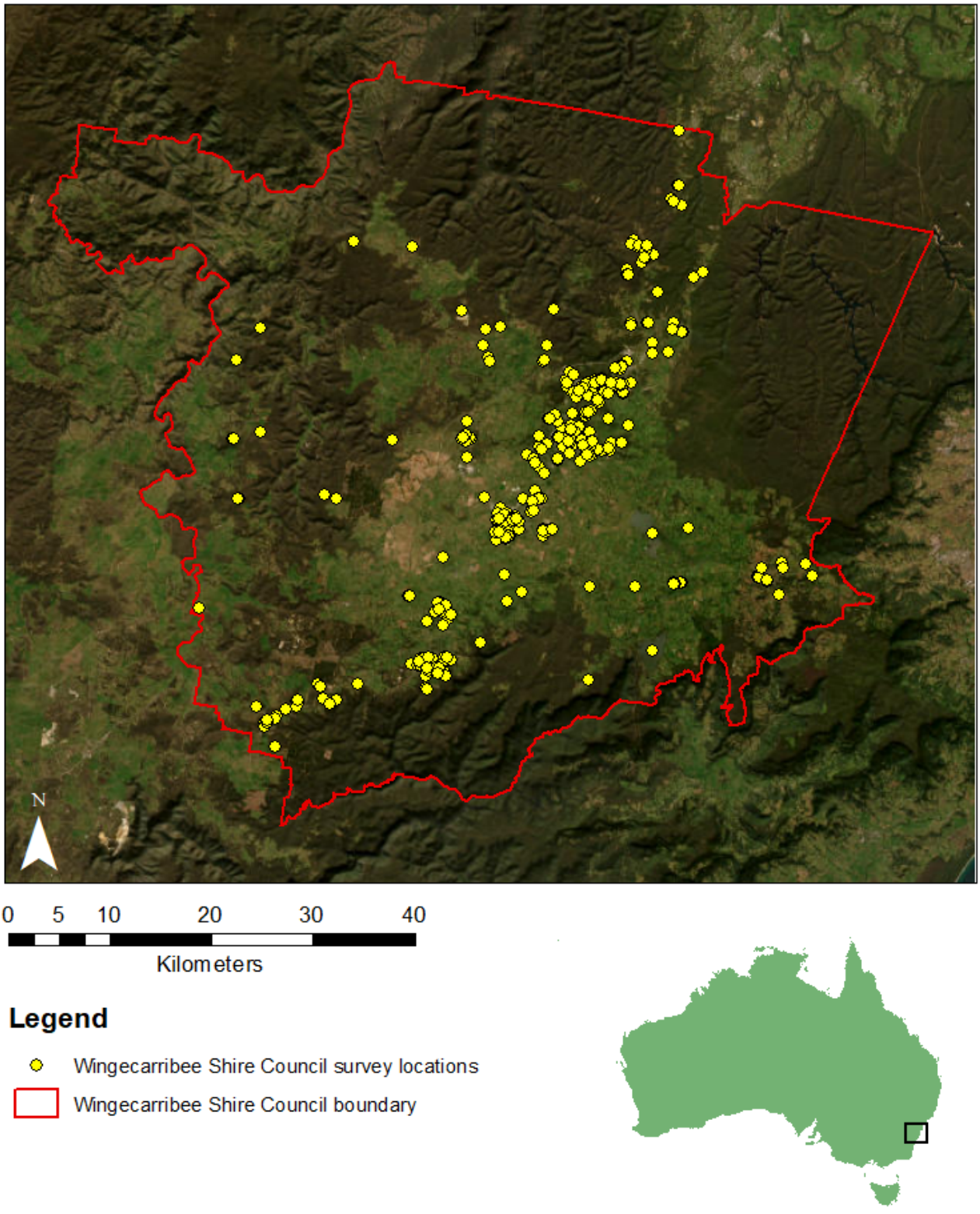

Figure 1. Bird counts (*n*=737) submitted within Wingecarribee Shire boundaries during the 2022 Aussie Bird Count. Each yellow dot represents a single survey, though repeat surveys at a single location will overlap.

Threatened species in your council

European colonisation has had a major impact on the populations of many Australian birds. Approximately 218 species and subspecies (taxa) of Australian bird are now listed as extinct, threatened, or near-threatened by the *Action Plan for Australian Birds 2020* (Garnett & Baker 2021). A further 69 taxa are listed under one of these categories by the EPBC Act, global IUCN Red List or previous Action Plan for Australian Birds (Garnett & Baker 2021).

It is critical for us to gain an understanding of where threatened birds persist so that we can implement appropriate management actions in these precious refuges. Threatened species can be found in every council across the country, and the Aussie Bird Count provides an excellent opportunity for community members to take a first step in participating in this crucial monitoring.

In total, **five** threatened bird species were recorded within the Wingecarribee Shire boundaries in the 2022 Aussie Bird Count (**Table 3**). A visualisation of individual records from the 2022 Aussie Bird Count is provided in **Figure 2**. As there were just a few overlapping records, and they are all clearly visible, we have not provided a separate appendix with individual species maps.

We encourage councils to explore the full set of threatened species data for your region here – simply type your species of interest into the 'Species' filter on the left. Please note some threatened species will not have their exact location made visible in this public interface. You can enquire via birdata@birdlife.org.au if you wish to organise a free download of these data for a particular purpose.

Table 3: Total counts and reporting rates (%) of all five threatened species observed within the Wingecarribee Shire boundaries during the 2022 Aussie Bird Count. This list is based on BirdLife Australia's Working List of Australian Birds (Version 4), available here. **RR (%)** = reporting rate (percentage of all surveys submitted).

* = introduced species; RA = Rare; NT = Near Threatened; VU = Vulnerable; En = Endangered; CE = Critically Endangered; PR4 = Priority Four (WA) (based on IUCN listings; BirdLife Australia, 2020).

Bird species	Status	Count	Number of counts including this species	RR (%)
Dusky Woodswallow	VU	39	9	1.22
Glossy Black-Cockatoo	VU	15	4	0.54
White-bellied Sea-Eagle	VU	2	2	0.27
Flame Robin	VU	1	1	0.14

Scarlet Robin	VU	1		1	0.14

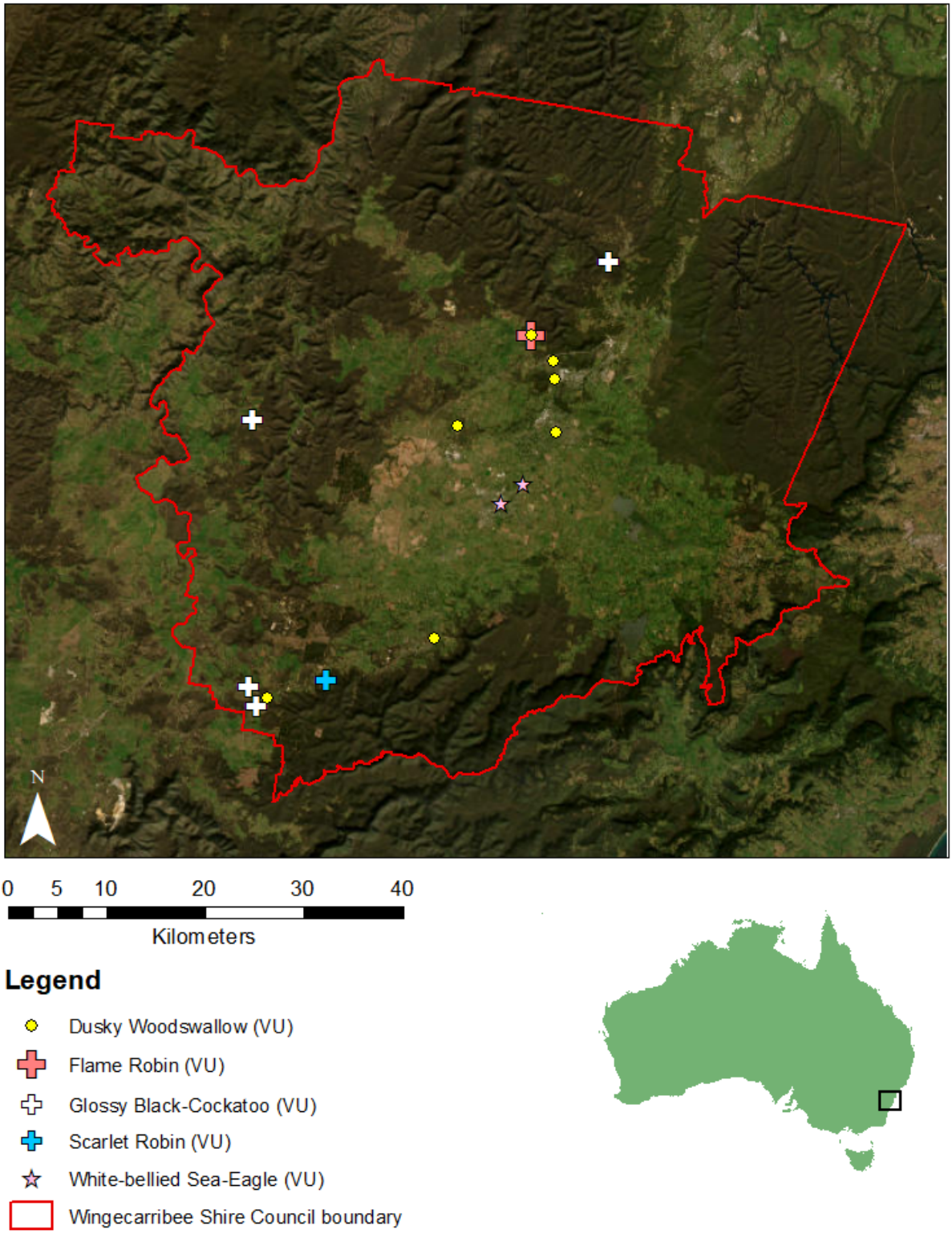

Figure 2. Distribution of threatened species records from the 2022 Aussie Bird Count for the Wingecarribee Shire. Where multiple threatened species are reported in the same count, these records will overlap.

Four threatened woodland bird species were recorded within the Wingecarribee Shire boundaries in 2022:

- Dusky Woodswallow (Vulnerable)
- Flame Robin (Vulnerable)
- Glossy Black-Cockatoo (Vulnerable)
- Scarlet Robin (Vulnerable)

Since European colonisation began, over 80% of Australia's temperate woodlands have been cleared, resulting in the decline of many woodland-dependent bird species (BirdLife Australia, 2015). Over one-third of Australia's bird species rely on woodland habitats, and more than one in five of these are threatened.

BirdLife Australia's **Woodland Birds Program** aims to prevent and reverse the declines of woodland birds and the habitats they rely on. Key actions include:

- ongoing monitoring of bird populations and their trends, particularly in south-eastern Australia;
- using this information to identify sites of priority for our woodland birds;
- engaging the community in woodland bird conservation on private property, and;
- monitoring signs of climate change on our woodland birds and habitats.

Some of the most familiar flagship species our team works with include the critically endangered Regent Honeyeater and Swift Parrot, both of which are the focus of intensive recovery efforts by BirdLife Australia, in tandem with Traditional Owners and local communities.

You can learn more about the numerous projects under the Woodland Birds Program umbrella - and contact the team – here.

The **South-eastern Glossy Black-Cockatoo** is also the subject of intensive work from BirdLife Australia. This subspecies had over 38% of its habitat impacted in the 2019-20 Black Summer fires, and is threatened by ongoing clearing across its range.

The South-eastern Glossy Black-Cockatoo is dependent on she-oaks (*Allocasuarina* and *Casuarina*) for food, and these trees may not produce seed for up to ten years post-fire. Fires and land clearing also reduce the availability of tree hollows on which these birds rely for successful nesting.

BirdLife Australia is working with various partners to run an annual **Great Glossy Count** on the east coast – your council and constituents can register to participate in this crucial data collection here.

One species of threatened raptor was recorded in Wingecarribee Shire in 2022:

- White-bellied Sea-Eagle (Vulnerable)

Several Australian raptor species are threatened due to habitat destruction, loss of nesting hollows, declining prey availability, and the use of rodenticides. As naturally long-lived bird, raptor populations also take a long time to recover even once threats are removed.

The **BirdLife Australia Raptor Group** (BARG) promotes the conservation, management and study of Australia's birds of prey. You can find out more about BARG here.

Introduced species in your council

Eight introduced taxa were recorded within the Wingecarribee Shire during the 2022 Aussie Bird Count (**Table 4**; **Figure 3**). The Black Duck-Mallard hybrid is a descendent of the native Pacific Black Duck and introduced Mallard, and is not a full species.

Records of introduced species were strongly clustered around the regional centres and satellite towns of the council, with very few reports from the tracts of forest that fringe the council. However, this pattern is simply a reflection of the fact that most surveys were submitted from these regional centres; few people surveyed from large patches of native habitat, and much of this habitat is also inaccessible for the average person. However, the Common Blackbird was reported more than most introduced species in areas fringing this native bushland. Further, most introduced species in the region do not utilise intact eucalypt forest.

The Common Myna (16.42%), Common Blackbird (9.91%), and House Sparrow (8.01%) were only introduced species reported in more than five percent of local surveys in the 2022 Aussie Bird Count. All three species are well-adapted to backyards, from which many residents of Wingecarribee Shire submitted their counts. Together with a few large flocks of Common Starling (3.53%) and Long-billed Corella (2.58%), these species accounted for about one-fifteenth of all counted birds. The remaining species were reported from only a handful of counts, though the Spotted Dove (3.12%) is expanding its presence in regional areas.

Figure 3 gives an indication of introduced species records from the 2022 Aussie Bird Count. As many records overlap, individual maps for counts of each introduced species are provided in **Appendix One**.

Table 4: Total counts and reporting rates (%) of all eight introduced taxa observed within the Wingecarribee Shire boundaries during the 2022 Aussie Bird Count. This list is based on BirdLife Australia's Working List of Australian Birds (Version 4), available here. **RR (%)** = reporting rate (percentage of all surveys submitted).

Bird species	Count	Proportion of all birds counted (%)	Number of counts including this species	RR (%)
Common Myna	410	2.43	121	16.42
House Sparrow	397	2.35	59	8.01
Long-billed Corella	131	0.78	19	2.58
Common Blackbird	102	0.60	73	9.91
Common Starling	86	0.51	26	3.53
Spotted Dove	35	0.21	23	3.12
Black Duck-Mallard hybrid	7	0.04	2	0.27
Rock Dove	1	0.01	1	0.14

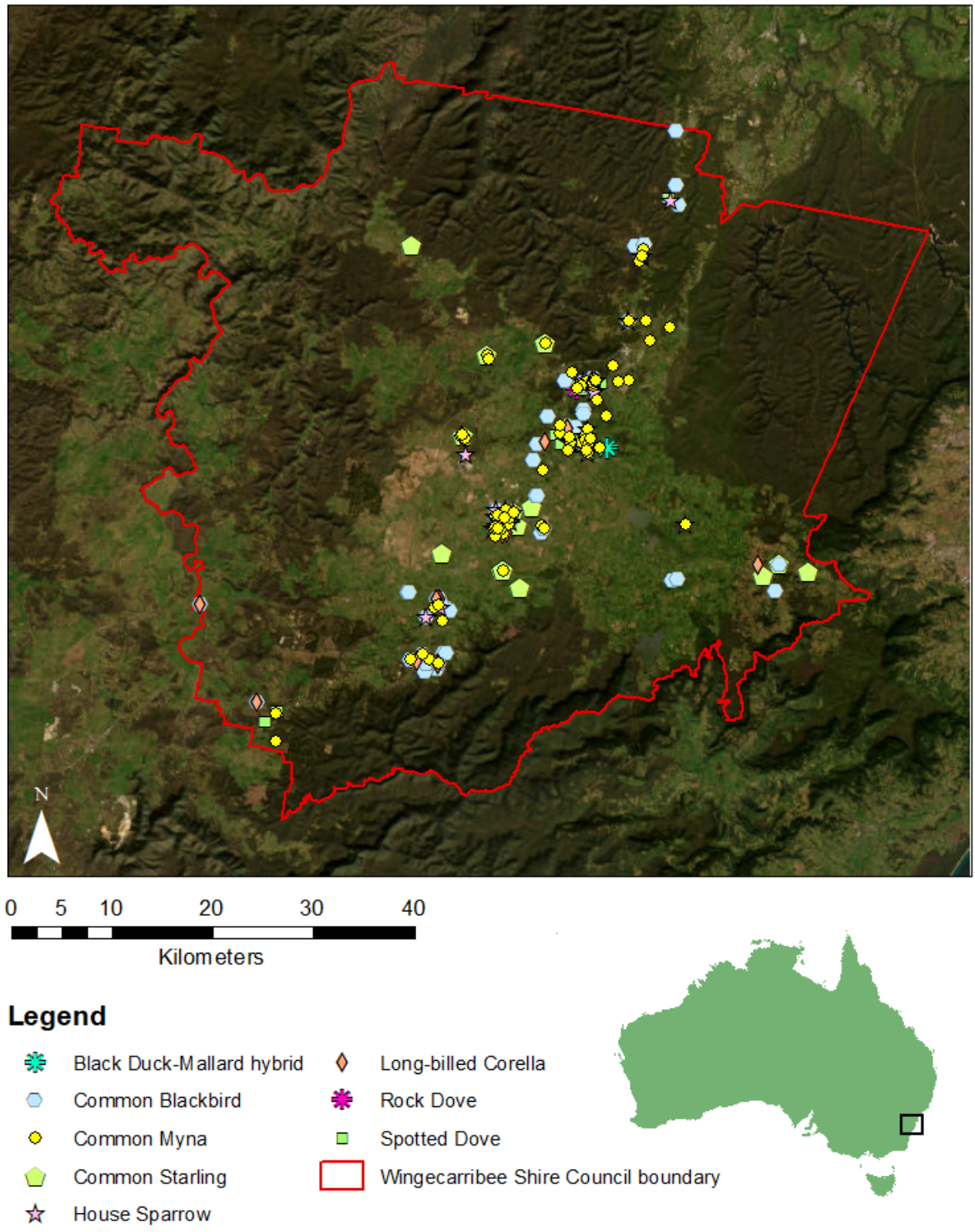

Figure 3. Distribution of introduced species records from the 2022 Aussie Bird Count for the Wingecarribee Shire. Where multiple introduced species are reported in the same count, these records will overlap.

Least commonly reported birds

Twenty-five species were recorded in just a single survey in the 2022 Aussie Bird Count – these were:

- Australasian Darter
- Australasian Figbird
- Australasian Shoveler
- Australian Hobby
- Australian Owlet-nightjar
- Azure Kingfisher
- Barn Owl
- Brown Falcon
- Brush Bronzewing
- Cattle Egret
- Chestnut Teal
- Fairy Martin
- Flame Robin (VU)
- Great Egret
- Leaden Flycatcher
- Little Black Cormorant
- Nankeen Night-Heron
- Red-rumped Parrot
- Rock Dove
- Scarlet Honeyeater
- Scarlet Robin (VU)
- Variegated Fairy-wren
- White-necked Heron
- Yellow Thornbill
- Yellow-throated Scrubwren

All twenty-five species are native to Australia and Wingecarribee Shire, with the exception of the Rock Dove. None of the twenty-five species are endangered or critically endangered at a state level, though the Flame and Scarlet Robin are both Vulnerable. Nine are largely restricted to aquatic habitats such as swamps and wetlands, two are nocturnal, and three are birds of prey. Many of the other species, like the Yellow-throated Scrubwren, are poor urban adapters, restricted mainly to native woodland and forest, or are restricted generally to drier or moister forest that occurs only on the western and eastern edges of the Shire. The behaviour and habitat requirements of these species may account for the lack of reports in the 2022 Aussie Bird Count, as most people submit their counts from close to – or at – home.

Most common birds

With **1,809** individuals counted in the Wingecarribee Shire, the **Sulphur-crested Cockatoo** was the most abundant bird in the 2022 Aussie Bird Count (**Figure 4**). The Crimson Rosella was the next-most abundant, close behind with 1,763 birds counted. The Australian Magpie came in third, with 1,299 birds counted, followed by the Noisy Miner with exactly 1,100 individuals.

All of the ten most abundant bird species recorded within the Wingecarribee Shire boundaries are native to Australia and Wingecarribee Shire, and none of these species are considered threatened in the state. The Little Corella (sixth place) is a self-introduced species from drier regions to the west.

Several of the species in the Top Ten, like the Australian Magpie, Noisy Miner, and Galah are typical urban 'winners' in south-eastern Australia, indicating a similarity between the built-up areas of the Wingecarribee Shire and other parts of the region. However, the prevalence of the Crimson Rosella and Australian King-Parrot is notable. Both species are very common in the cooler regions along the Great Dividing Range, but quite scarce in inner urban regions of Melbourne and Sydney.

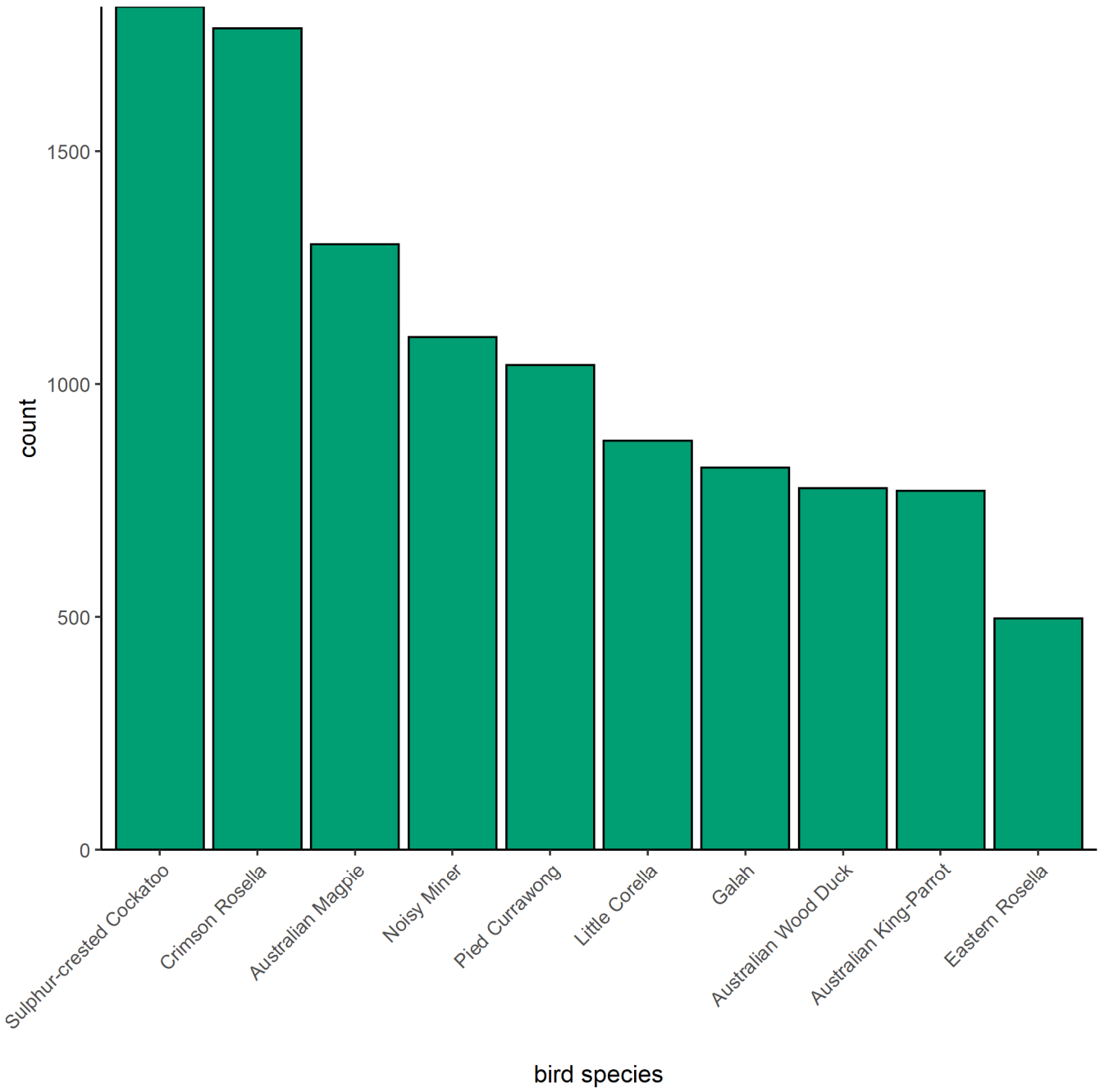

Figure 4. The ten most abundant bird species reported in the 2022 Aussie Bird Count, for the Wingecarribee Shire. As this ranking is based on the total number of birds, and not how often they were seen, species that form large flocks are more likely to be over-represented in this figure.

Reported from **67.03%** of counts, the **Crimson Rosella** was the most *frequently* recorded bird in the Wingecarribee Shire 2022 Aussie Bird Count, just pipping the Australian Magpie (62.82%) for first place. The Sulphur-crested Cockatoo was third (53.19%), ahead of the Pied Currawong at 48.17%. While the Magpie-lark was not in the Top Ten based on overall count, it was reported from over one-quarter of surveys.

The behaviour of the Magpie-lark likely accounts for the lower total count of the species; many of the species in the Top Ten by count (such as the Sulphur-crested Cockatoo and Little Corella) are normally seen in groups, while the Magpie-lark is typically seen in ones or twos.

The Laughing Kookaburra, Magpie-lark and Noisy Miner were all reported at similar rates to the state-wide average. All the other species in the Top Ten were reported at higher-than-average rates when compared to both state- and nation-wide figures (**Figure 5**).

The Australian King-Parrot, Crimson Rosella, and Pied Currawong are all notable in this regard. All three species are common inhabitants of cooler wet forests along the Great Dividing Range, and historically quite mobile during colder months. This may have predisposed them to moving into regional towns along the Great Dividing Range, and then remaining year-round. These species make use of non-native plantings (such as fruit trees) in towns and backyards, well away from their original forest homes, and have become a regular sight in regional towns at higher elevations. The abundance of natural habitat in Wingecarribee Shire may also bolster the presence of these species; many parrots are known to depart urban areas to breed in natural habitats, then return with their fledglings later in the season.

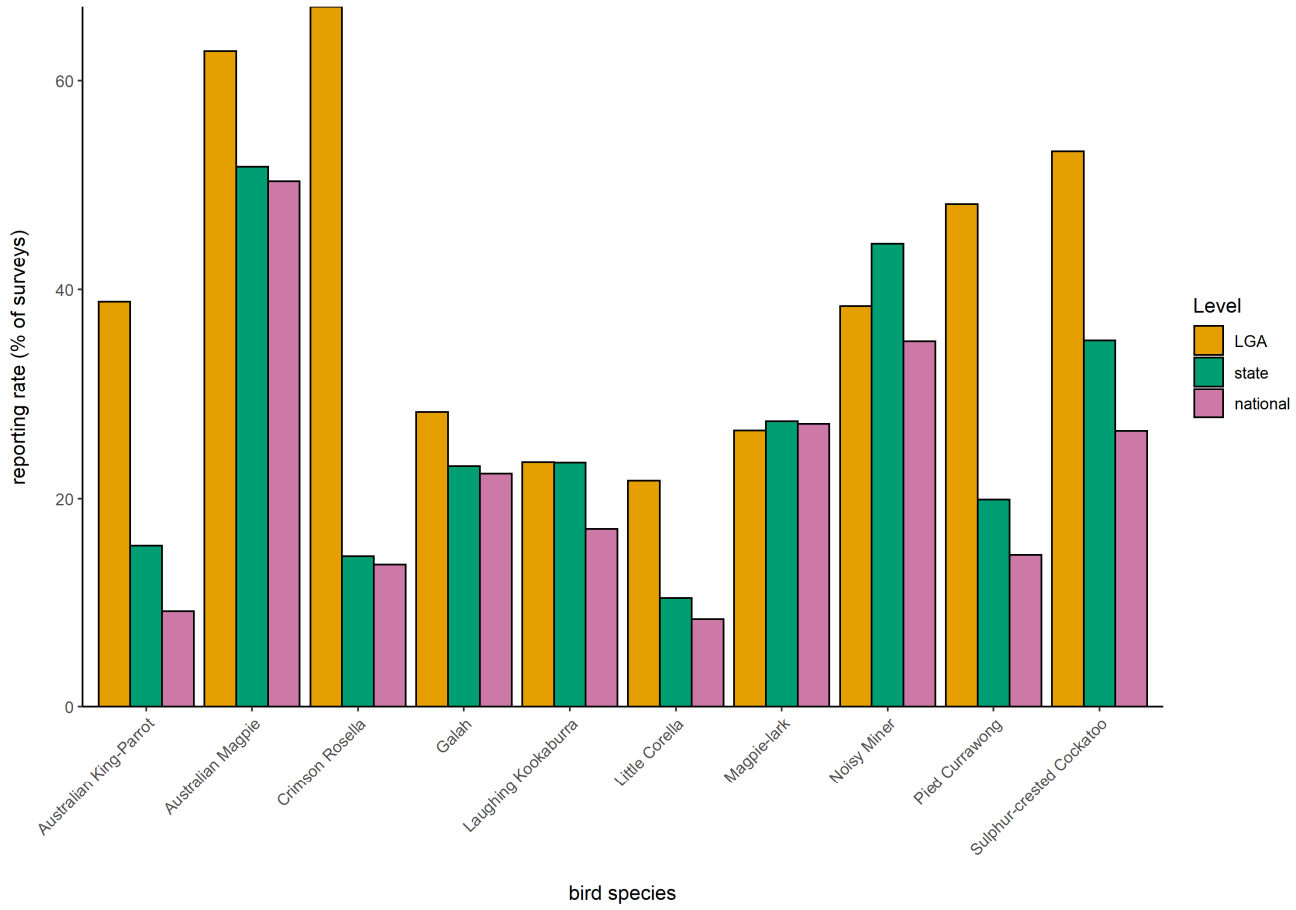

Figure 5. Comparison of council, state, and national reporting rates (%) of the ten most frequently recorded species during the 2022 Aussie Bird Count within the Wingecarribee Shire boundaries.

Species-specific results

Laughing Kookaburra

303 Laughing Kookaburras were counted within the Wingecarribee Shire in the 2022 Aussie Bird Count, across a total of **173** surveys. This is a notable decline from 2021, when 502 Laughing Kookaburras were reported (**Table 5**). However, accounting for the decline in participation in 2022, the reporting rate of this species was almost identical (**23.47%** vs. 23.82%). The Laughing Kookaburra was the ninth-most reported species in the council in 2022, and fourteenth for overall count. State (sixth place) reporting rates were notably higher, though the national reporting rate of 17.4% (tenth place) was similar. Reporting rates in the Aussie Bird Count have been very stable for the past four years, and data show only a very modest decline in Greater Sydney (Campbell *et al.* 2022).

Laughing Kookaburra records were evenly spread throughout the council, with no notable areas of absence (when accounting for the lack of any surveys in large parts of Wingecarribee Shire) (**Figure 6**). However, most of the records came from patches of habitat with substantial tree cover, rather than the midst of dense development.

Table 5: Comparative summary statistics for the **Laughing Kookaburra** for the 2019-2022 Aussie Bird Counts for the Wingecarribee Shire. Additional council-level vetting was carried out in 2020 and 2021, with further scrutiny in 2022, so species numbers may differ considerably for some councils in these years compared to others, despite similar or increased participation.

	Year			
	2019	**2020**	**2021**	**2022**
Total council surveys	595	798	1,163	737
Species-specific count	259	285	502	303
Reporting rate (%)	24.37	22.68	23.82	23.47

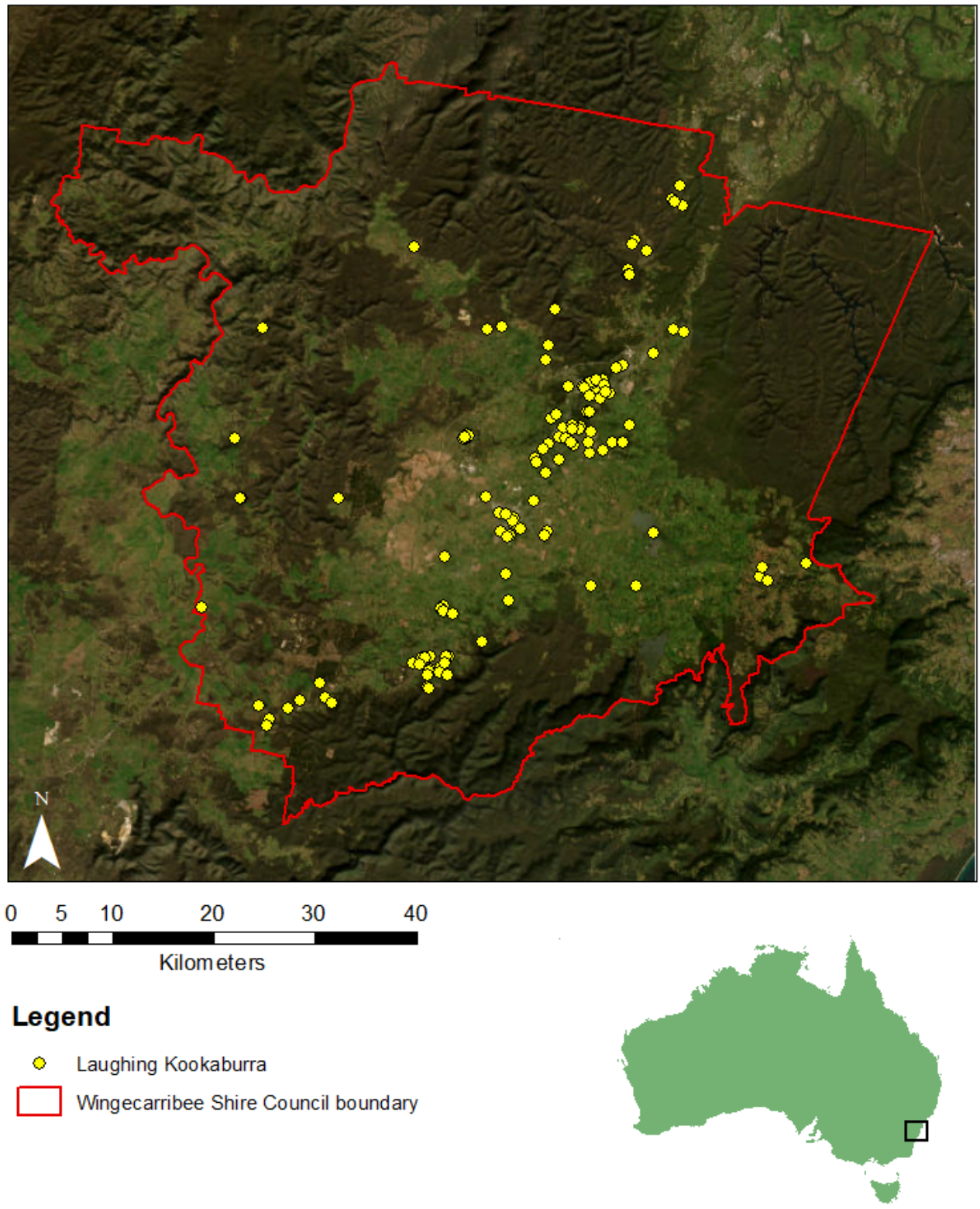

Figure 6. Distribution of Laughing Kookaburra records from the 2022 Aussie Bird Count for the Wingecarribee Shire. Where multiple counts containing this species were submitted from the same location, these observations will overlap.

Eastern Spinebill

125 Eastern Spinebills were counted within the Wingecarribee Shire in the 2022 Aussie Bird Count, across a total of **61** surveys. This number is up by a single bird from 2021, when 124 birds were recorded (**Table 6**). When accounting for the drop in participation in 2022, there was a slight increase in reporting rate (**8.28%** vs. 6.96% in 2021). On average, more Eastern Spinebills were reported per survey than in 2021, perhaps indicating a larger proportion of birds remained in residential gardens after winter, instead of returning to breeding grounds in the forest.

The Eastern Spinebill was the twenty-fourth-most reported and twenty-fourth-most abundant species in Wingecarribee Shire in 2022. Even accounting for the larger number of species reported at a state level, this is noticeably higher than state results; this species ranked forty-third for New South Wales.

Reports of Eastern Spinebills were again clustered around areas of native forest; while this species was reported in human environments, only a couple of records were far away from tracts of bushland or other dense vegetation (**Figure 7**).

Table 6: Comparative summary statistics for the **Eastern Spinebill** for the 2019-2022 Aussie Bird Counts for the Wingecarribee Shire. Additional council-level vetting was carried out in 2020 and 2021, with further scrutiny in 2022, so species numbers may differ considerably for some councils in these years compared to others, despite similar or increased participation.

	Year			
	2019	**2020**	**2021**	**2022**
Total council surveys	595	798	1,163	737
Species-specific count	94	84	124	125
Reporting rate (%)	8.57	7.64	6.96	8.28

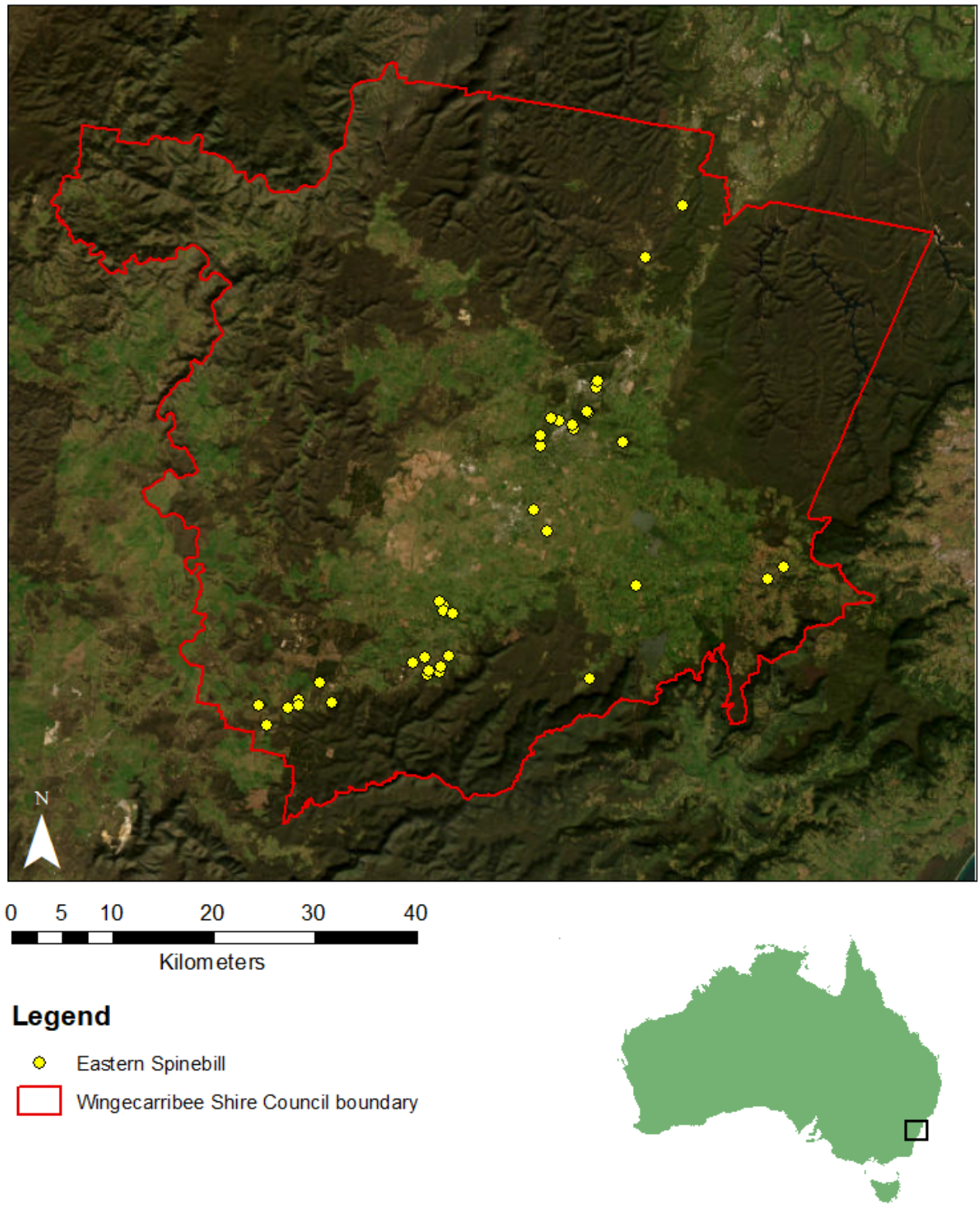

Figure 7. Distribution of Eastern Spinebill records from the 2022 Aussie Bird Count for the Wingecarribee Shire. Where multiple counts containing this species were submitted from the same location, these observations will overlap.

Masked Lapwing

86 Masked Lapwings were counted in the Wingecarribee Shire in the 2022 Aussie Bird Count, over **44** surveys. With a reporting rate of **5.97%**, this represents a notable increase in records over 2021 when accounting for lower total participation in 2022; the species was reported in only 3.1% of counts that year (**Table 7**). This is the highest reporting rate of any count since the inaugural 2014 event, though unreliable data vetting in the earliest years means inaccurate records of other species of plover may have been missed, when these should have been attributed to the Masked Lapwing.

Masked Lapwing records were scattered through the urban regions of the south and centre of the council, with no reports from the west (**Figure 8**). Much of the habitat in Wingecarribee Shire is unsuitable for this species, which prefers open areas of bare ground. Perhaps accordingly, the reporting rate in the Shire (5.97%) was still lower than the state (11.44%) and national (9.83%) average.

Table 7: Comparative summary statistics for the **Masked Lapwing** for the 2019-2022 Aussie Bird Counts for the Wingecarribee Shire. Additional council-level vetting was carried out in 2020 and 2021, with further scrutiny in 2022, so species numbers may differ considerably for some councils in these years compared to others, despite similar or increased participation.

	Year			
	2019	**2020**	**2021**	**2022**
Total council surveys	595	798	1,163	737
Species-specific count	50	54	77	86
Reporting rate (%)	3.7	4.01	3.1	5.97

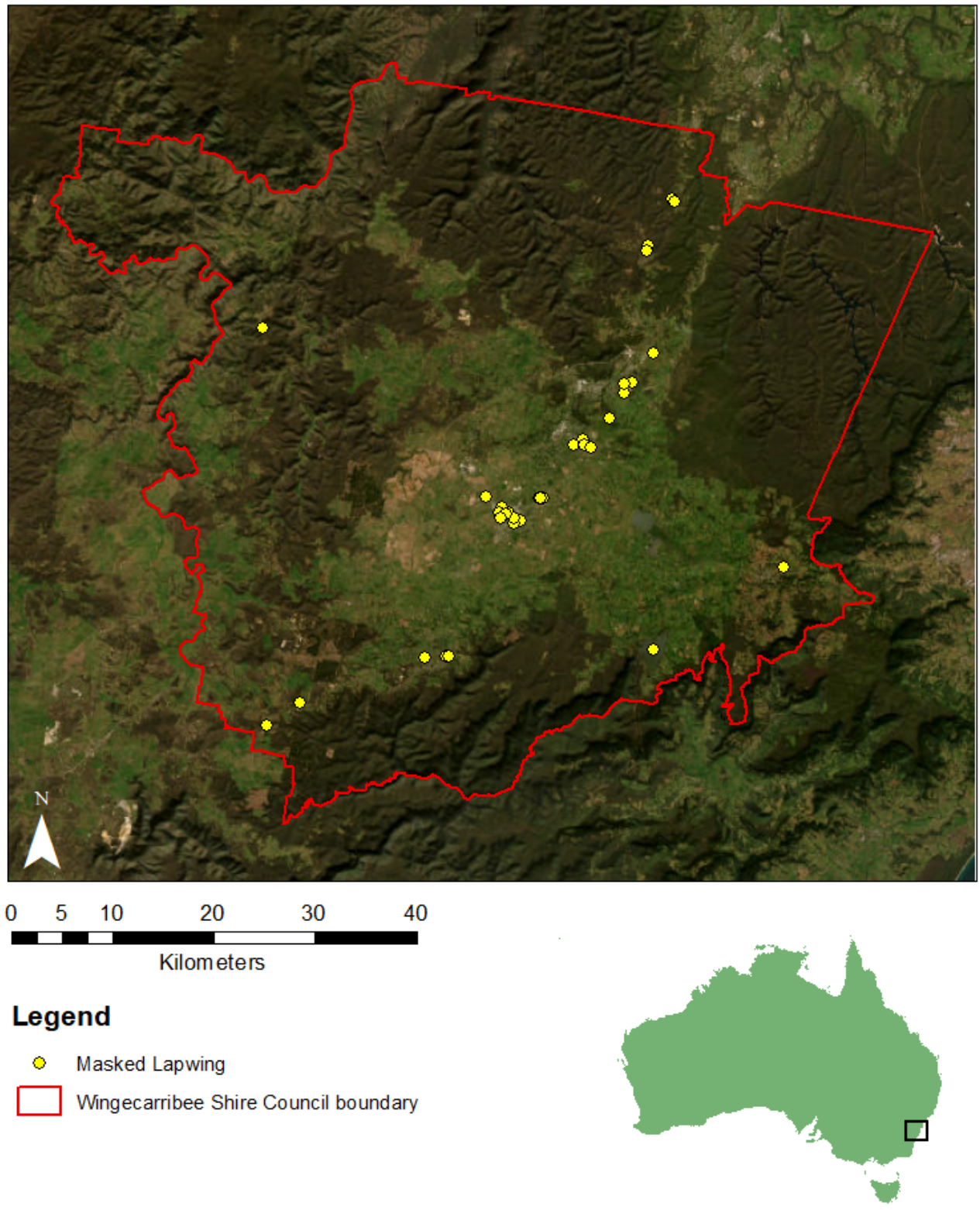

Figure 8. Distribution of Masked Lapwing records from the 2022 Aussie Bird Count for the Wingecarribee Shire. Where multiple counts containing this species were submitted from the same location, these observations will overlap.

There are countless ways for communities to get involved in protecting your local birds – which is why you're invited to participate in some of our key programs.

Birds in Backyards

With over 90% of Australians living in urban and regional centres, their own backyards, balconies or streets are often the only places to connect with the natural world. In Australia, we are fortunate to have such a charismatic and colourful array of native birds inhabiting the urban landscape – from raucous flocks of cockatoos to tiny bejewelled pardalotes.

Urban birds provide an easy way for people to engage with their natural environment, and research shows a clear link between biodiversity and quality of life (Malshe *et al.* 2021). In Britain, the presence of birdlife is so valued by communities that the UK Government uses information about their wild birds as a measure of large-scale environmental health. This environmental indicator is published alongside more traditional socioeconomic metrics, reinforcing the point that maintaining biodiversity is a key aspect of social sustainability.

However, urban bird communities are changing (Campbell *et al.* 2022). The size of Australian gardens – and the number of people who have them – are shrinking, and small birds are being displaced from parks and backyards by large, aggressive species such as Noisy Miners, Pied Currawongs and Red Wattlebirds.

Working together with councils and communities

The loss of urban bird diversity has both ecological and human consequences (Campbell *et al.* 2022). The Birds in Backyards Program empowers everyday citizens to build the knowledge and practical skills they need to lead action-oriented responses to the decline in urban bird diversity. For example, changes to our gardening practices – such as planting a diverse array of shrubs and local natives – can reduce the dominance of large birds and create islands of valuable habitat for smaller and shyer species birds in the urban landscape.

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. We want people acting for birds, informed by their own data.

The ultimate goal of Birds in Backyards is to establish and nurture diverse native bird communities across urban Australia. Achieving this requires large-scale behavioural change and habitat restoration. Education underpins behavioural change – our programs can teach people about sustainability, advocacy, and how they can contribute to the datasets that drive critical research.

Local councils can partner with the Birds in Backyards Program to achieve both education and quality-of-life outcomes for your constituents and conservation outcomes for our urban birds – let's get our communities taking action together!

What Birds in Backyards can offer

Birds in Backyards has designed our programs around increasing community capacity for land stewardship, through long-term habitat restoration and monitoring. Ongoing engagement with local landscapes not only benefits the wildlife in an area, but can improve individual satisfaction and foster creation of and connection to community (Spurr 2012). Please reach out to us via the webform on this page to enquire about programs we can tailor to your community and Local Government Area.

On an individual level, Birds in Backyards encourages people to learn in their own space – their homes, streets and gardens – to establish and strengthen their connection to nature. For residents with garden spaces (or similar alternatives), we also have a range of resources available to help people design and implement bird-friendly gardens.

Birds in Backyards takes a three-pronged approach to engagement:

LEARN about Aussie birds

PARTICIPATE in surveys

CREATE habitat and change

These steps enable people to build on their initial interest, learn more, then take direct action for their local birdlife.

Birds in Backyards can work with your council to provide resources or collaborate on a range of projects. For example, we can provide:

- Hard-copy materials like A4 Backyard Birds posters (available in six languages) and gardening advice brochures.
- 'Train the Trainer' workshops and associated materials (aimed at council staff or community leaders), or direct-to-public workshops.
- Ongoing monitoring for keen participants, via Birds in Backyards bird surveys, with training sessions and feedback available.
- Region-specific planting guides, currently under development. A guide for Perth LGAs is available here.
- Children's engagement activities and school resources (see the Birds in Schools section of this report). Both teacher-delivered and BirdLife Australia-supported options are available.

Contact the Urban Birds team to get involved, or for any general enquiries about our programs.

Birds in Schools

Birds in Schools is a free environmental education program designed by BirdLife Australia's Urban Birds Team. Available online through BirdLife's e-learning platform, Birds in Schools enables teachers right across Australia to deliver education and action for local birds, with support from BirdLife Australia.

Birds in Schools engages students in the scientific process through investigation and monitoring of the birds and habitat on their school grounds. Students use their own observational skills and ideas to develop and implement action plans to help their local birdlife. Action plans may include planting native flora, installing nest boxes or birdbaths, or delivering education campaigns in their school or local neighbourhood.

Birds in Schools offers students and teachers:

- The chance to become citizen scientists and actively participate in the scientific process.
- A valuable experience of connection with, and improved understanding of, the natural world.
- An opportunity to investigate real-life issues, reflect and problem-solve, and develop action-oriented responses to sustainability challenges.
- A supported, curriculum-linked teaching resource for Years 3 to 6, including lesson plans and resources, that builds students' knowledge and skills. Highschool resources are under development!
- A way to prioritise biodiversity within the school, with greener spaces improving the wellbeing of students too.
- The opportunity to collaborate and partner with the local school community and local council.

Lessons and support

Birds in Schools consists of **ten** lessons for students from Years 3 to 6, through which students:

- Conduct bird and habitat surveys and contribute survey data to Birdata (our database of bird records).
- Learn about local birds, biodiversity, and habitats.
- Analyse surveys and make recommendations based on their own research.
- Develop and implement an action plan to improve habitat for birds.

Support for teachers includes:

- Lesson plans and accompanying resources to support teachers delivering content.
- Student assessments, to easily measure learning outcomes.
- Online professional development
- Online lesson options for students
- Assistance and advice from a BirdLife staff member

How much time does it take?

Birds in Schools is designed to give schools flexibility of delivery. Schools can deliver the program over one term, two terms, or more. There are ten lessons, with each lesson designed to fit into a 50-60 minute-long session (although some activities will extend beyond these times, particularly the implementation of students' action plans). We encourage schools to adapt the program to meet their needs – for example, some may choose not to deliver every lesson. BirdLife Australia can assist with program adaptation if required.

Who teaches the students?

Teachers deliver the lessons, and we provide them with an online professional training session to develop the technical skills and knowledge required to deliver the Birds in Schools program. This includes skills in bird identification, conducting bird surveys, using Birdata, and identifying the types of actions that help birds. A BirdLife Australia staff member will deliver online Q&A sessions for students, and is available for periodic support of teachers delivering the program.

How much does it cost?

Birds in Schools is **free** for schools to take part in. Schools may wish to fundraise or secure grants to enable the completion of student action plans, such as revegetating school grounds, or installing nest boxes and birdbaths.

To find out more and get in touch with the Birds in Schools team, head to our webpage!

Rodent poisons kill birds – say NO to SGARs

Download our free Council Action Toolkit here to make a change in your region today!

Rodenticides are commonly used to control rats and mice in both urban and rural councils, but these poisons can also spell doom for pets and wildlife. **Second generation anticoagulant rodenticides (SGARs)** are particularly bad.

What are SGARs?

SGARs are animal poisons, often found in bait form, that work by causing internal bleeding when ingested.
SGARs don't kill their targets immediately, and take a long time to break down in the body, turning poisoned animals into mobile, ticking time bombs.

Rodent-loving birds of prey, such as owls and kestrels, can be easily poisoned by eating animals that have recently consumed baits. Other species, such as insects and possums, may also eat baits left out for rodents.

Because of their persistence, and ability to travel quickly through the environment, SGARs put a wide range of animals at risk – including our own cats and dogs.

Studies both internationally and in Australia have found harmful levels of SGARs in the organs of many carnivorous animals (Cooke *et al.* 2022; Lohr & Davis 2018; Nakayama *et al.* 2019; Shore *et al.* 2014). Testing on the livers of deceased Powerful Owls, commissioned by BirdLife Australia, has also shown dangerous SGAR levels in 60% of tissue samples, and rodenticides were detected in all but 1 of 38 owls.

The public sale and use of SGARs has been restricted in parts of the US, Canada, and the European Union. But Australian regulations lag behind, and SGARs are found in supermarkets and hardware shops across the country. This includes products as recognisable as Mortein, RatSak Fast Action, and The Big Cheese.

What can our council do?

Your council can help in **three** key ways:

CHANGE your pest management practices

EDUCATE local residents about rodent control

SHARE knowledge and spread the word

Changing your pest control practices, and sharing these changes with residents, is the best way to reduce the amount of deadly SGARs entering the environment in your region. You can act by:

- Distributing information about the impacts of SGARs on birds and other wildlife to council residents.
- Providing lists of **alternatives to poison**, and **lower-impact poisons**, to businesses and residents.
- Specifying preferred, lower-impact rodenticide treatments in commercial pest operator contracts.
- Including additional conditions to assist with rat and mouse control in demolition licenses.

How can we change our pest control practices?

Taking initiative to employ wildlife-friendly rodent control on all council-managed properties is an excellent way to show your community their councillors are committed to protecting native animals from SGARs. Wildlife-friendly rodent control may include:

- Making properties – including homes and gardens – less rodent-friendly.
- Encouraging the presence of native predators – for example, by protecting owl-friendly tree hollows.
- Reducing dependence on poison baits.

Click here to access a range of resident-friendly tips for sustainable rodent control.

Where poisons are required for rodent control, you can place requirements on pest control contractors to use only **first generation anticoagulant rodenticides (FGARs)**. These use less harmful ingredients like warfarin (e.g. RatSak Double Strength) and coumatetralyl (e.g. Bacumin). In domestic settings, non-chemical pest control, such as snap traps, should always be promoted as the first choice.

Click here for a list of which pest control products to purchase – and which to avoid.

Want to get more involved?

We are encouraging local councils to champion our rodenticide campaign by taking the actions detailed above. Making full use of the resources and links included in our **Council Action Toolkit** is an excellent way to get started.

If you would like more information, please don't hesitate to contact the Campaigns Team by emailing **conservation@birdlife.org.au**.

Data limitations

An annual bird count in gardens, parks and other habitats across Australia has incredible value to engage people with nature and foster a shared sense of community. It also has the potential to be a valuable monitoring tool for Australian bird species and ecological communities.

As the Aussie Bird Count continues year on year, results from the count have started to mirror regional and national trends in the abundance and distribution of many familiar urban bird species. For example, we've seen the Eastern Koel popping up in more and more Victorian bird counts, Rainbow Lorikeets reported further and further inland, and a decline in Australian Ringnecks in metro Perth. These trends are all backed up by the long-term scientific monitoring data stored in our national monitoring platform, Birdata. Many of these trends are also reported in official publications (e.g. Campbell *et al.* 2022).

While the results from the Aussie Bird Count provide an enticing snapshot of what people see in Bird Week each spring, caution must be taken when interpreting these results. Councils looking for robust long-term datasets on bird abundances in your region should reach out to us directly at **birdata@birdlife.org.au**.

Some of the key limitations of this dataset are outlined below.

Counts are biased towards familiar and urban-adapted species

Most people do the Aussie Bird Count in their backyards, streets, or local parks. This means that easily recognisable birds common in human environments are most likely to turn up in people's counts. Conversely, species which rely on intact native habitats like dense forest and natural wetlands – as well as hard-to-ID species and shy birds that stick to dense cover – are likely to be under-reported. This is true even for species which are common in high-quality habitats within your Local Government Area, as well as seabirds for those councils that adjoin the open ocean.

For example, Variegated Fairy-wrens are common in dense bushland on the east coast, including in the Greater Sydney and Brisbane regions. However, there are few records of this species in the Aussie Bird Count. By contrast, the iconic Superb Fairy-wren, which is more resilient in suburban areas and degraded habitat, is reported in high numbers from most councils in these regions. Fuscous Honeyeaters are another example – very abundant in box-ironbark woodlands in QLD, NSW and VIC, but almost missing from the Aussie Bird Count in several regions where they occur.

A smaller problem to keep in mind is that some species are often misidentified as other, similarly-sized birds that do not occur in the places participants count in. Where our expert vetters cannot determine exactly what species these are likely to be, the best option is to delete these records.

People may count the same birds several times

The total number of birds reported in your local Bird Count may be inflated, due to the potential for observers (particularly novices) to count the same bird/s multiple times over the course of their 20-minute survey period. Furthermore, counters who submit repeat counts from the same place over the week may be repeatedly submitting the same birds each day, and all these counts will form part of the final tally. This may be particularly noticeable in councils with small populations or low participation levels.

Counters have different levels of experience

Participants in Bird Week have a wide range of birding experience – from total beginners to life-long birdwatchers. While there is ID help available in the Bird Count app, and we edit and delete records that vetters deem to be made in error, a portion of incorrect records will always make their way through into the final dataset.

This is especially true for common birds, which we assume most people have correctly identified – some of these records will be other common species instead! For example, novice observers often mix up Eastern and Crimson Rosellas in Sydney, or Brown and Singing Honeyeaters in Perth.

Counts may be submitted with incorrect GPS coordinates

Most of the counts submitted in Bird Week will fall within about fifty metres of their true location. However, user error means a few surveys may be logged quite far away from the site a participant was counting, and this may affect some of the survey and sighting map pins for councils who have purchased a Brolga Report.

Counters may mis-click their location in the app, intentionally enter their home address even when counting elsewhere, or submit counts in scenarios where GPS access is poor: for example, near tall buildings, in a dense rainforest, or under heavy cloud cover. Where phones fail to pick up a GPS fix, they are forced to rely on mobile towers – this can reduce the accuracy of a count to a radius of 1+ km (particularly troublesome for smaller, urban LGAs). Counts submitted on the Bird Count website are also more prone to inaccurate locations, as most computers lack GPS functionality and participants must manually select a site for their counts.

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Photographed bird species in order of appearance:

Red-browed Finch; Rainbow Bee-eater; New Holland Honeyeater; Yellow-tailed Black-Cockatoo; Variegated Fairy-wren; Spotted Pardalote; Silvereye; Eastern Spinebill; Chestnut Teal; Powerful Owl (x2).

Illustrated bird species in order of appearance:

Variegated Fairy-wren; Yellow-tailed Black-Cockatoo; Silvereye; Willie Wagtail; Southern Boobook.

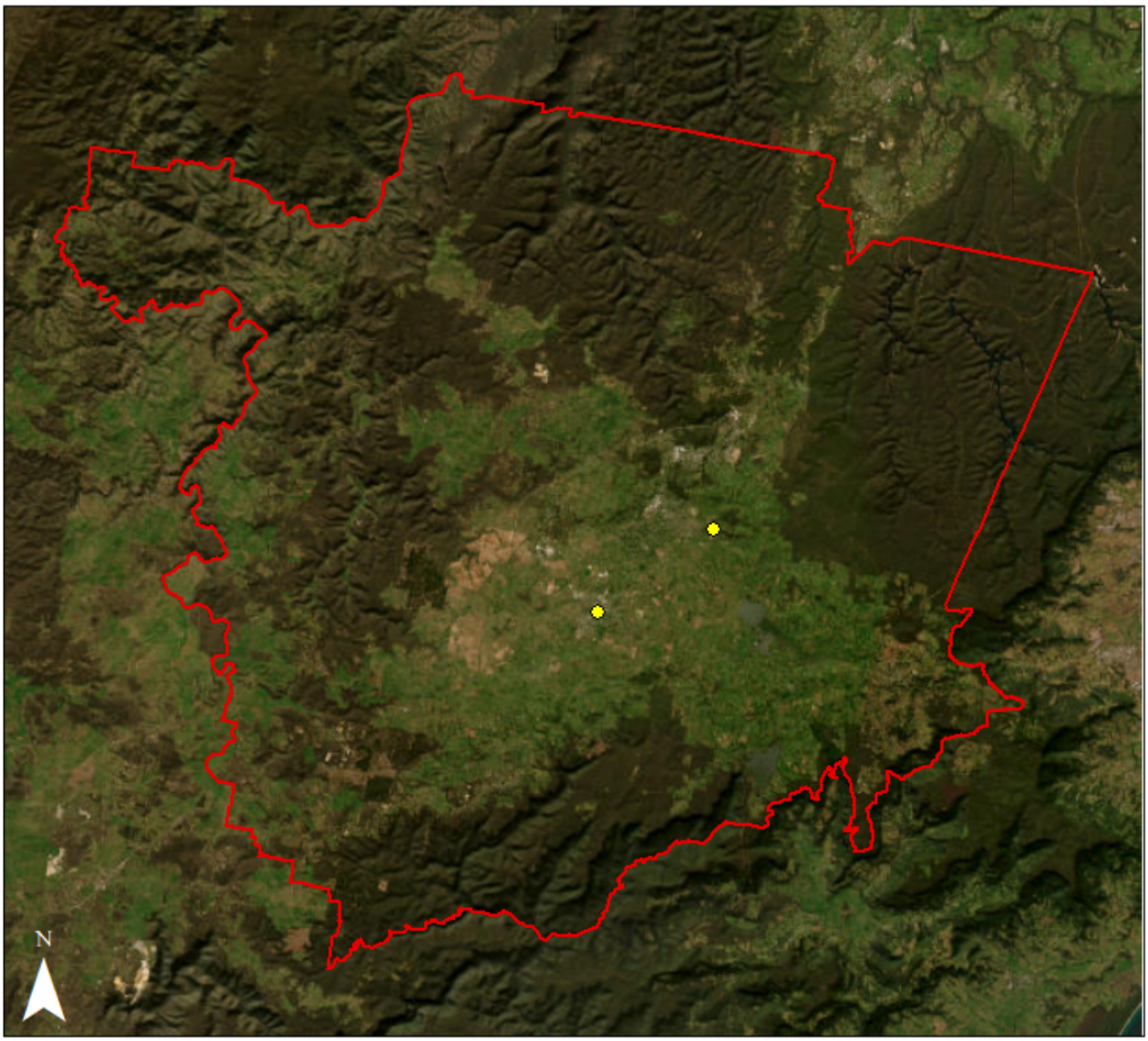
Appendix One

Introduced species maps

We have provided individual maps of 2022 Aussie Bird Count records for each introduced species in the Wingecarribee Shire below. Species are arranged in **alphabetical order**, but without a caption, as the formatting is identical to Figure 3 earlier in the report. You can also visualise these data by importing the raw data file provided with this report into GIS software.

Species in order:

- **Black Duck-Mallard hybrid**
- **Common Blackbird**
- **Common Myna**
- **Common Starling**
- **House Sparrow**
- **Long-billed Corella**
- **Rock Dove**
- **Spotted Dove**



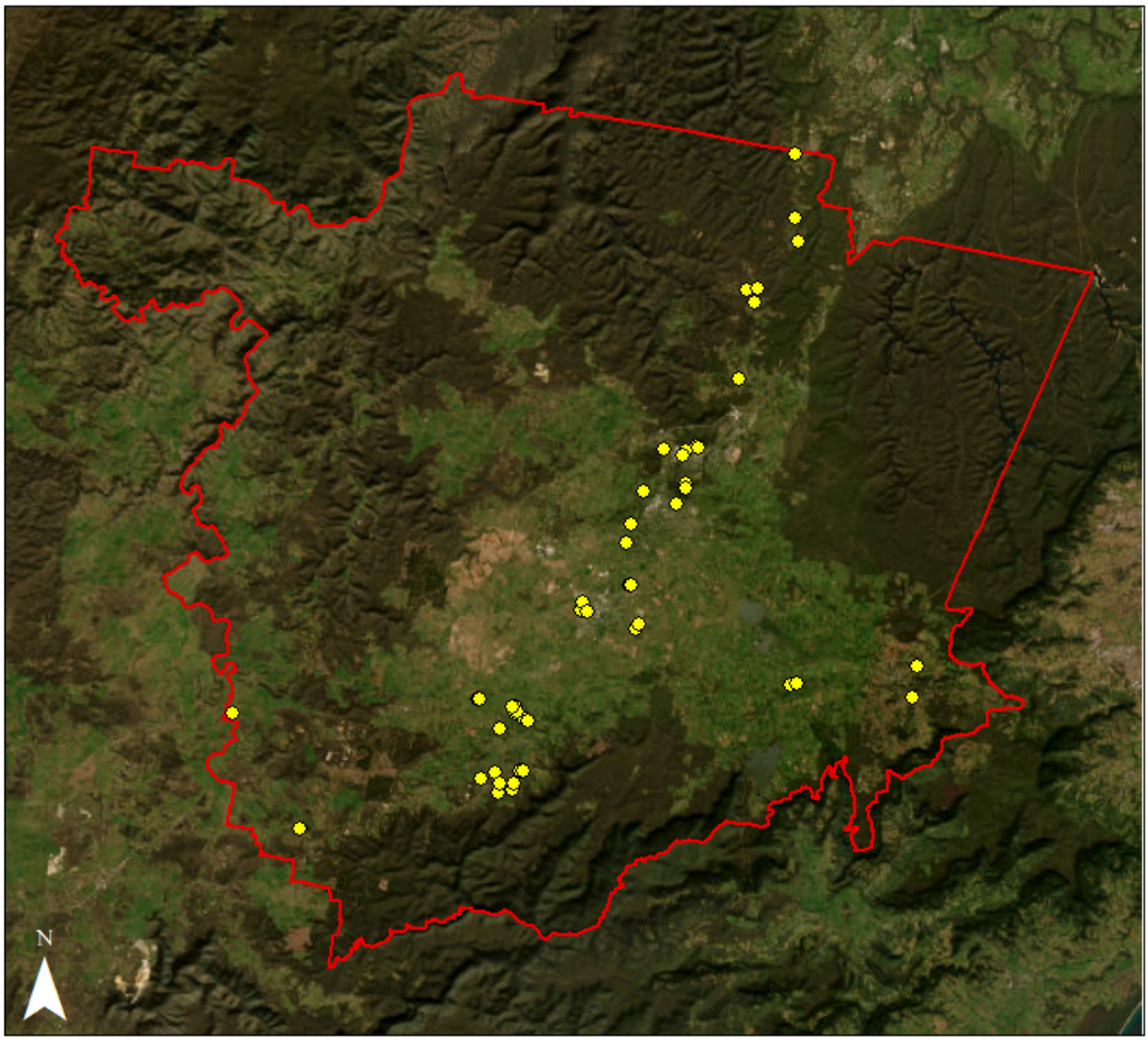
0 5 10 20 30 40

Kilometers

Legend

Black Duck-Mallard hybrid

Wingecarribee Shire Council boundary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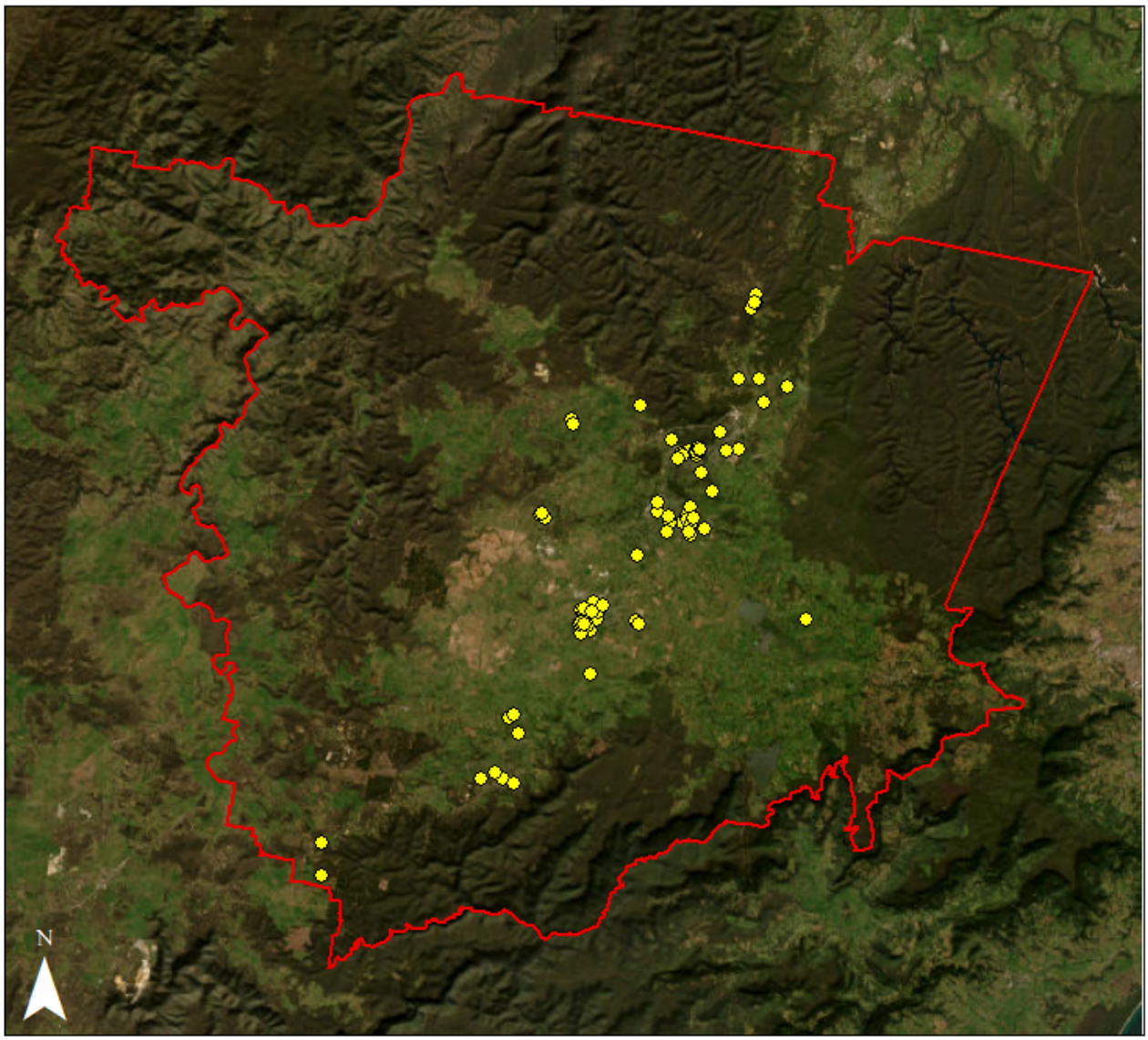
0 5 10 20 30 40
Kilometers
Legend
Common Blackbird
Wingecarribee Shire Council boundary



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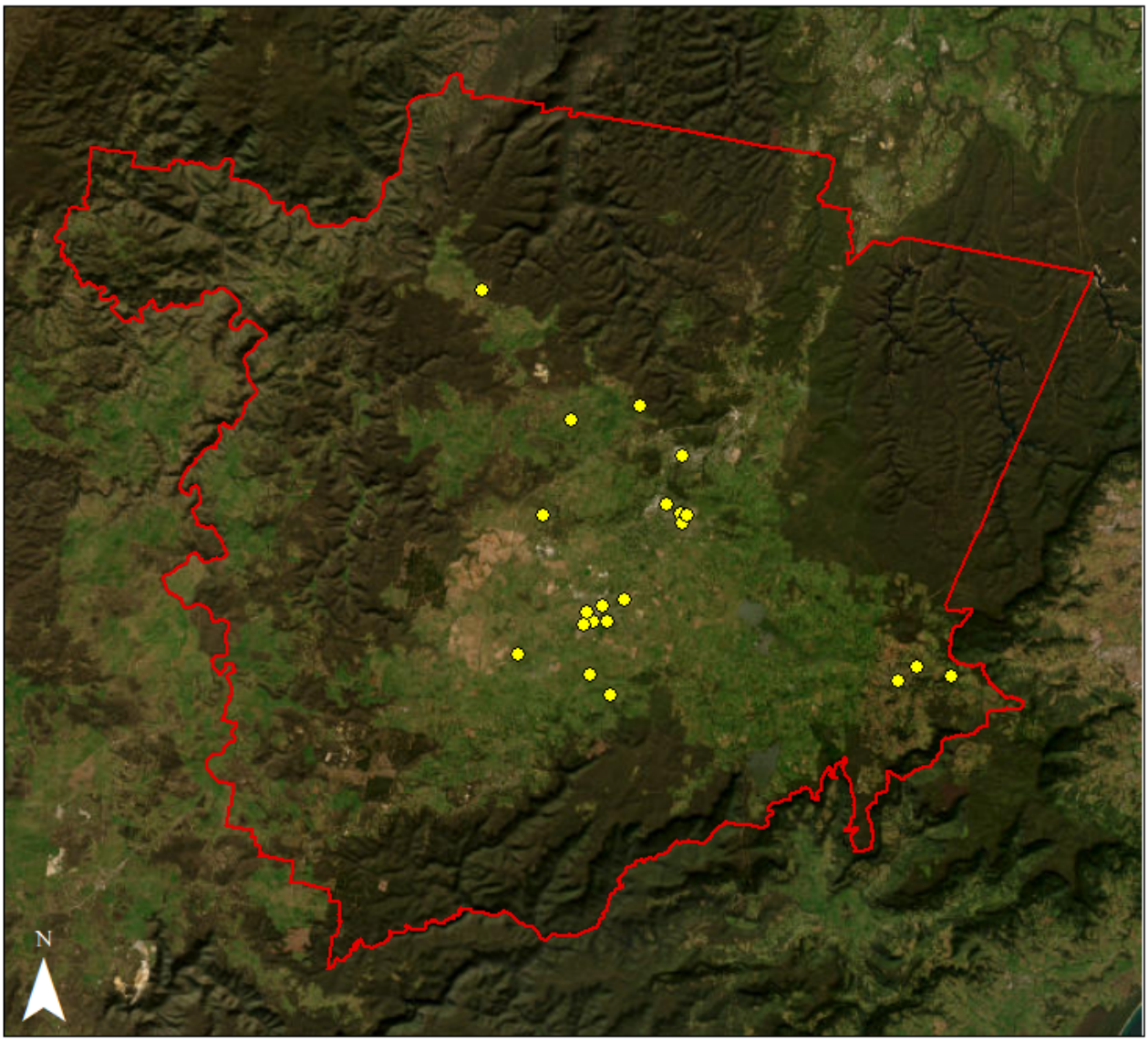
Kilometers

Legend

Common Myna

Wingecarribee Shire Council boundary



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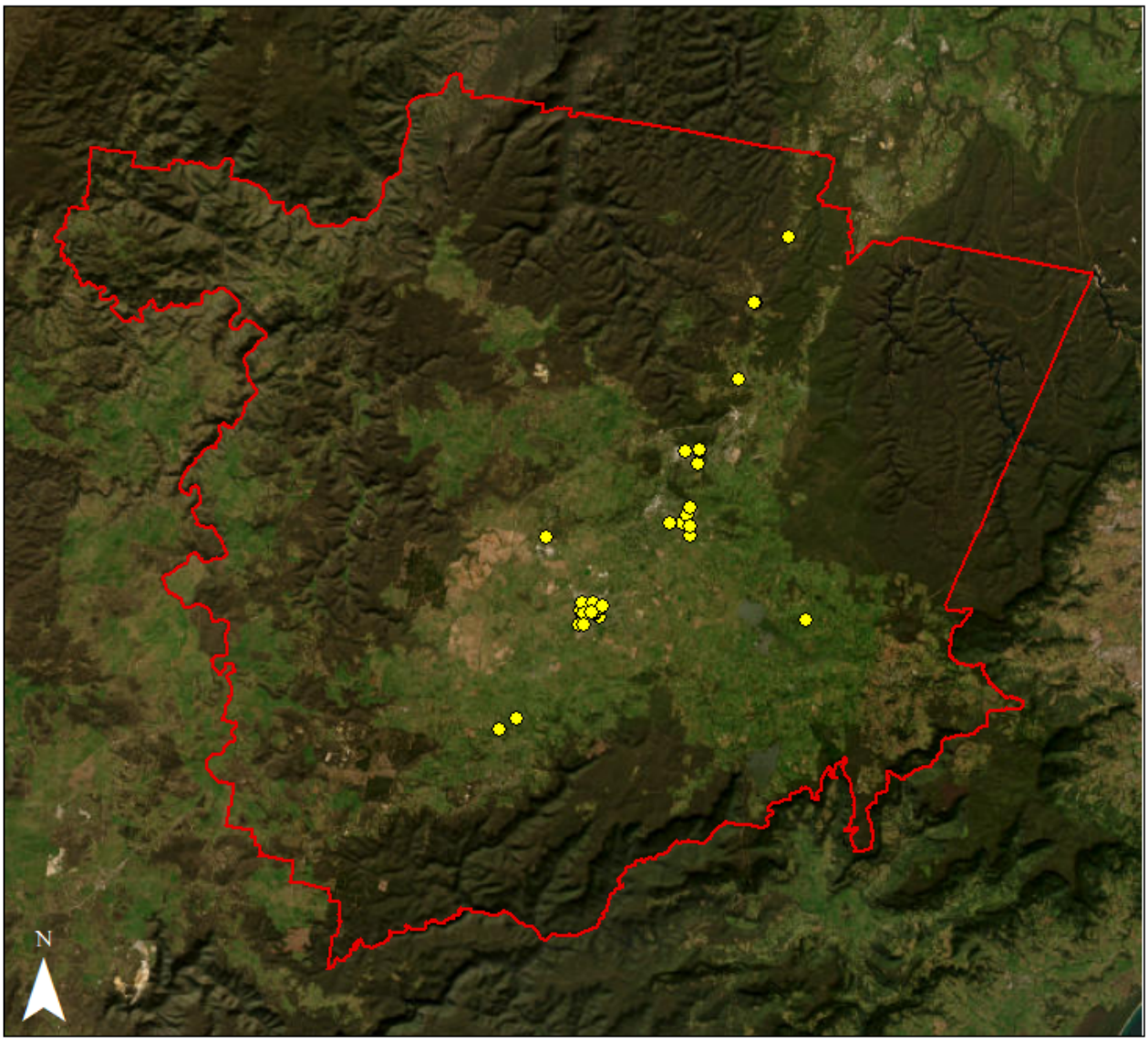
Kilometers

Legend

Common Starling

Wingecarribee Shire Council boundary



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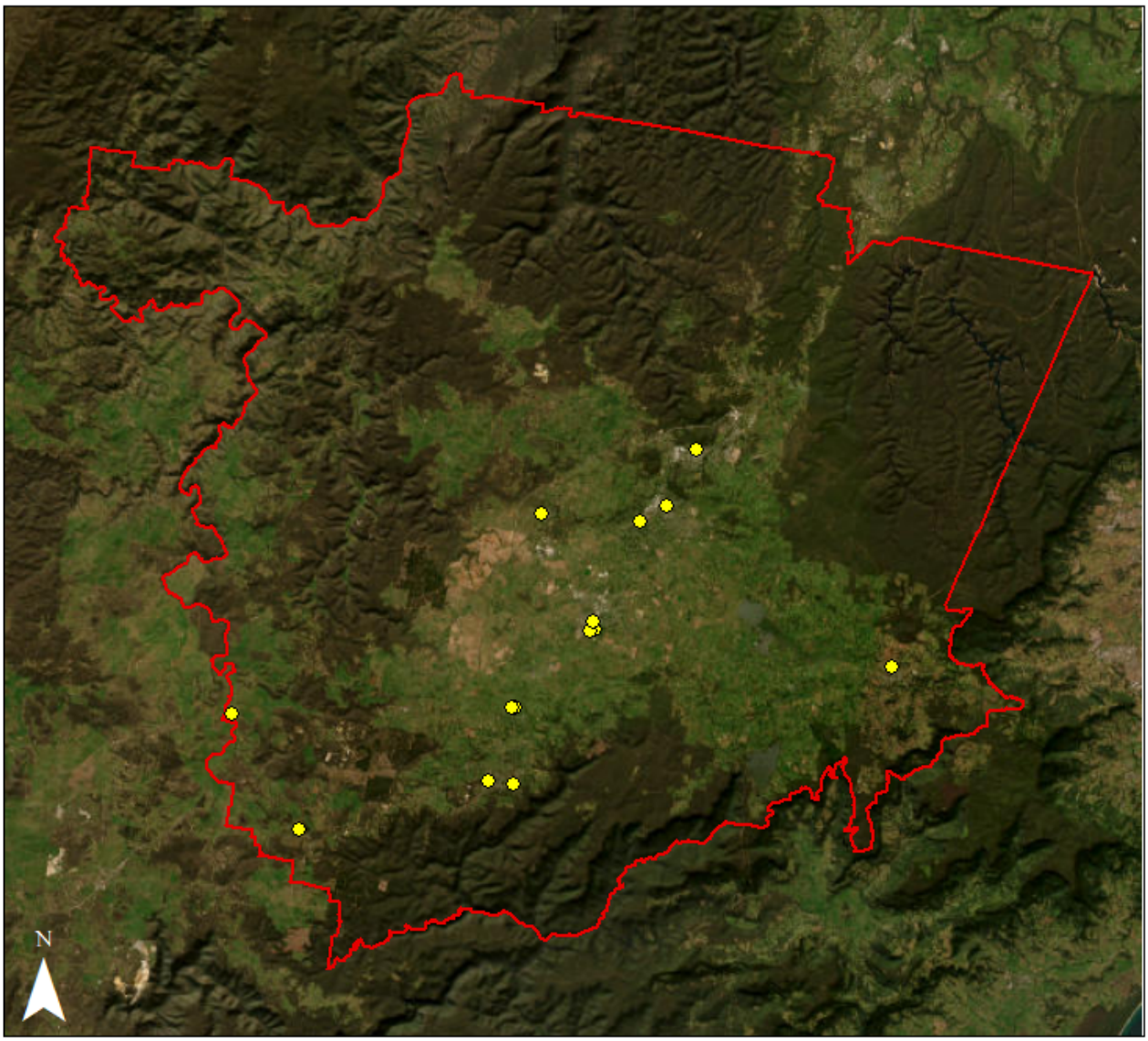
Kilometers

Legend

House Sparrow

Wingecarribee Shire Council boundary



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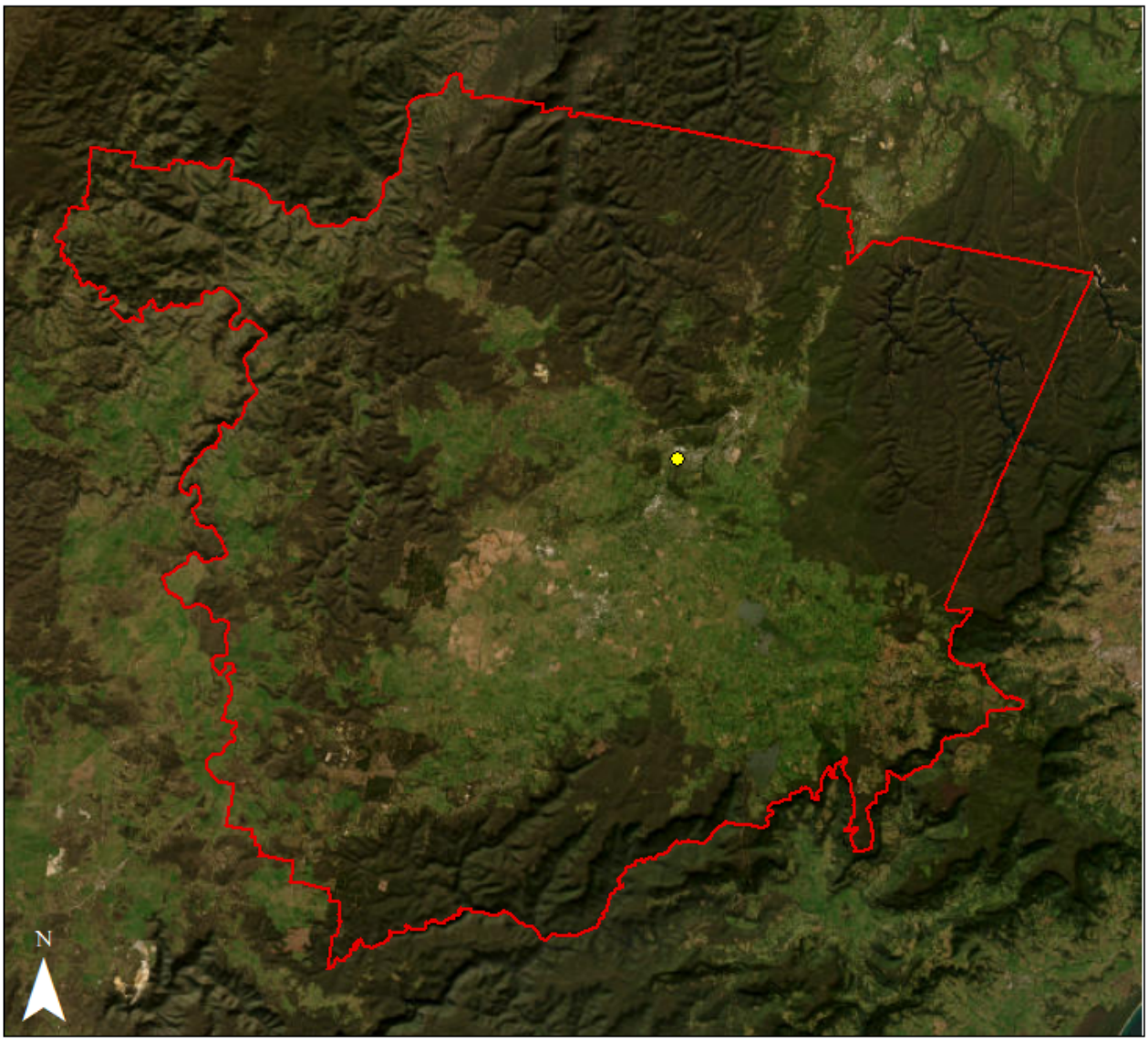
Kilometers

Legend

Long-billed Corella

Wingecarribee Shire Council boundary



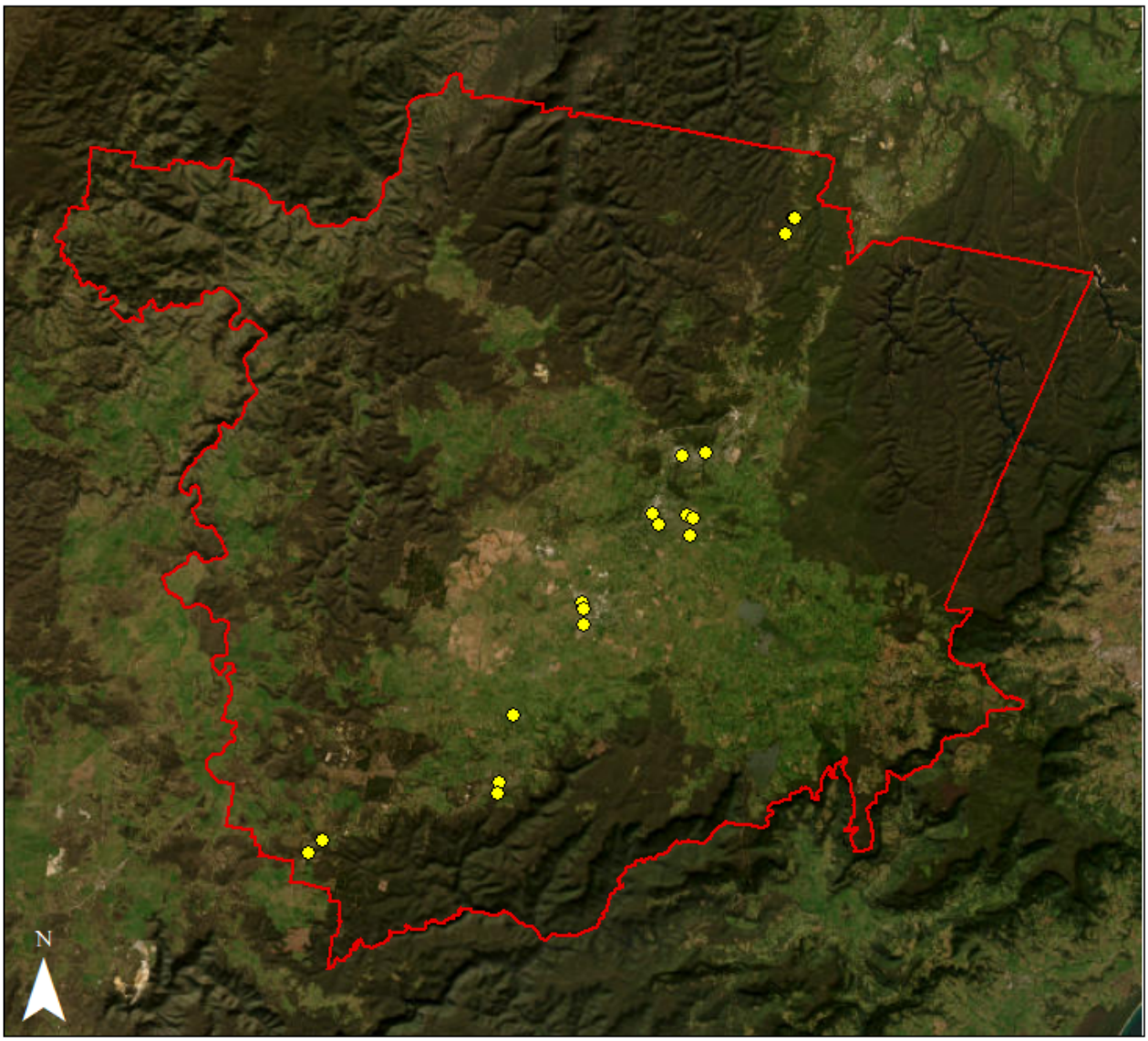
0 5 10 20 30 40

Kilometers

Legend

Rock Dove

Wingecarribee Shire Council boundary



0 5 10 20 30 40

Kilometers

Legend

Spotted Dove

Wingecarribee Shire Council boundary