

Brolga Report

prepared for

Shire of Hepburn



birdlife
AUSTRALIA



17-23

October 2022

#aussiebirdcount

aussiebirdcount.org.au

AUSSIE
BIRD
COUNT



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 Birddata 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).

© BirdLife Australia

This report is copyright. Apart from any fair dealings for the purposes of private study, research, criticism, or review as permitted under the Copyright Act, and as outlined in the Terms and Conditions, no part may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without prior written permission from BirdLife Australia. Results from the data analysis and the provided raw data shall not be provided to third parties (unless explicitly authorised) and raw data is not permitted to be published. Publications where the data analysis or findings of this report are included in, or which utilise the raw data, must properly acknowledge BirdLife Australia as the data source. All enquiries to BirdLife Australia.

Recommended citation:

BirdLife Australia. 2023. Aussie Backyard Bird Count 2022 results: Shire of Hepburn. Unpublished report for the Shire of Hepburn.

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 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 birddata@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.

Report prepared by **Oakley Germech**. All bird photography copyright of **Andrew Silcocks**. Illustrations by **Anna Wilson**.

Contents

| | |
|--|----|
| BirdLife Australia..... | 2 |
| The Aussie Bird Count..... | 4 |
| Aussie Bird Count results – 2022 | 6 |
| Threatened species in your council | 10 |
| Introduced species in your council | 13 |
| Most common birds | 16 |
| Birds in Backyards..... | 20 |
| Birds in Schools..... | 23 |
| Rodent poisons kill birds | 25 |
| Data limitations..... | 28 |
| References | 30 |
| Appendix One | 31 |





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 **Shire of Hepburn**. The count ran from **17–23 October 2022**.

- **293** observers participated in the Bird Count, submitting **631** counts.
- Participants submitted between **one** and **twenty-nine** surveys per registered account – an average of **3.43** surveys per account.
- Participants counted birds for a combined duration of **192** hours and **17** minutes.
- Participants recorded a total of **18,209** individual birds during Bird Week.
- **118** bird species were recorded, with the **Australian Magpie** reported in **74.33%** of counts (**Table 1**).

Table 1: Total counts of all 118 bird species observed within the Shire of Hepburn 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 (%) |
|--------------------------|-------|--------|---------------------------|-------|--------|
| Crimson Rosella | 1734 | 65.93 | Fuscous Honeyeater | 30 | 1.11 |
| Australian Magpie | 1692 | 72.58 | Gang-gang Cockatoo | 29 | 1.43 |
| House Sparrow* | 1652 | 23.61 | Black-faced Cuckoo-shrike | 28 | 3.01 |
| Sulphur-crested Cockatoo | 1537 | 42.79 | Striated Thornbill | 27 | 1.43 |
| Australian Wood Duck | 1129 | 27.89 | Purple Swamphen | 25 | 1.74 |
| Australian Raven | 769 | 36.29 | Rock Dove* | 23 | 0.79 |
| Red Wattlebird | 665 | 45.96 | Red-rumped Parrot | 22 | 0.32 |
| Superb Fairy-wren | 632 | 34.87 | Wedge-tailed Eagle | 21 | 2.38 |
| Little Raven | 549 | 25.04 | Buff-rumped Thornbill | 19 | 1.58 |
| Galah | 524 | 20.76 | Varied Sittella | 18 | 0.63 |
| Welcome Swallow | 506 | 19.81 | Golden Whistler | 17 | 2.06 |
| Common Blackbird* | 479 | 31.06 | Brown Treecreeper (NT) | 16 | 1.27 |
| New Holland Honeyeater | 391 | 21.87 | Little Lorikeet | 15 | 0.63 |
| Long-billed Corella | 356 | 10.78 | Grey Teal | 15 | 0.95 |
| Laughing Kookaburra | 351 | 26.47 | Eastern Yellow Robin | 15 | 1.74 |
| Common Starling* | 290 | 7.92 | Tawny Frogmouth | 14 | 0.79 |
| Straw-necked Ibis | 282 | 0.48 | Dusky Woodswallow | 13 | 0.79 |
| Pacific Black Duck | 280 | 10.14 | Dusky Moorhen | 13 | 1.43 |
| Pied Currawong | 244 | 16.8 | Collared Sparrowhawk | 12 | 1.11 |

| | | | | | |
|------------------------------|-----|-------|--------------------------|----|------|
| Grey Fantail | 241 | 19.81 | Little Pied Cormorant | 11 | 1.74 |
| Little Corella | 224 | 9.67 | Yellow-tufted Honeyeater | 9 | 0.48 |
| White-winged Chough | 194 | 4.75 | Scarlet Robin | 9 | 0.79 |
| Striated Pardalote | 183 | 11.57 | Common Greenfinch* | 8 | 0.63 |
| White-browed Scrubwren | 178 | 13.15 | Grey Butcherbird | 8 | 0.63 |
| Brown Thornbill | 161 | 10.94 | Sacred Kingfisher | 8 | 1.11 |
| Grey Shrike-thrush | 145 | 14.1 | Red-browed Treecreeper | 7 | 0.32 |
| Yellow-faced Honeyeater | 137 | 9.83 | Crescent Honeyeater | 7 | 0.79 |
| Eastern Spinebill | 135 | 11.73 | Mistletoebird | 6 | 0.32 |
| Rainbow Lorikeet | 127 | 5.71 | Diamond Firetail (NT) | 5 | 0.32 |
| Noisy Miner | 98 | 3.17 | Chestnut Teal | 5 | 0.48 |
| Red-browed Finch | 98 | 3.17 | Eastern Shrike-tit | 5 | 0.48 |
| Magpie-lark | 95 | 7.45 | Restless Flycatcher | 5 | 0.79 |
| White-naped Honeyeater | 87 | 4.91 | Painted Honeyeater (VU) | 4 | 0.16 |
| Yellow-tailed Black-Cockatoo | 86 | 4.44 | White-browed Babbler | 4 | 0.16 |
| Australian Reed-Warbler | 85 | 2.54 | White-plumed Honeyeater | 4 | 0.16 |
| Spotted Pardalote | 84 | 8.24 | Australian Pelican | 4 | 0.32 |
| Silvereye | 83 | 4.44 | Black Swan | 4 | 0.32 |
| Eastern Rosella | 76 | 4.6 | Spotted Dove* | 4 | 0.32 |
| Musk Lorikeet | 75 | 1.9 | Brown Goshawk | 4 | 0.63 |
| Australian White Ibis | 74 | 3.01 | Pallid Cuckoo | 4 | 0.63 |
| Yellow-rumped Thornbill | 67 | 3.33 | Black-shouldered Kite | 3 | 0.32 |
| Grey Currawong | 67 | 6.97 | Nankeen Kestrel | 3 | 0.32 |
| Eurasian Coot | 66 | 3.65 | Tree Martin | 3 | 0.32 |
| Crested Pigeon | 64 | 3.96 | Shining Bronze-Cuckoo | 3 | 0.48 |
| Australian Shelduck | 61 | 1.58 | Barn Owl | 2 | 0.16 |
| Black Duck-Mallard hybrid* | 61 | 1.9 | Black-chinned Honeyeater | 2 | 0.16 |
| Domestic Duck* | 57 | 2.22 | Yellow-billed Spoonbill | 2 | 0.16 |
| European Goldfinch* | 54 | 1.74 | Brown-headed Honeyeater | 2 | 0.32 |
| Common Bronzewing | 54 | 4.91 | Brown Falcon | 2 | 0.32 |
| Fan-tailed Cuckoo | 47 | 4.75 | Brush Cuckoo | 2 | 0.32 |
| White-eared Honeyeater | 44 | 3.01 | Great Cormorant | 2 | 0.32 |
| Willie Wagtail | 44 | 4.75 | Australasian Grebe | 1 | 0.16 |
| Australian King-Parrot | 43 | 3.01 | Australian Hobby | 1 | 0.16 |
| White-throated Treecreeper | 40 | 4.12 | Brush Bronzewing | 1 | 0.16 |
| Yellow Thornbill | 38 | 1.58 | Little Black Cormorant | 1 | 0.16 |
| Rufous Whistler | 38 | 3.33 | Little Eagle | 1 | 0.16 |
| Masked Lapwing | 37 | 3.01 | Peaceful Dove | 1 | 0.16 |
| Common Myna* | 36 | 2.69 | Silver Gull | 1 | 0.16 |
| White-faced Heron | 32 | 3.65 | Weebill | 1 | 0.16 |

The Shire of Hepburn is a regional Local Government Area with some remnant areas of native habitat that support the ecosystems many of our threatened bird species depend on. However, urbanisation and clearing for mining, development and agriculture threaten the biodiversity of many regional councils.

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?

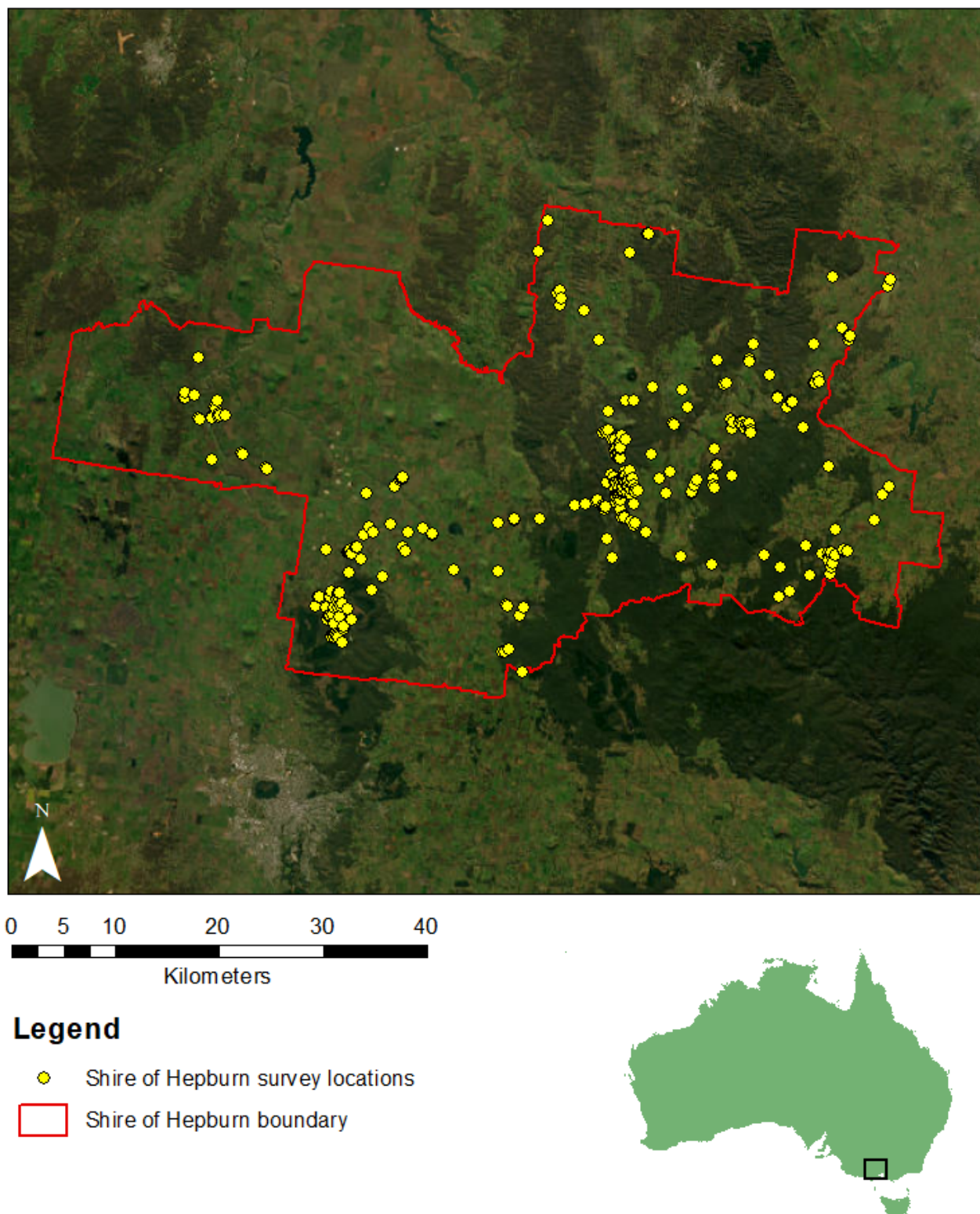


Figure 1. Bird counts ($n=335$) submitted within Shire of Hepburn boundaries during the 2022 Aussie Bird Count. Each yellow dot represents a single survey, though repeat surveys at a single location will overlap.

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, **three** threatened bird species were recorded within the Shire of Hepburn boundaries in the 2022 Aussie Bird Count (**Table 2**). A visualisation of individual records from the 2022 Aussie Bird Count is provided in **Figure 2**. As there was only a single overlap in threatened species records, clearly visible on the map, we have not provided individual species maps in a separate appendix.

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 birddata@birdlife.org.au if you wish to organise a free download of these data for a particular purpose.

Table 2: Total counts and reporting rates (%) of all three threatened species observed within the Shire of Hepburn 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 (%) |
|--------------------|--------|-------|---|--------|
| Brown Treecreeper | NT | 16 | 8 | 1.27 |
| Diamond Firetail | NT | 5 | 2 | 0.32 |
| Painted Honeyeater | VU | 4 | 1 | 0.16 |

Three threatened woodland bird species were recorded within the Shire of Hepburn boundaries in 2022:

- Brown Treecreeper (Near Threatened)
- Diamond Firetail (Near Threatened)
- Painted Honeyeater (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.

The temperate south-eastern regions of Australia have experienced the largest number of woodland species declines. However, high rates of land clearing in Queensland also threaten species that inhabit our lesser-studied tropical woodlands.

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](#).

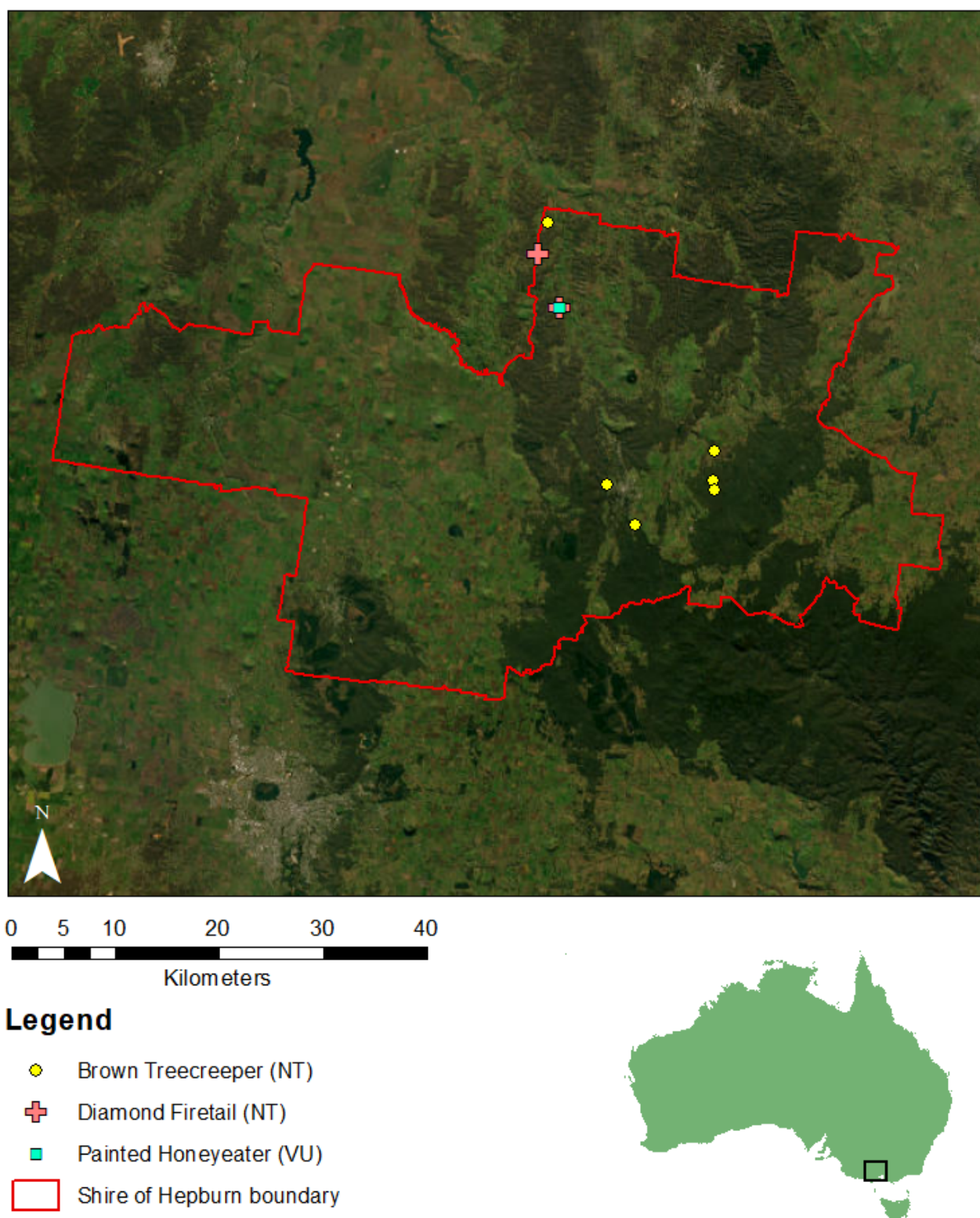


Figure 2. Distribution of threatened species records from the 2022 Aussie Bird Count for the Shire of Hepburn. Where multiple threatened species are reported in the same count, these records will overlap.

Introduced species in your council

Ten introduced taxa were recorded within the Shire of Hepburn during the 2022 Aussie Bird Count (**Table 3; Figure 3**). However, the Domestic Duck is descended from domesticated Mallards and is not a true species. The Back Duck-Mallard hybrid is a natural hybrid formed between introduced Mallards and native Pacific Black Ducks.

Most records of introduced species were clustered around urban and agricultural centres of the council, particularly in Clunes, Daylesford, and Creswick. Fewer birds were reported in areas of intact forest habitat, and most of these records were of the Common Blackbird. However, it should be noted that survey bias is partly responsible for this pattern; several introduced species occur in rural districts, but most of the people participating in the Aussie Bird Count live and count in urban spaces. Most introduced species do not occur at high densities in native forest, but some, particularly the Common Blackbird, do establish in these habitats.

The Common Blackbird (31.06%) and House Sparrow (23.61%) were by far the most frequently recorded introduced species during the Aussie Bird Count, though the House Sparrow was recorded in much greater overall numbers. Together with several flocks of Common Starling (7.92%), these species accounted for over one-eighth of all recorded birds in the Shire. Several other introduced species were reported, but at quite low rates when compared to regions like Greater Sydney and Greater Melbourne. The reporting rate of Spotted Dove (0.32%) was especially low in comparison to most urban centres in eastern Australia, where this species is consistently high in the rankings.

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 3: Total counts and reporting rates (%) of all ten introduced taxa observed within the Shire of Hepburn 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 (%) |
|---------------------------|-------|-------------------------------------|---|--------|
| House Sparrow | 1652 | 9.07 | 149 | 23.61 |
| Common Blackbird | 479 | 2.63 | 196 | 31.06 |
| Common Starling | 290 | 1.59 | 50 | 7.92 |
| Black Duck-Mallard hybrid | 61 | 0.33 | 12 | 1.9 |

| | | | | |
|--------------------|----|------|----|------|
| Domestic Duck | 57 | 0.31 | 14 | 2.22 |
| European Goldfinch | 54 | 0.30 | 11 | 1.74 |
| Common Myna | 36 | 0.20 | 17 | 2.69 |
| Rock Dove | 23 | 0.13 | 5 | 0.79 |
| Common Greenfinch | 8 | 0.04 | 4 | 0.63 |
| Spotted Dove | 4 | 0.02 | 2 | 0.32 |

Least commonly reported birds

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

- Australasian Grebe
- Australian Hobby
- Barn Owl
- Black-chinned Honeyeater
- Brush Bronzewing
- Little Black Cormorant
- Little Eagle
- Painted Honeyeater (VU)
- Peaceful Dove
- Silver Gull
- Weebill
- White-browed Babbler
- White-plumed Honeyeater
- Yellow-billed Spoonbill

All of the fourteen species are native to Australia and Victoria. None of the species are endangered or critically endangered, though the Painted Honeyeater is listed as Vulnerable in the state. One (Barn Owl) is nocturnal, four are restricted to aquatic habitats such as wetlands and lakes, and three are birds of prey. Many of the other species reported only once, such as the Black-chinned Honeyeater and Brush Bronzewing, are limited to intact woodland or forest habitat, from which few surveys were submitted. Further, the Painted Honeyeater is a spring-summer migrant that is still arriving in Victoria during October. 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.

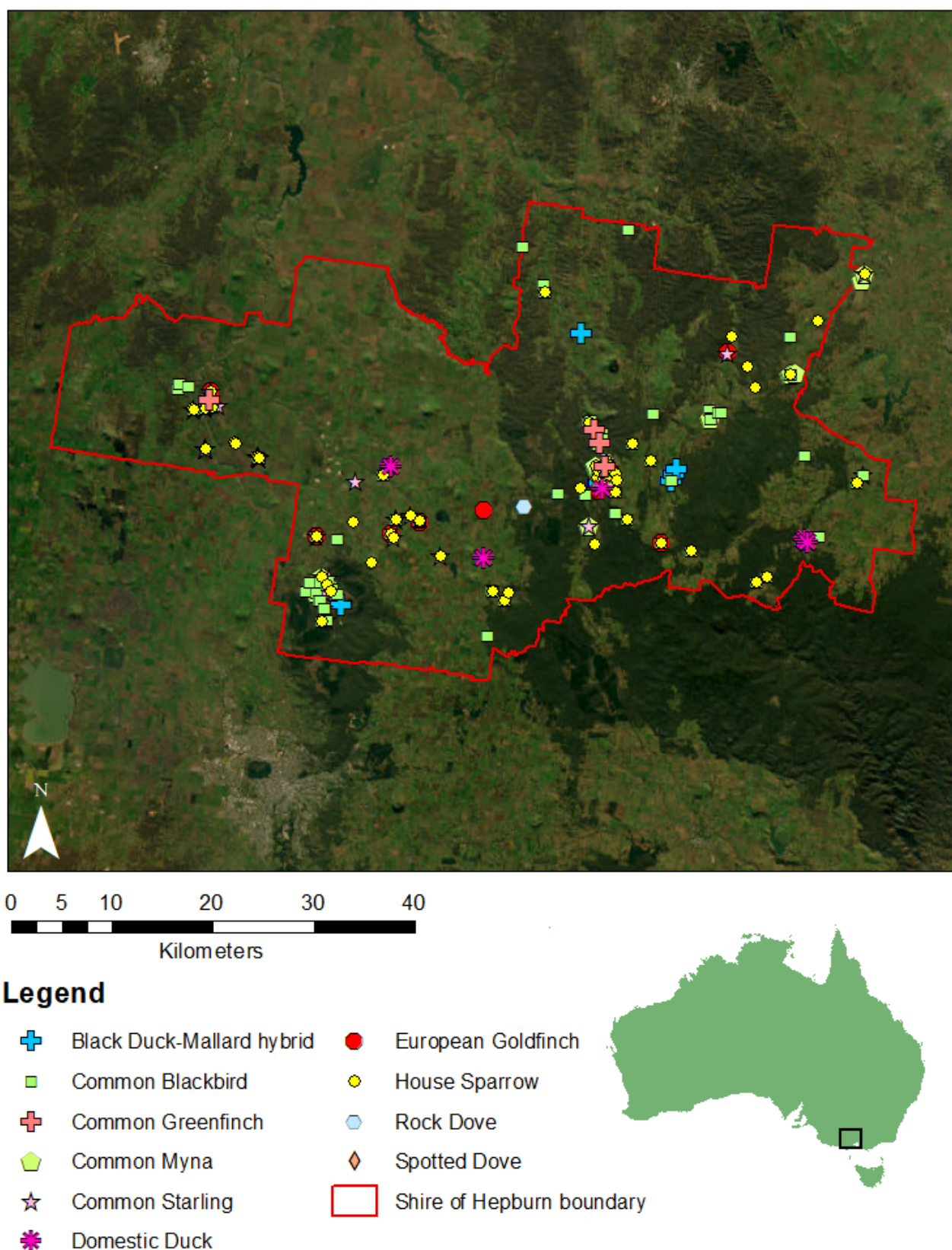


Figure 3. Distribution of introduced species records from the 2022 Aussie Bird Count for the Shire of Hepburn. Where multiple introduced species are reported in the same count, these records will overlap.

Most common birds

With **1,734** individuals counted in the Shire of Hepburn, the **Crimson Rosella** was the most abundant bird in the 2022 Aussie Bird Count (**Figure 4**). This is much higher than in most urban areas of the state; the species was the fifteenth-most counted bird for the state of Victoria. The next-most abundant species was the Australian Magpie (1,692 individuals), while the House Sparrow (1,652 individuals) edged out the Sulphur-crested Cockatoo (1,537 individuals) for third place.

Nine of the ten most abundant bird species recorded within the Shire of Hepburn boundaries are native to Victoria, and none of these species are considered threatened in the state. The House Sparrow (third place) is a common introduced species in towns and farming areas across south-eastern Australia.

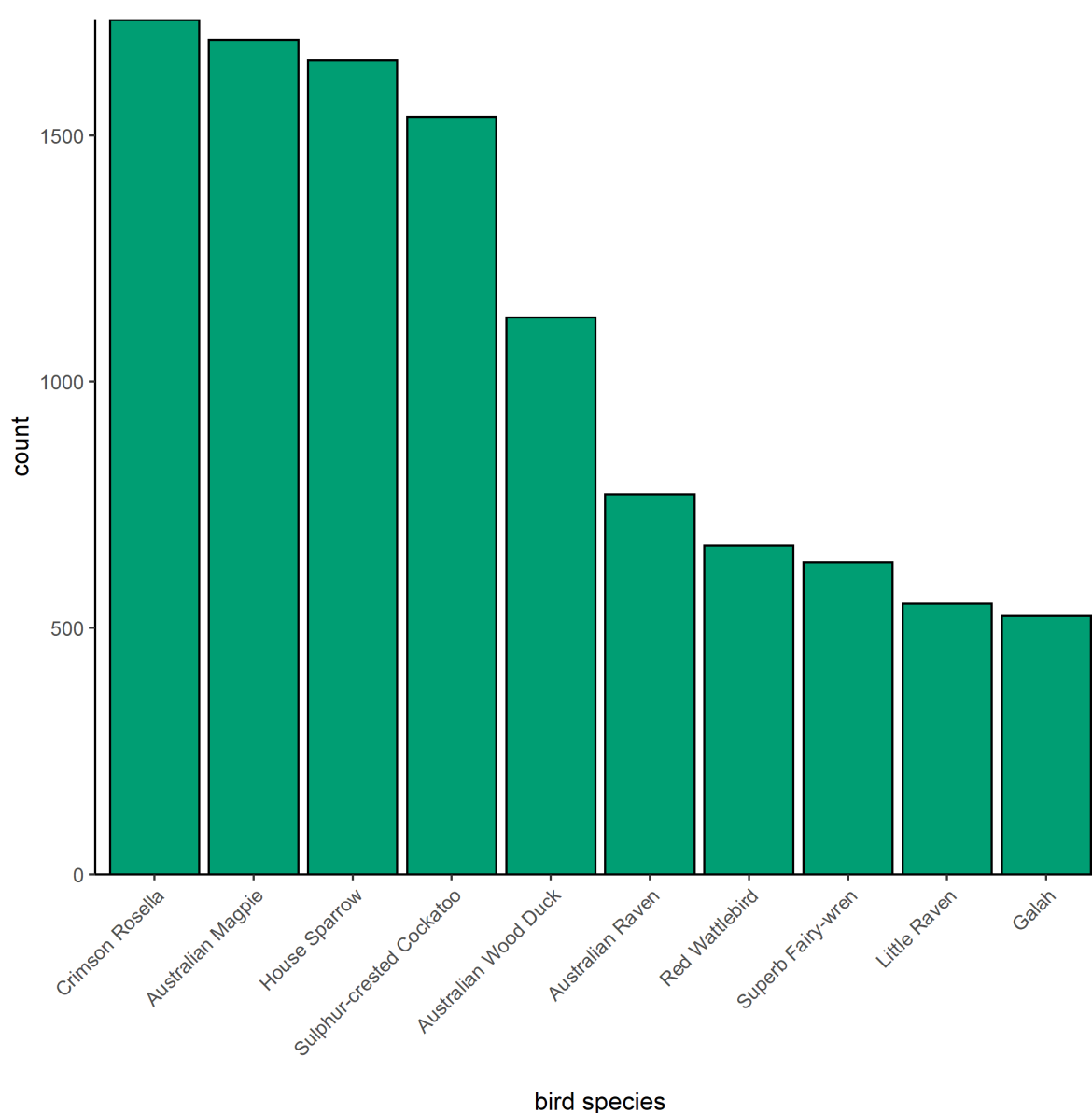


Figure 4 (above). The ten most abundant bird species reported in the 2022 Aussie Bird Count, for the Shire of Hepburn. As this ranking is based on the total number of birds, and not how often they were seen, species that form large flocks are more likely to be over-represented in this figure.

While the Australian Magpie was the second-most counted bird in the council, and most counted in the state, the Superb Fairy-wren is notable for ranking eighth in the Shire of Hepburn while fifteenth in the state and just nineteenth nationally. While still a recognisable, common species in areas with suitable habitat, the Superb Fairy-wren does not tolerate habitats with a complete lack of dense groundcover. The continued persistence of the Superb Fairy-wren high in the rankings indicates that patches of suitable habitat (weedy or native) are widespread throughout the Shire of Hepburn.

While the Crimson Rosella is over-represented, all the species in the Top Ten are also common in other regional areas across south-eastern Australia, indicating a similarity between the urban areas of the Shire of Hepburn and other urban centres in the region.

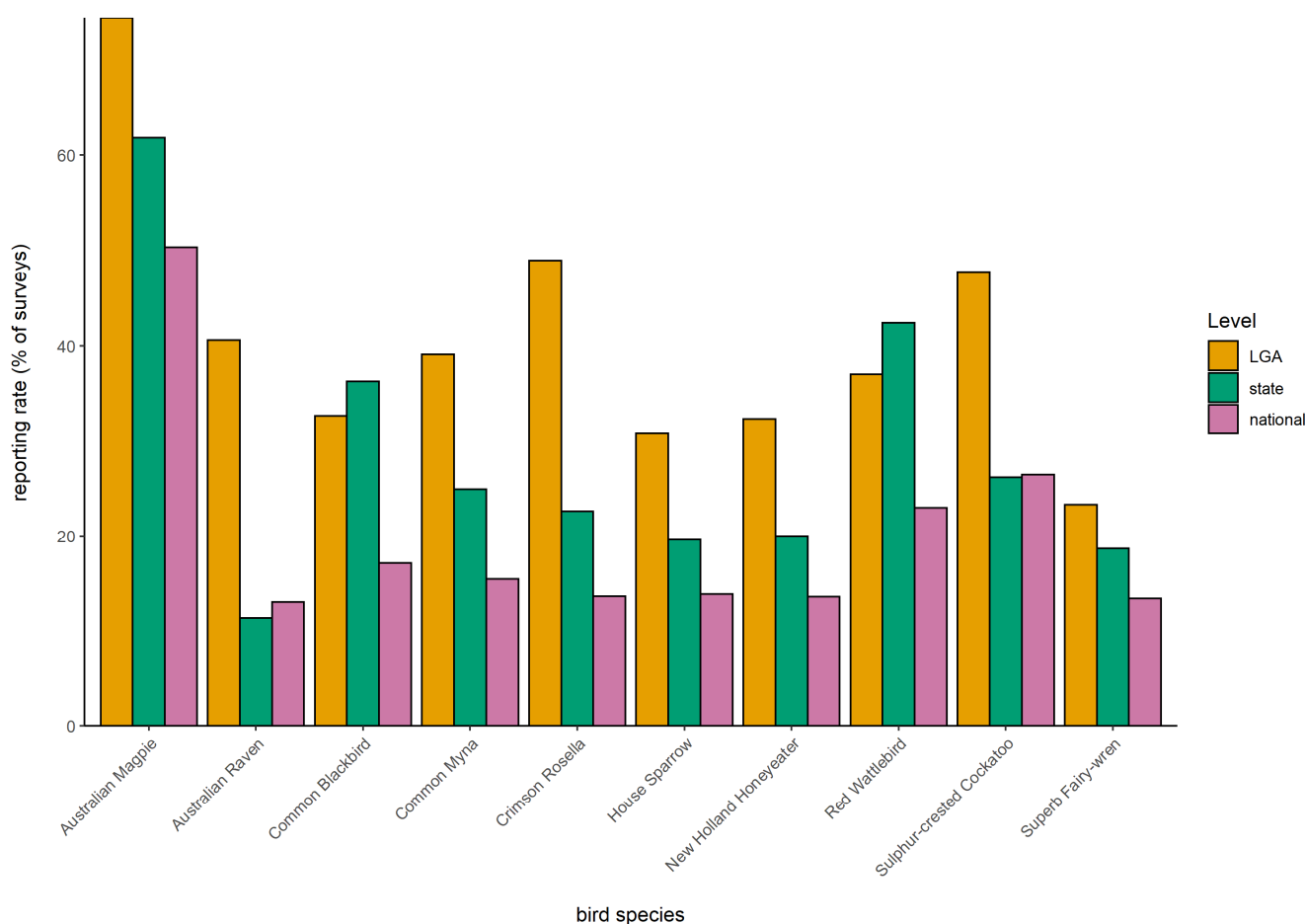


Figure 5. Comparison of council, state, and national reporting rates (%) of the ten most frequently recorded species during the 2022 Aussie Bird Count within the Shire of Hepburn boundaries.

Reported from **72.58%** of counts, the **Australian Magpie** was the most *frequently* recorded bird in the Shire of Hepburn 2022 Aussie Bird Count. The second-most reported species (Crimson Rosella) was reported in almost 66% of counts, well ahead of the Red Wattlebird, which was reported from 45.96% of counts. Except for the Common Blackbird and Red Wattlebird, which were slightly under-represented when compared to state-wide results, all the species in the Top Ten were reported at higher-than-average rates when compared to both state- and nation-wide figures (**Figure 5**).

The Crimson Rosella is notable in this regard, being reported in just 22.57% of counts state-wide and 13.64% nationally. This species is very common in regions adjoining the Great Dividing Range, such as the Shire of Hepburn. However, this species is on the decline in many urban centres (Campbell *et al.* 2022). Suggested reasons for this decline include the loss of leafy habitat and lack of nesting hollows, as well as competition for remaining hollows from more aggressive species, such as Rainbow Lorikeets, that are better urban adapters. Monitoring the long-term persistence of the Crimson Rosella in townships across the Shire of Hepburn may provide useful information on the health of local urban ecology.

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.

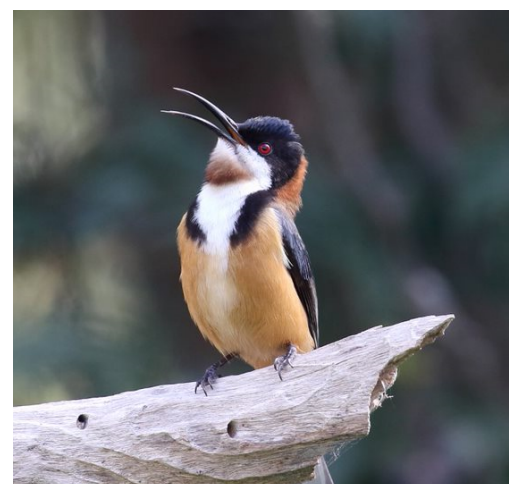
Birds in Backyards takes a three-pronged approach to engagement:

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?

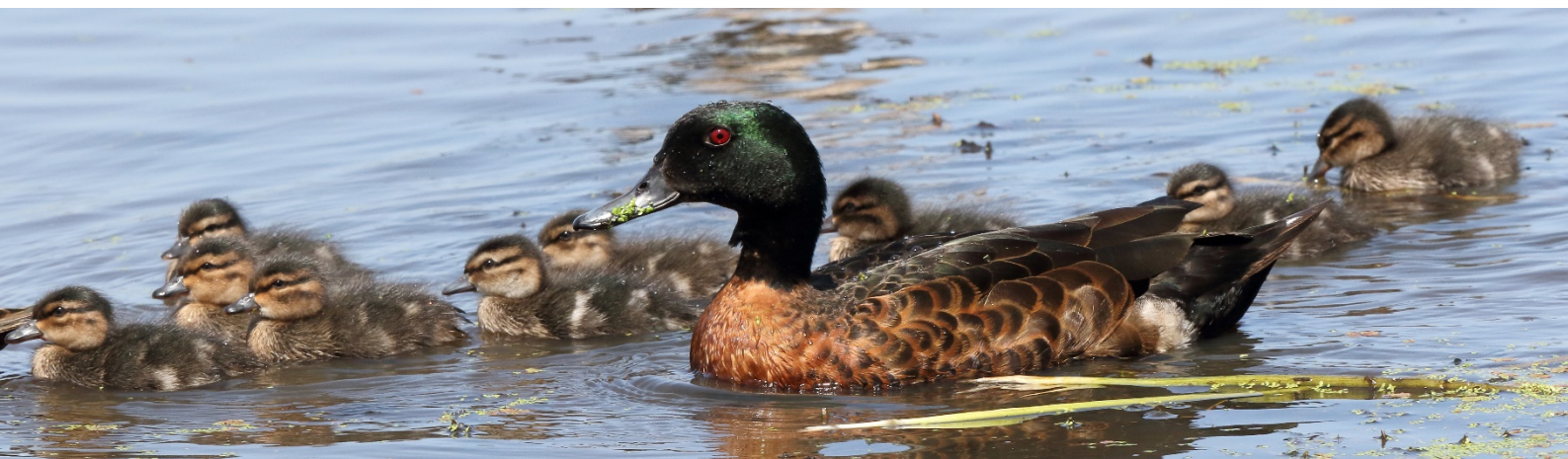
Teachers deliver the lessons, and we provide them with an online professional training session to develop the technical skills and knowledge

required to deliver the Birds in Schools program. This includes skills in bird identification, conducting bird surveys, using Birddata, 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, Birddata. 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 birddata@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.



References

- BirdLife Australia (2022). *Working List of Australian Birds v4.1*. Retrieved from https://birddata.birdlife.org.au/wp-content/uploads/2022/12/WLAB_v4.1.xlsx (accessed 1/3/2023).
- Campbell, C.E., Jones, D.N., Awasthy, M., Guy Castley, J. & Chauvenet, A.L.M. (2022). Big changes in backyard birds: An analysis of long-term changes in bird communities in Australia's most populous urban regions. *Biological Conservation* **272**: 109671. doi: <https://doi.org/10.1016/j.biocon.2022.109671>.
- Cooke, R., Whiteley, P., Jin, Y., Death, C., Weston, M.A., Carter, N. & White, J.G. (2022). Widespread exposure of powerful owls to second-generation anticoagulant rodenticides in Australia spans an urban to agricultural and forest landscape. *Science of the Total Environment* **819**(1): 153204. doi: <https://doi.org/10.1016/j.scitotenv.2022.153024>.
- Garnett, R. & Baker, B. (Eds). (2021). *The Action Plan for Australian Birds 2020*. CSIRO Publishing. Melbourne.
- Lohr, M.T. & Davis, R.A. (2018). Anticoagulant rodenticide use, non-target impacts and regulation: a case study from Australia. *Science of the Total Environment* **634**(1): 1372-1384. doi: <https://doi.org/10.1016/j.scitotenv.2018.04.069>.
- Malshe, A., Vann, G., Baig, J., Legge, K., Courtemanche, M.B. & Morphet, V. (2021). *State of Place: 2021 Australian Liveability Census*. Version 1.0. Place Score. Retrieved from <https://www.placescore.org/lets-talk/?help=sample&report=sop2021> (accessed 1/3/2023).
- Nakayama, S.M.M., Morita, A., Ikenaka, Y., Mizukawa, H. & Ishizuka, M. (2019). A review: poisoning by anticoagulant rodenticides in non-target animals globally. *Journal of Veterinary Medical Science* **81**(2): 298-313. doi: <https://doi.org/10.1292/jvms.17-0717>.
- Shore, R.F., Henrys, P.A. & Walker, L.A. (2014). Power analysis of liver second generation anticoagulant rodenticide (SGAR) residue data in barn owls from Britain: a Predatory Bird Monitoring Scheme (PBMS) report. CEH contract report to the Health and Safety Executive. Centre for Ecology & Hydrology. Retrieved from <https://nora.nerc.ac.uk/id/eprint/508401/1/N508401CR.pdf> (accessed 1/3/2023).
- Spurr, E.B. (2012). New Zealand garden bird survey – analysis of the first four years. *The New Zealand Journal of Ecology* **36**: 1-13.

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.



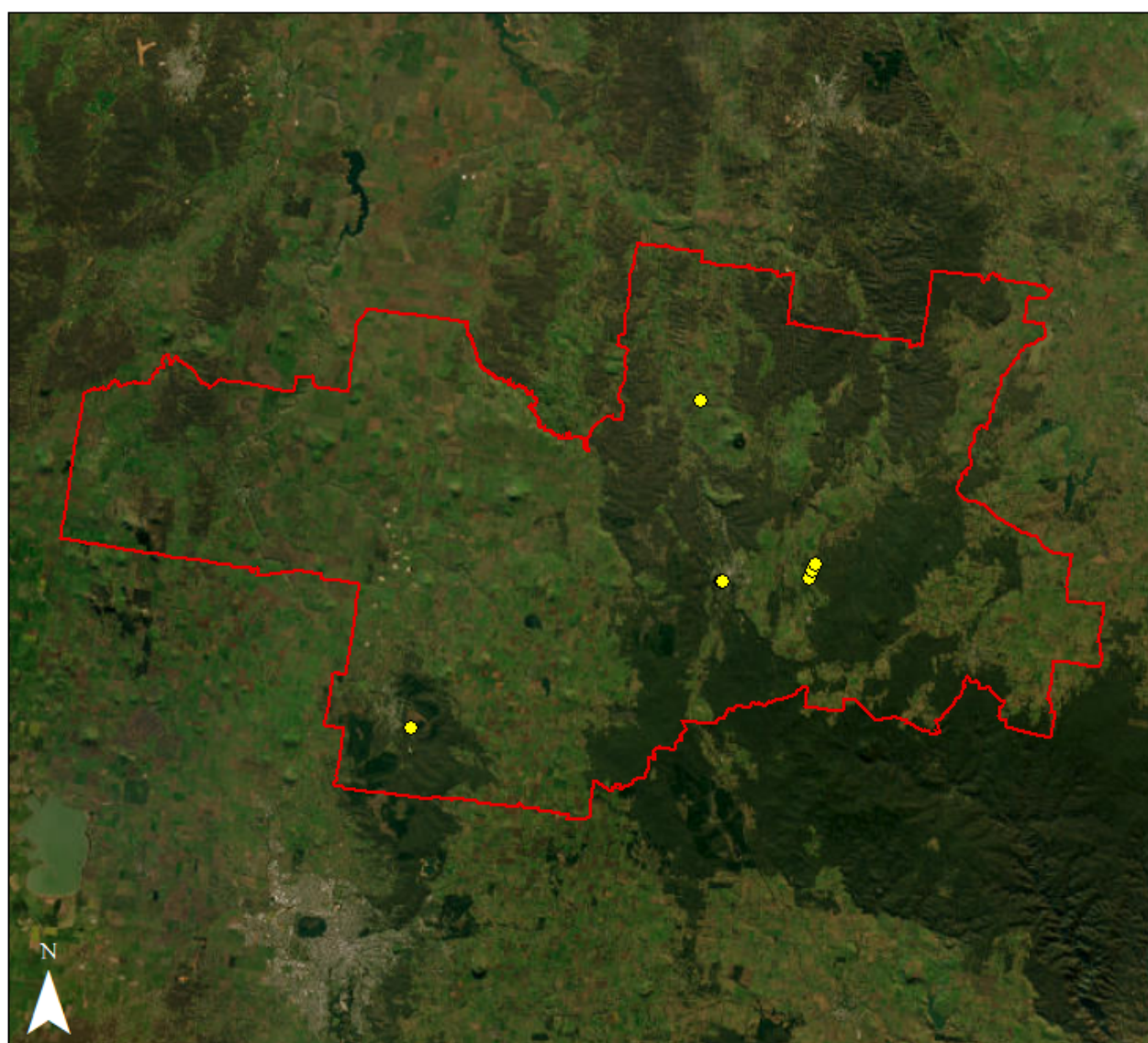
Appendix One

Introduced species maps

We have provided individual maps of 2022 Aussie Bird Count records for each introduced species in the Shire of Hepburn 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 Greenfinch**
- **Common Myna**
- **Common Starling**
- **Domestic Duck**
- **European Goldfinch**
- **House Sparrow**
- **Rock Dove**
- **Spotted Dove**

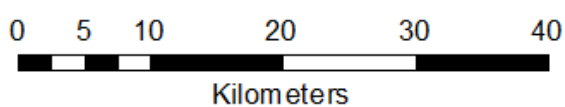
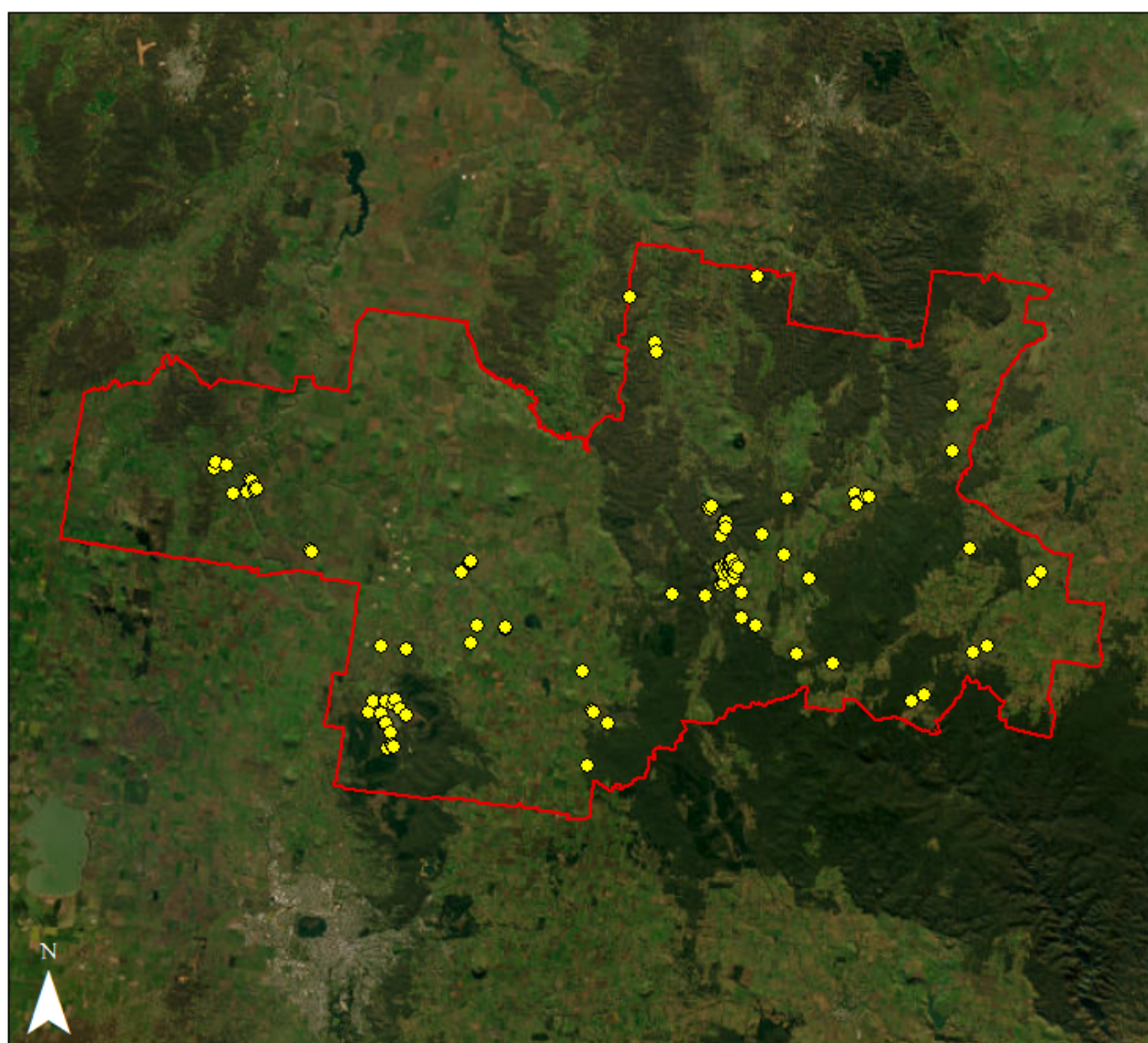


0 5 10 20 30 40
Kilometers



Legend

-  Black Duck-Mallard hybrid
-  Shire of Hepburn boundary

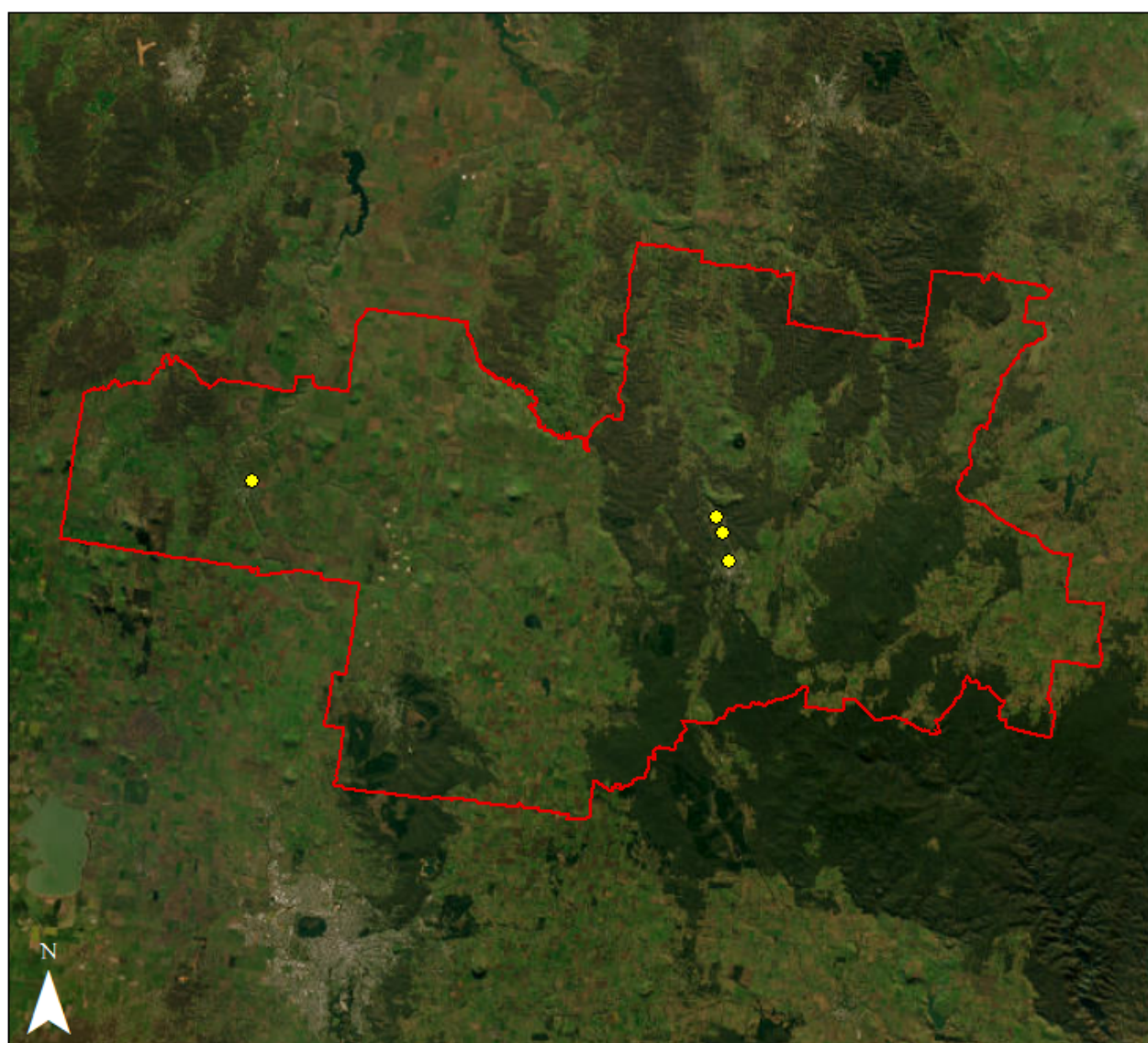




Legend



-  Common Blackbird
-  Shire of Hepburn boundary



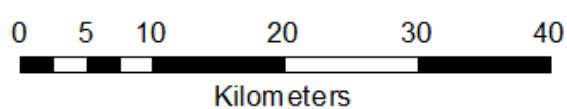
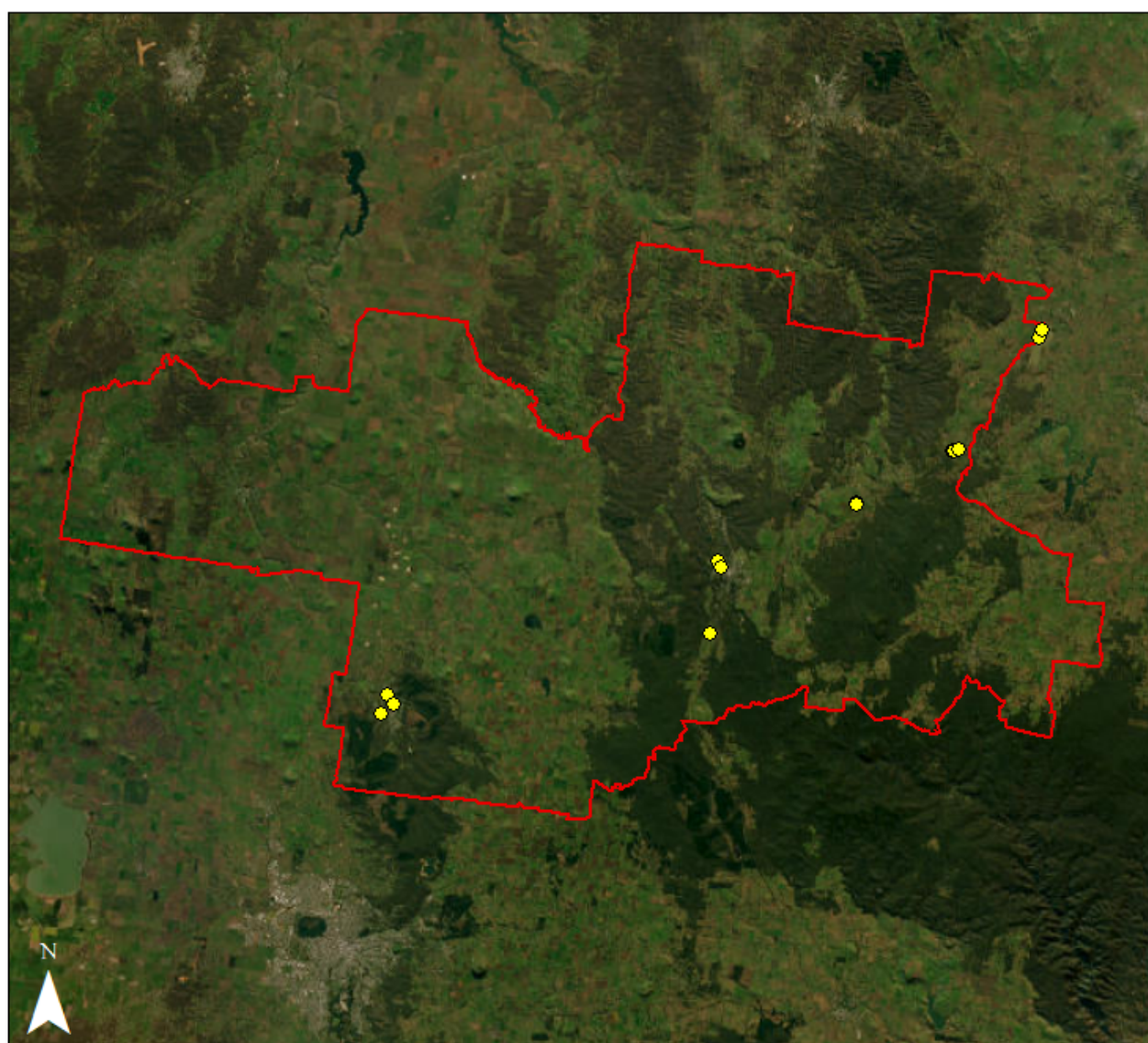


0 5 10 20 30 40
Kilometers



Legend

-  Common Greenfinch
-  Shire of Hepburn boundary

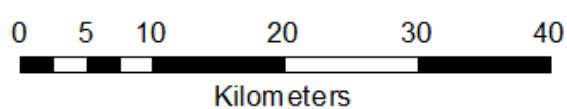
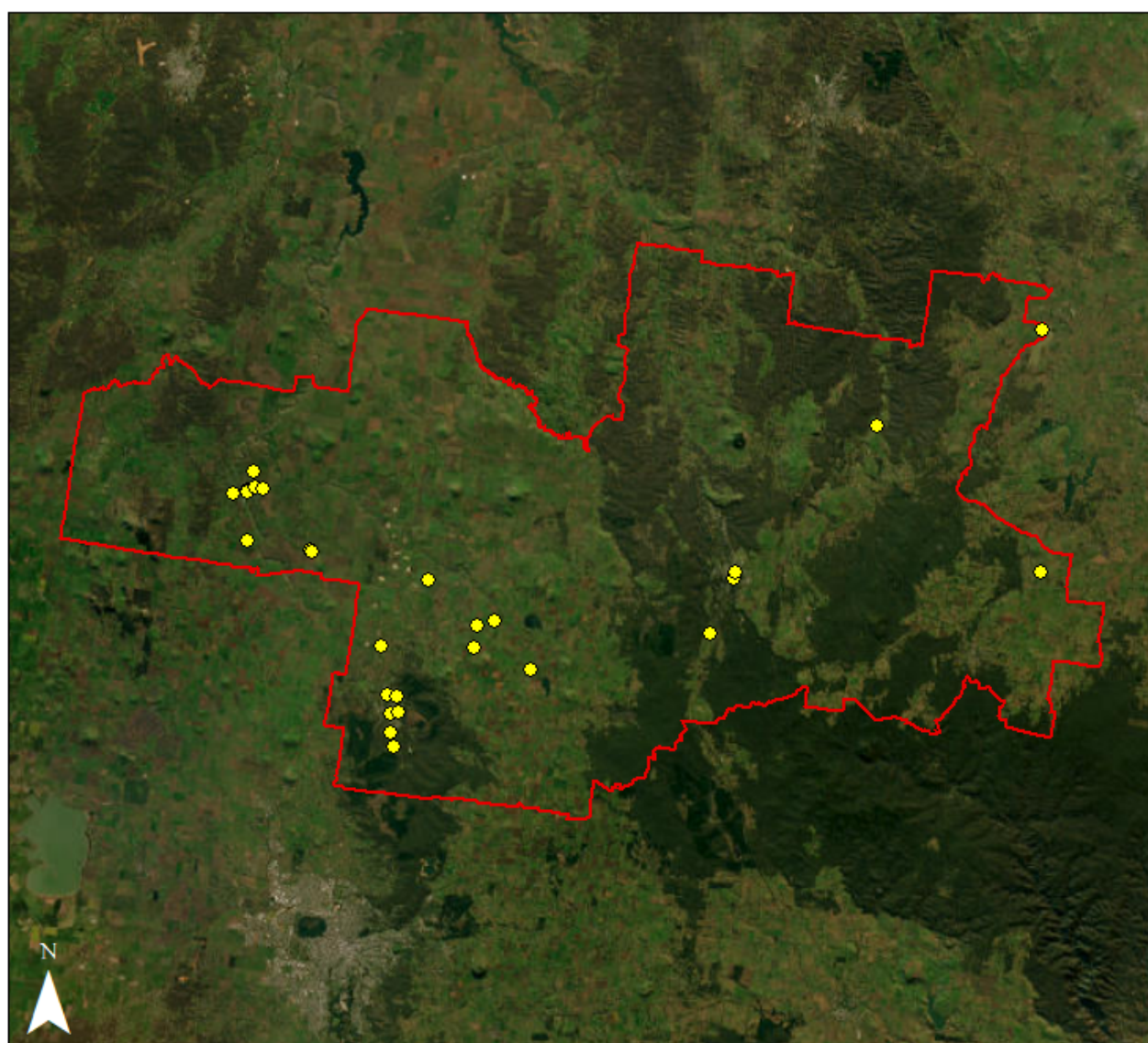






Legend

-  Common Myna
-  Shire of Hepburn boundary

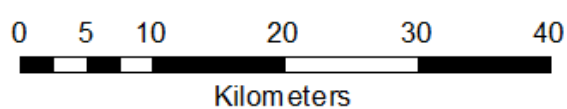
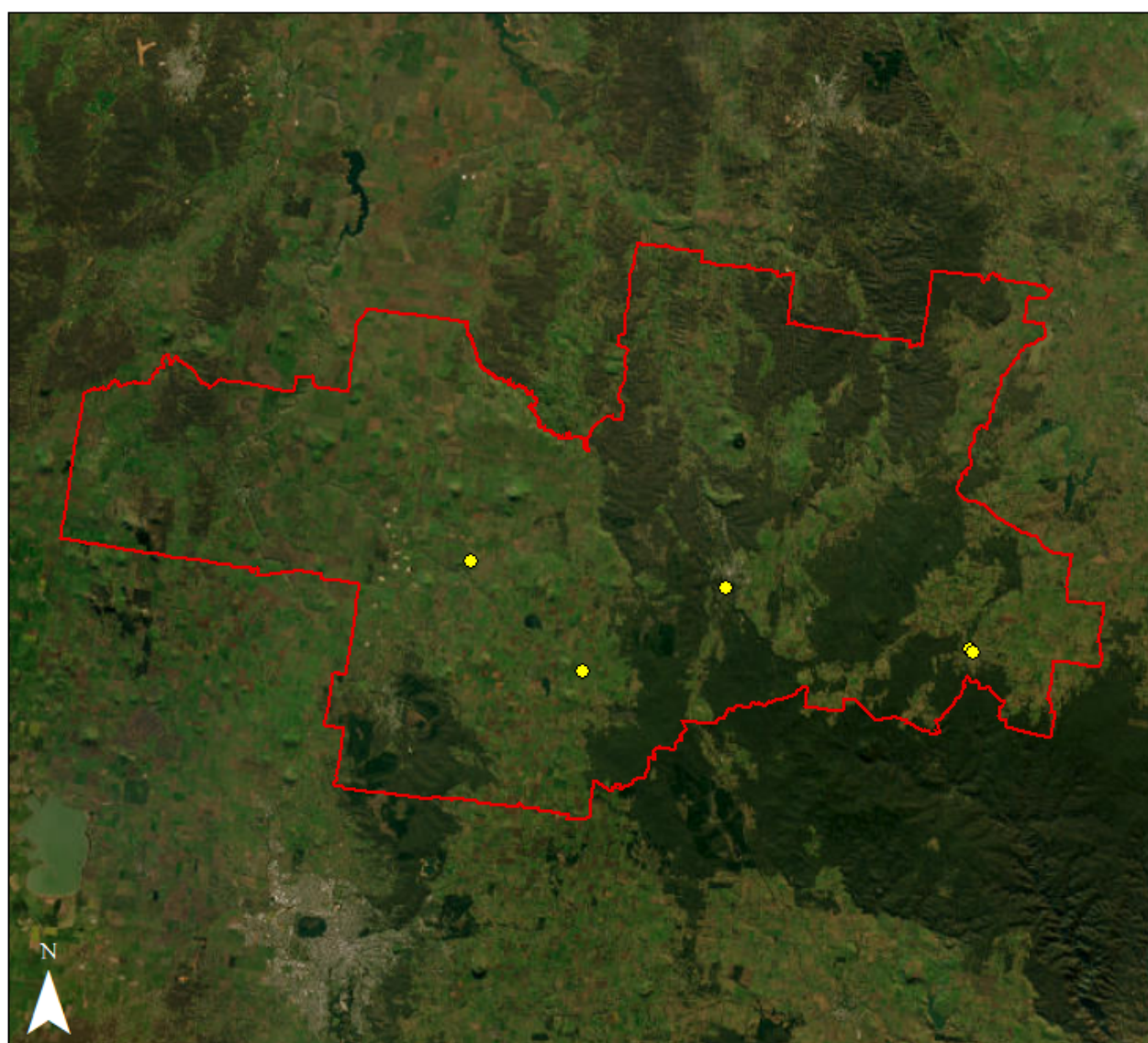






Legend

-  Common Starling
-  Shire of Hepburn boundary

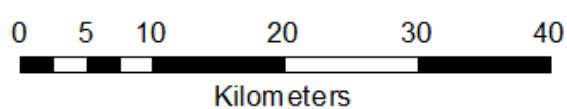
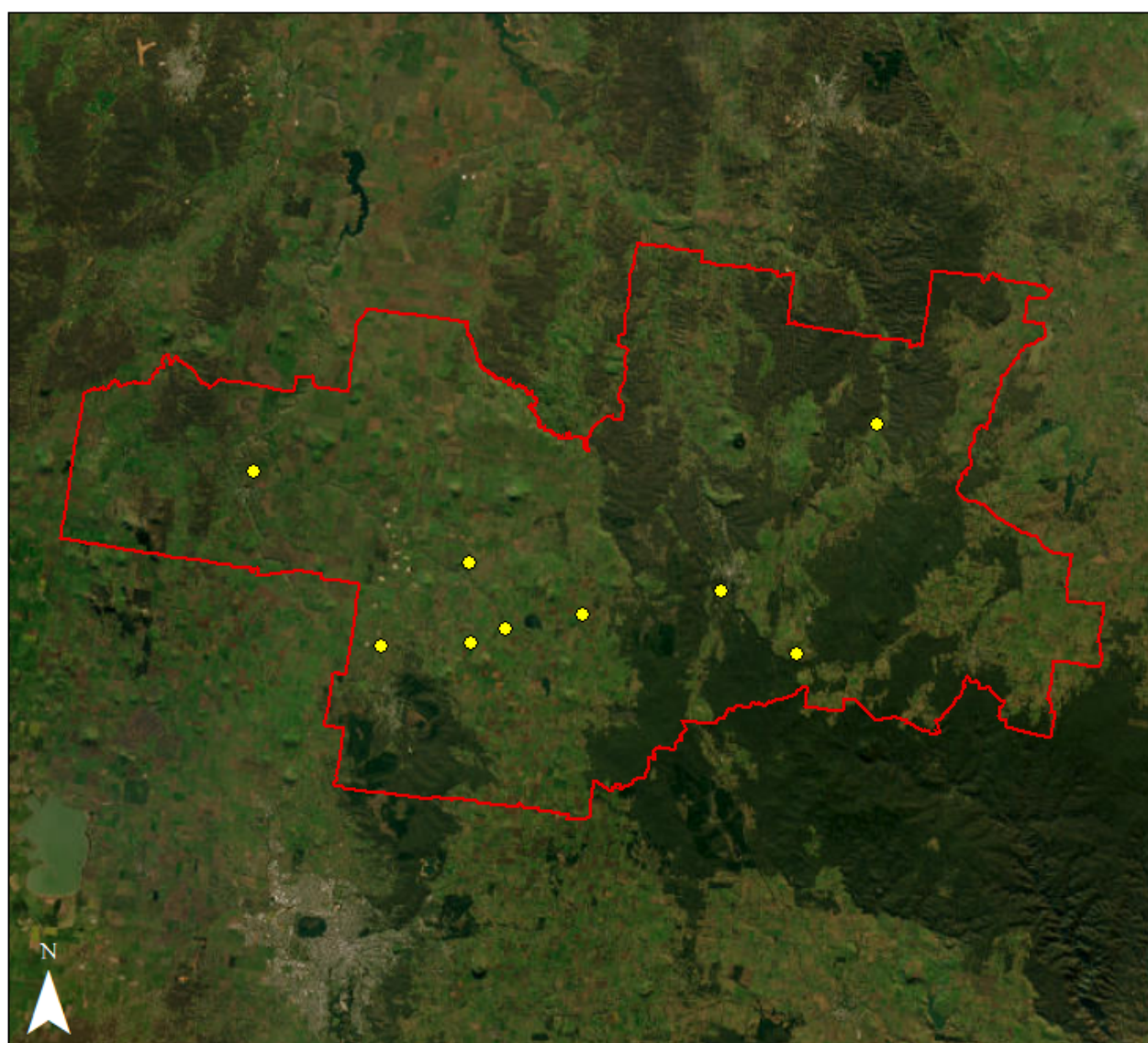






Legend

-  Domestic Duck
-  Shire of Hepburn boundary

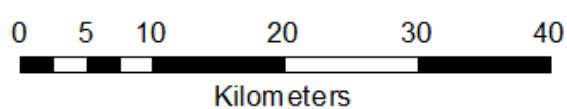
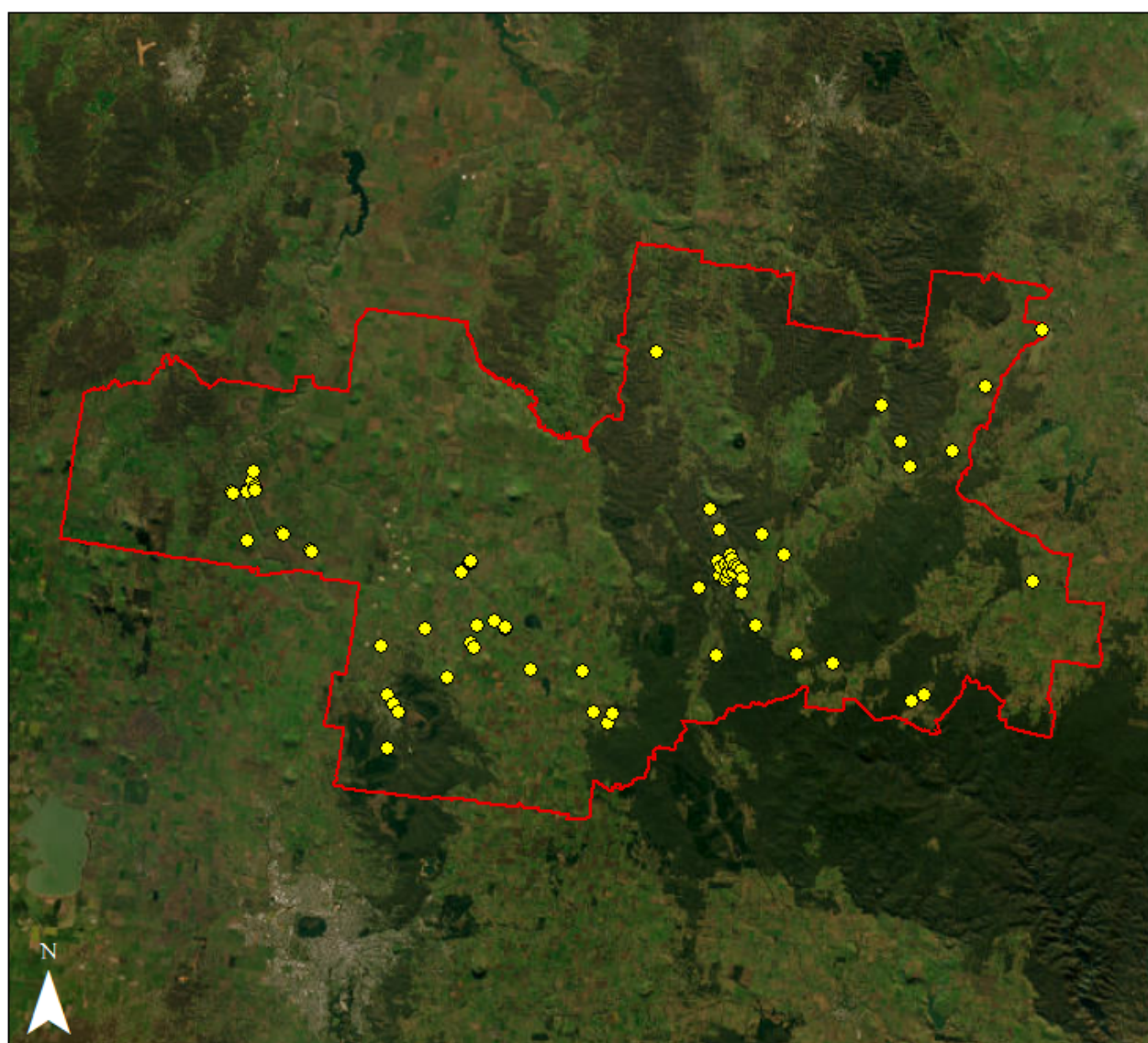






Legend

-  European Goldfinch
-  Shire of Hepburn boundary

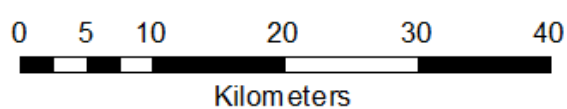
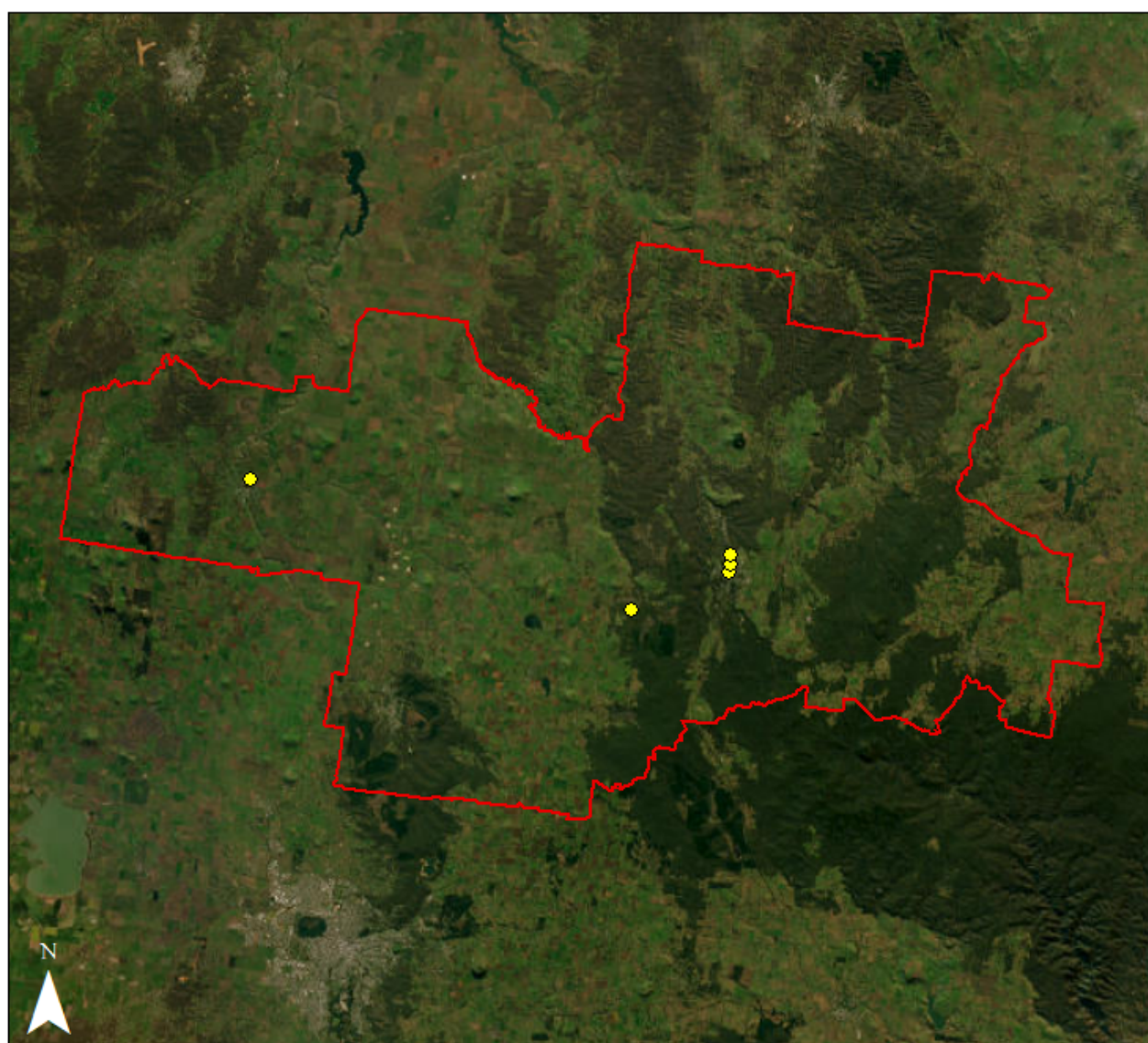






Legend

-  House Sparrow
-  Shire of Hepburn boundary

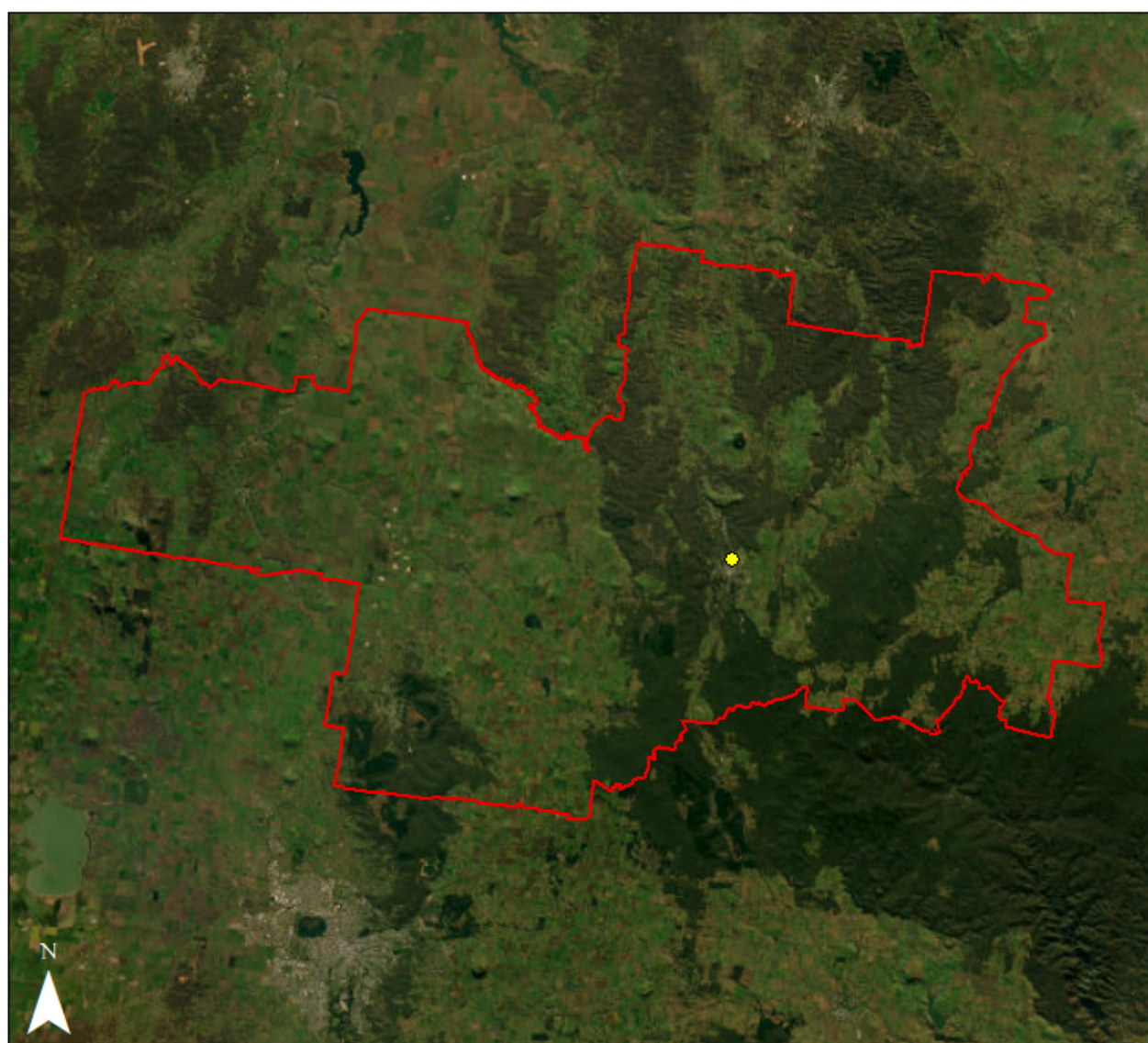




Legend



-  Rock Dove
-  Shire of Hepburn boundary





0 5 10 20 30 40
Kilometers

Legend

-  Spotted Dove
-  Shire of Hepburn boundary



