

QUEENSLAND BIRD RESEARCH AND BANDING GROUP 2020 ANNUAL REPORT FOR QUEENSLAND AND THE BORDER RANGES NATIONAL PARK, NSW, and ACT

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Prepared for:
DERM-Queensland, DEC-NSW, Animal Ethics Committee, Local Governments and Private
Landowners

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4 January 2021

Front Picture: Golden Bowerbird (*Prionodura newtoniana*) Band No. 052-88891 Caught and Banded on 30 November 2020 Mount Lewis, Brooklyn Reserve, Qld.

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1. PURPOSE OF DOCUMENT

The Annual Technical Bird Banding Report for Queensland and The Border Ranges National Park, NSW and the Australian Capital Territory (ACT) summarises the authors' bird banding projects and activities for 2020. DERM Queensland, DEC-NSW, Animal Ethics Committee, and local Governments requires a progress report since some of the bird banding projects are located on public land. The information collected is also shared with private landowners who support the banding group's objectives and initiatives in southeast Queensland. All work was completed under Australian Bird and Bat Banding Scheme permit 2733, Queensland DERM scientific permits WISP17052616, WISP16746415, WISP16744415, WITK18603817, PTU19-002194, PTC19-002195, SPP19-002196 and Queensland DERM Marine Park Permit QS2016 /CVL1337. All activities were conducted and monitored under DPI Community Access Animal Ethics Approval CA2018-02-1159. The senior author is the registered scientific user, Number 254. For New South Wales, work was conducted under Scientific Permit S13019 and in the ACT under permit number LT201838.

2. INTRODUCTION

This report summarises the authors' bird banding projects and activities for 2020. DERM Queensland, DEC-NSW, Animal Ethics Committee, and local Governments all require a progress report to assure that these activities remain current and relevant. This information is also shared with private landowners who support the banding group's objectives and initiatives in southeast Queensland. Since July 2006 this is the 14th annual progress report for bird banding projects in Queensland, northern NSW and ACT including relevant results from past years.

All projects are intended to be long term monitoring projects (20 years plus) to allow trends to be identified and monitored over time. Monitoring at many sites only started in 2007 hence the smaller datasets for some locations. Two specific passerine banding sites, Iron Range National Park and Bowra Sanctuary, are documented in two site-specific reports with the results summarised here.

No detailed analysis has been attempted in this report. Data are presented to illustrate each project's potential and demonstrate the value of consistent long-term monitoring.

3. ACKNOWLEDGEMENTS

For swan banding, Gold Coast City Council provided access to their water bodies wherever public access is permitted. Logan City Council provided access to Tygum Lagoon, parks in Beenleigh and Eagleby Wetlands for the same purpose. The Port of Brisbane also offered regular access to their Visitor Centre Lake.

Redland Council, Gold Coast City Council, and Moreton Bay Regional Council and the Moreton Bay Marine Park EPA provided access to several shorebird banding locations in the Bay. The Port of Brisbane allowed access to certain areas in the Fisherman Islands and helped with funding.

Queensland Wader Study Group funded all wader banding activities. Redland Council also provides permission for Bush Stone-curlew banding on Coochiemudlo and adjacent islands

Logan City Council permitted mist-netting at Eagleby Wetlands and Parker Park in Shailer Park. Brisbane City Council allowed regular mist-netting at Boondall Wetlands, Tinchi Tamba, Wynnum Mangrove boardwalk and Mookin-Bah Reserve. New South Wales Parks and Wildlife in Kyogle provided access to the Border Ranges National Parks sites. At the same time, Australian Wildlife Conservancy supported the project by allowing Bowra Station access and a new location in the Wet Tropics on Mount Lewis. The University of Queensland also allowed access to areas on Lockyer Creek near Gatton for bird banding.

Moreton Bay Regional Council and the Osprey House Environmental Centre provided access to banding sites at Pine Rivers. Simultaneously, the Grand Golf Courses and the management of Cedar Lakes and private landowners at Canungra allowed access to their sites. Gold Coast City Council provided support to access to The Spit at Southport and Tee Tree Wetlands in Arundel.

Rosemary Braithwaite and Aaron Bean permitted banding on private land near Mackay. SEQ Water also kindly allowed access to several locations at Lake Samsonvale. Cairns Airport Authority also allowed access to Mangrove sites on their land for these studies.

DES issued protected area permits for access to Kutini Payamu NP on Cape York, Eungella NP and Crediton State Forest. They also issued permits for work on nature refuges near Julatten and Oakey.

Finally, Ian and Margaret Bunce provided regular access to a privately owned rainforest in the Imbil area. I am grateful to all of these organisations and individuals for their support, without which these projects could not exist.

The following individuals were actively involved in planned field visits during the period: -

A Class Banders: Jon Coleman, Brenda Smith, David Edwards, Penn Lloyd, Robert Bush, Rainer Ebel. David Braithwaite, Patrick Webster

R Class Banders: Aaron Bean, Miriam Braithwaite, Ofalia Ho, Stephen Macdonald, Ross McMillan, Graham Smith

C Class banders and helpers: Keith Rigby, Lucy Coleman, Rosemary Braithwaite, Emily Davies and Deidre Chrzescijanski

4. POPULATION BIOLOGY OF BLACK SWANS

4.1 PROJECT AIMS

- 1) To understand factors affecting mortality and establish mortality rates for Black Swans of different age classes.
- 2) To study dispersal patterns in juvenile, sub-adult, non-breeding and breeding Black Swans.
- 3) To study the factors, environmental, parental and morphological that influence recruitment of individual non-breeding individuals to the breeding population.
- 4) To study the factors, environmental, parental and morphological that influence and cause individual variation in the Lifetime Reproductive Success in Black Swans.
- 5) To use biometrics collected from banded individuals to study variation in size and body condition in the species and use this data to understand individual variation in survival, recruitment to the breeding population and productivity in the species.
- 6) To consistently monitor the population in a defined study area over a long period of time to establish population indices for breeding and non-breeding contingents of the population and establish long term trend in the black swan population.
- 7) To use the individual variation studied above to understand the impact of individual birds and their productivity, on overall population demography.
- 8) To compare the demography of the species in south-east Queensland with other areas in Australia.

4.2 METHODS

The project involves a combination of capturing and banding with field survey work. Known breeding sites within the study area are visited each year to establish the presence of territorial pairs and record if they breed and how many cygnets they hatch and rear. Attempts are made to catch and band all paired birds and where possible cygnets are also banded after being caught by hand. Sites identified as non-breeding flock sites are visited monthly, numbers of birds present recorded, band numbers read and band un-banded birds.

Every bird caught received two bands, a standard ABBBS metal band on the right leg, and an individually uniquely engraved Alpha coded colour band on the other leg. The combination of bands could easily be read by researchers and the public in the field, without the need to recapture the bird. The reporting of these bands helps construct detailed life histories and the movement patterns of the individual swans.

For each captured swan the tarsus length, radius bone length, total head length, bill length and width were measured to the nearest mm and is weighed to the nearest 0.1 kg. From these measurements, it is possible to produce a body condition index for every individual captured.

Consistently repeating this field work over years demonstrates between-year variations and long-term population trends for the study area. Data on survival and recruitment rates to the breeding population and variation in lifetime reproductive success for the species is also

being collated to understand individual variation and its cause and impact on the overall demographics of swan populations. In the manner described above continuous monitoring, with reports of colour sightings from the public, has generated comprehensive data on local movements, moult migration (enabling the catchment areas of those sites to be established) dispersing of juveniles from the natal site and breeding site fidelity. Potentially irruptive behaviour can also be monitored and documented.

Detailed data on pair-bonding, fidelity to mates and the impact of these factors on lifetime reproductive success is also being collated. It is also proposed that collaboration with researchers from other parts of the country occur to collect and pool data between different studies.

4.3 FIELD VISITS DURING 2020

Table 4.1 Monthly field visits in search of swans during 2020 in SEQ and ACT

MONTH	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Survey Date	1	9	13	5	6	8	11	22	13	6		
South East Queensland (SEQ)	7	21	17	15	8	10	26			11		
	15			23	14	16						
	19			28	17							
				30								
Survey Date	15		1			27				3	1	13
Australian Capital Territory (ACT)			9							4		

4.4 NUMBERS OF BLACK SWANS BANDED IN ALL YEARS OF THE STUDY

Table 4.2 Numbers of Black Swans captured and (recaptured) from 2006 to 2020 inclusive.

Species	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	TOTAL
Swan, Black – SEQ	0	53 (4)	48 (10)	43 (1)	38	58 (5)	92 (11)	46 (7)	43 (5)	43 (6)	56 (13)	55 (10)	153 (6)	110 (8)	129 (1)	967 (87)
Swan Black - ACT	0	0	0	0	0	0	0	0	0	0	0	0	0	73 (1)	68 (2)	141 (3)

Figures are numbers of new birds banded; figures in brackets are the number of recaptures

4.5 RESULTS TO DATE

Banding and survey visits were made in SEQ in every month except November and December with 129 birds banded, bringing the total banded to 967 birds. The Southeast Queensland study area extends from the Port of Brisbane south to the New South Wales border.

A second study area was established in 2019 in the ACT to compare swans' breeding biology in subtropical and temperate climates. Sixty-eight birds were banded in the ACT study area during 2020 with 141 individuals marked to date.

Many local movements in SEQ (Figure 4.1) were recorded during the year with 593 individual encounters of banded individuals added to the database which now records 5,560 individual encounters in SEQ. A further 226 individual encounters were collected in ACT.

Indicative movements from all years of the SEQ study are shown in Figure 4.1, and as in previous years non-breeding birds moved along the coast between the North and South of the area with birds recorded between Toorbul in the north and Lennox Heads, NSW, to the South. There has also been evidence of some movement inland with at least one record in the Lockyer Valley, west of Brisbane in 2020. Most movements, however, remained within 1-10km of the original banding site. A single cygnet movement from the Gold Coast to Victoria in 2013 remains unprecedented with no other resightings of this nature and distance recorded.



Figure 4.1 Recorded movements of Black Swans in SEQ from 2006 to 2020

Figure 4.2 shows the movements of birds banded in the ACT study area. Movements were are also typically within 20km of the banding site but large mobile flocks and breeding colonies occur at nearby sites in NSW and it is likely these birds do move further than currently noted.



Figure 4.2 Recorded movements of Black Swans in SEQ from 2006 to 2020

Figure 4.3 shows monthly counts in the SEQ area, since the study began. Counts were variable through the year with high counts corresponding with increasing numbers of birds (100+) using the Port of Brisbane lake at different times. Over time there appears to be a slow trend towards increasing numbers, however with the presence of large and often elusive offshore flocks it is difficult to draw any conclusions as these flocks often remain uncoun-

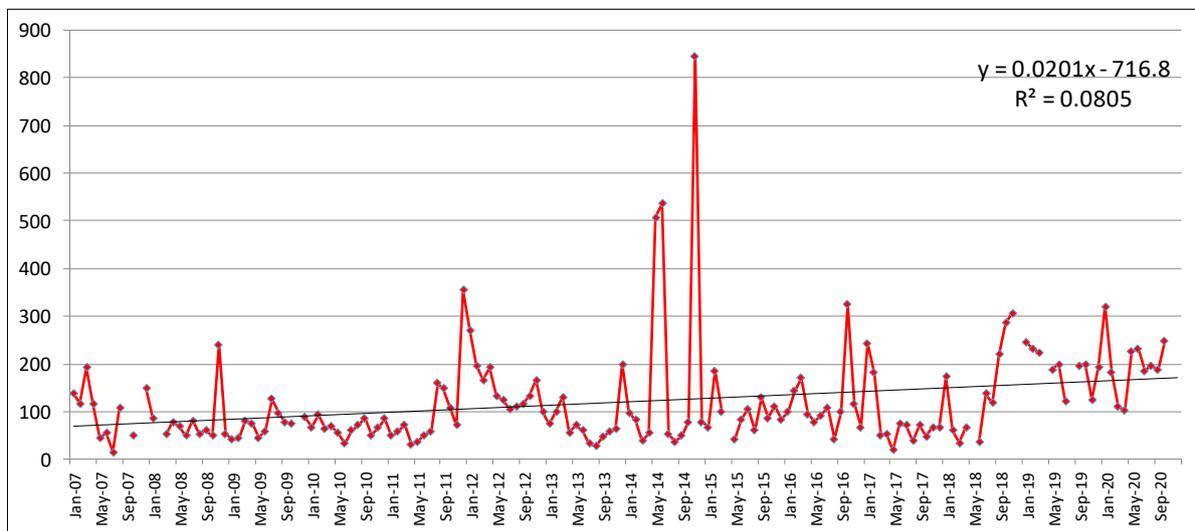


Figure 4.3 Monthly maximum counts of Black Swans in SEQ recorded on survey visits

In the ACT, only two years of count data are available (Figure 4.4) with numbers varying between 60 and 150 individuals throughout the study.

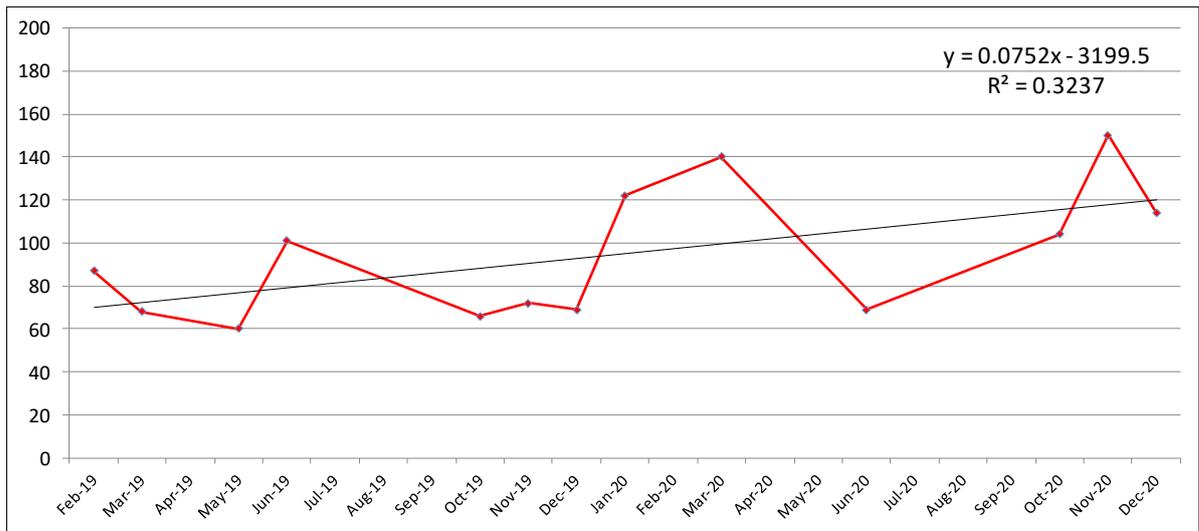


Figure 4.4 Monthly maximum counts of Black Swans in ACT recorded on survey visits

Eighty-seven separate pairs were identified in 2020, compared to 60 in 2019, 62 in 2018, 40 in 2017, 44 in 2016 and only 27 in 2015. Of these 45 were recorded breeding, with 58 breeding attempts recorded (Figures 4.5 & 4.6). Of the 58 breeding attempts 12 (20.7%) failed to produce cygnets, compared to 31% in 2018, 19% in 2017, 32% in 2016, 28% in 2015 and 39% in 2014. Figures 4.5 and 4.6 show trends in the number of pairs and breeding attempts from 2007 to the present day and shows that 2013 remains by far the poorest year recorded so far in terms of number of breeding pairs and breeding attempts with 2014 and 2015 showing a gradual improvement, 2016 /2017 showing a return to pre-2012 success and 2018/2019 recording increasing numbers of breeding pairs and second highest number of breeding attempts.

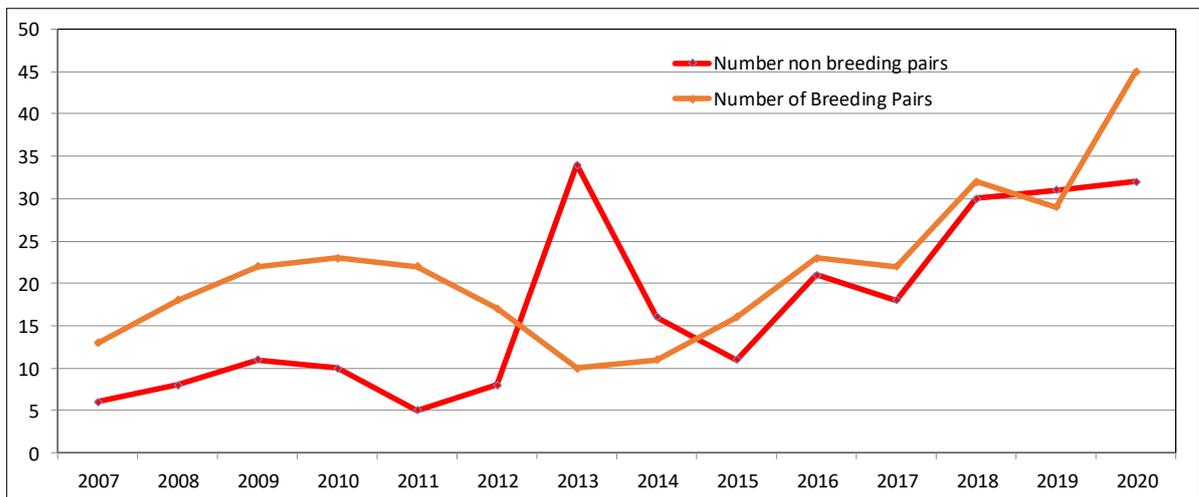


Figure 4.5 Number of Breeding and Non-breeding Pairs in SEQ in each year of the study

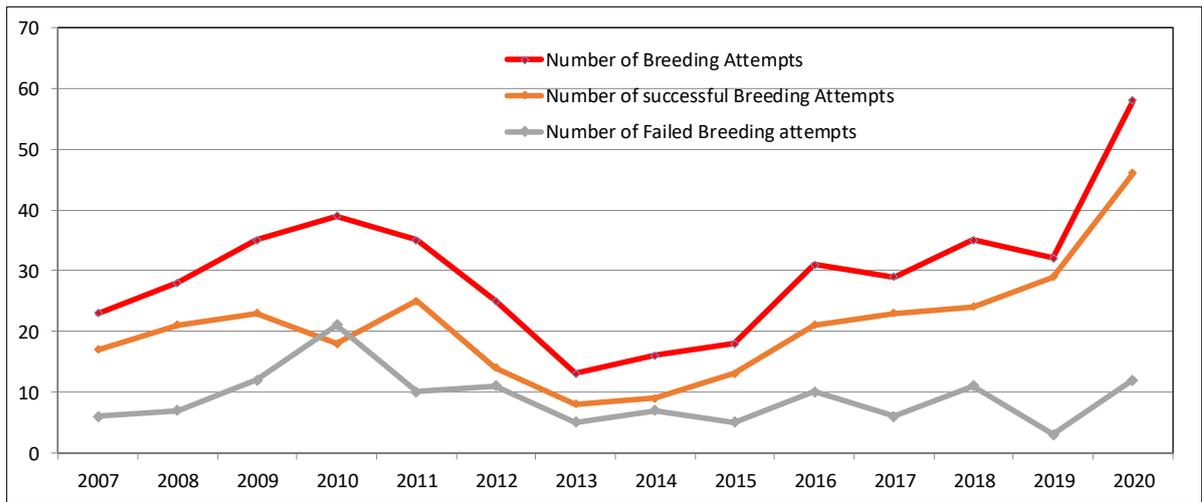


Figure 4.6 Number of Breeding attempts in SEQ in each year of the study

Hatching success in SEQ for those breeding in 2020 was 3.30 cygnets per breeding attempt (compared to 3.11, 2.71, 2.88, 2.54 and 2.04 in 2019, 2018, 2017, 2016 and 2015 respectively). This was the highest number of cygnets hatched per breeding attempt recorded in this study. Rearing success in SEQ for 2020 was 2.50 cygnets reared per breeding attempt; the second highest rearing rate recorded to date in this study. Figures 4.7 and 4.8 show the mean average hatching and rearing success, per breeding attempt, respectively, for each year of the study. These graphs are updated annually so that trends in hatching and rearing can be monitored. Compared to the hatching and rearing rates for the 34 recorded breeding attempts in the ACT the ACT had a higher hatching rate per breeding attempt (3.6 cygnets hatched) but a lower number of cygnets reared per breeding attempt at 2.3 cygnets in 2020.

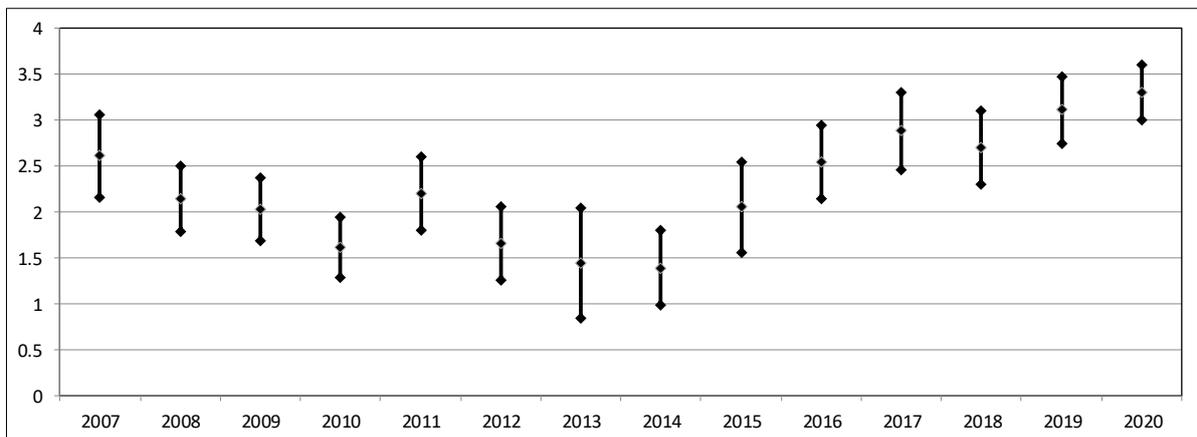


Figure 4.7 Mean Average Hatching success for Black Swan Pairs within the SEQ study area

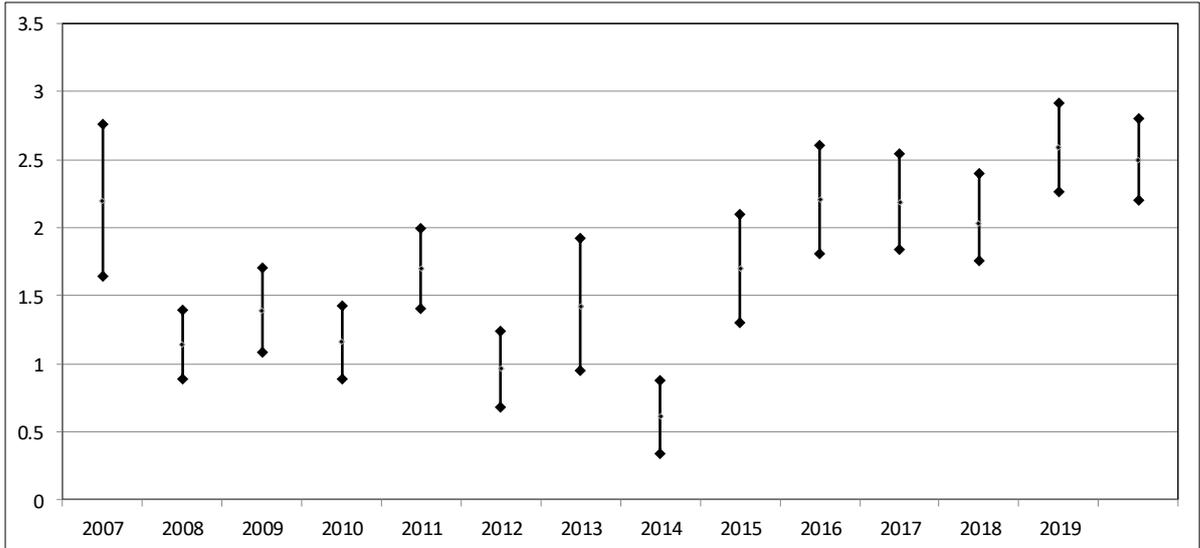


Figure 4.8 Mean Average Rearing success for Black Swan Pairs within the SEQ study area

Broods in SEQ were hatched throughout the year with most hatched from March to August. In ACT, broods were also hatched throughout the year, but most broods were hatched from July to November (Figure 4.8).

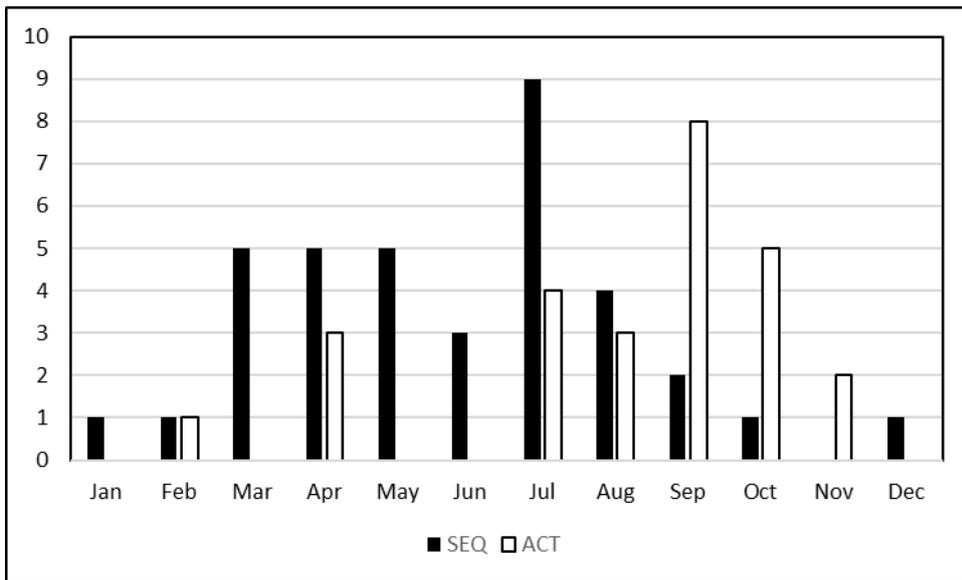


Figure 4.8 Number of broods hatched by month for Black Swan Pairs in SEQ (Black) and ACT (Open) in 2020

The future monitoring will continue using the same methodology and visiting the same sites each month for the foreseeable future to ensure consistent data collection over many years.

4.6 Publications arising from or involving data from the Black Swan project 2010

Coleman J.T. 2010. **Observations on breeding in the Black Swan *Cygnus atratus* in south-eastern Queensland** Corella (2010), vol 34 (3) 103-106

2014

Coleman J.T. 2014. **Breeding biology of the Black Swan *Cygnus atratus* in south-east Queensland, Australia.** *Wildfowl* (2014) 64:217-230

2019

Eileen C. Rees, Lei Cao, Preben Clausen, Jonathan T. Coleman, John Cornely, Olafur Einarsson, Craig R. Ely, Richard T. Kingsford, Ming Ma, Carl D. Mitchell, Szabolcs Nagy, Tetsuo Shimada, Jeffrey Snyder, Diana V. Solovyeva, Wim Tijssen, Yerko A. Vilina, Radosław Włodarczyk, Kane Brides. (2019). **Conservation status of the world's swan populations, *Cygnus* sp. and *Coscoroba* sp.: a review of current trends and gaps in knowledge.** *Wildfowl* (2019) Special Issue 5: 35–72

Coleman J. (2019) **Breeding Biology of Black Swans.** *Sunbird* 48: 127-129.

5. BODY CONDITION, SURVIVAL AND MOVEMENTS IN SHOREBIRDS

5.1 PROJECT AIMS

- 1) To maintain a banded, individually colour flagged population of shorebirds that use Moreton Bay. These can be monitored by Queensland Wader Study Group (QWSG) counters to better identify roosting, feeding and staging areas around the bay and their relative importance to waders.
- 2) To collect weight and size data from individuals caught to calculate body condition indices from a range of resident and migratory wading bird species. These data will be built up in a consistent manner over a number of years so that trends in change in body condition index can be monitored over time as a means of assessing site quality and understanding fluctuations in numbers.
- 3) To use age criteria for the birds to establish age ratios that can be used to estimate breeding productivity in the various species, which can be compared between years.
- 4) To understand fidelity of birds to roosting and feeding sites.
- 5) To contribute data on wader movements and survival in the Pacific flyway by banding and flagging Queensland birds that can be observed on migration, with waders from other regions and their movements plotted and survival estimated internationally.

5.2 METHODS

Mist-nets were set to intercept waders flying into known roost sites in the Moreton Bay area at night. Cannon nets were also used during the day to catch birds on their roost sites. Every bird caught was given a green engraved leg flag, and on the other leg, a metal band, allowing the marked bird to be identified in the field by observers. Banding was conducted once a month at a range of sites to minimise disturbance of any one location. Also, low tide mist-netting of birds in feeding areas was also attempted with mixed success to date. Banding was tried at a wide range of sites throughout the Moreton Bay area to improve the understanding of birds' spatial movements within the bay.

Each bird caught was aged, sexed if possible, and a series of biometric measures recorded such as maximum wing chord length, tarsus length, total head length, bill length and weight. Each bird's weight will be regressed against a composite size measure to provide an indicative body index for every bird caught.

A database of sighting records around the Moreton Bay area allowed habitat utilisation patterns to be constructed and monitored over time for significant changes. This data was collected through Adhoc sightings of colour flags and also from data collected by QWSG observers during the course of planned surveys.

Weight and morphometric data were used to show trends in body condition index for species. The information was used as an indicator of health, providing additional granularity to the survey work to explain any observed changes.

Age data were used to calculate proportions of juveniles to adults as comparative estimates of productivity of the various species caught between years. Locations in which birds are regularly caught are shown in figure 5.1 with sites used historically shown in figure 5.2.



Figure 5.1 Shorebird banding locations in the Moreton Bay area



Figure 5.2 Shorebird banding locations in the Gladstone area

5.3 FIELD VISITS DURING 2020

Table 5.1 Monthly field visits to catch shorebirds during 2020

MONTH	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
ARUNDEL, TEE TREE WETLANDS												
BRISBANE AIRPORT												
CAIRNS AIRPORT MANGROVES											19	
CURTIS ISLAND, GLADSTONE												
MANLY MARINA			23					2				30
GEOFF SKINNER RESERVE												
FACING ISLAND, GLADSTONE												
TURKEY BAY, GLADSTONE												
KING STREET, THORNLANDS												
LYTTON ROOST												
MORETON BAY ISLANDS						1						
REDLAND BAY												
SOUTHPORT, THE SPIT						4		28				
TOORBUL												
NUDGEE/KEDRON												
PORT OF BRISBANE												

Banding in 2020 was heavily impacted by Covid restrictions in the early part of the year. As a result, no banding was conducted before the migratory shorebirds left for their Palearctic breeding grounds. Netting and banding of shorebirds occurred twice at Manly during the Austral winter. Bush Stone-curlews were caught on Coochiemudlo and at Southport on the Gold Coast. No new sites were added in 2020 and all sites used by the group are shown in Figures 5.1 and 5.2.

The decision to suspend cannon-net catching at Toorbul due to the amount of external disturbance occurring at the roost, remained in place. Once this issue is resolved, cannon-net catching may be resumed at this site. Capturing and banding of shorebirds particularly Far Eastern Curlew and Bar-tailed Godwit for the addition of either PTTs (Platform Terminal Transmitter) or leg flags will continue in 2021 at the usual locations in Moreton Bay. Birds caught during 2020, and in earlier years are shown in Table 5.2 with Appendix 2 detailing the data by location for 2020.

5.4 NUMBERS OF SHOREBIRDS BANDED DURING THIS STUDY

Table 5.2 Numbers of Shorebirds captured and (recaptured) from 2006 to 2020 inclusive

Species	Banded 2006-2019	Banded 2020	Total banded	Total Retraps
Stone-curlew, Bush	182	7	189	16
Oystercatcher, Pied	84	2	86	13
Stilt, Pied	55	45	100	3
Avocet, Red-necked	1	0	1	0
Lapwing, Masked	21	0	21	0
Dotterel, Red-kneed	26	0	26	0
Golden-Plover, Pacific	96	0	96	6
Plover, Grey	7	0	7	0
Plover, Red-capped	34	1	35	3
Plover, Double-banded	7	1	8	0
Sandplover, Lesser	327	2	329	21
Sandplover, Greater	33	0	33	1
Dotterel, Black-fronted	23	8	31	1
Snipe, Latham's	3	0	3	0
Godwit, Black-tailed	5	0	5	0
Godwit, Bar-tailed	992	51	1,043	36
Whimbrel	144	3	147	1
Curlew, Far Eastern	37	1	38	1
Greenshank, Common	1	0	1	0
Tattler, Grey-tailed	872	47	919	88
Tattler, Wandering	1	0	1	0
Sandpiper, Terek	68	2	70	5
Turnstone, Ruddy	135	10	145	19
Knot, Great	333	2	335	42
Knot, Red	22	0	22	1
Stint, Red-necked	787	9	796	51
Sandpiper, Sharp-tailed	260	1	261	4
Sandpiper, Curlew	241	13	254	19
Sandpiper, Broad-billed	7	1	8	1
Tern, Caspian	1	0	1	0
Tern, Gull-billed	2	0	2	0
Tern, Crested	2	0	2	0
Tern, Little	2	0	2	1
Tern, Sooty	4	0	4	0
Totals	4,808	206	5,021	333

5.5 RESULTS TO DATE

Two hundred and six birds of 18 species were caught and leg flagged during 2020. Since 2006, 4,700 individually identifiable leg flags have been placed on shorebirds in Moreton Bay. These continue to produce large numbers of local resightings (4,892 in 2020) enabling the development and identification of detailed movement patterns. Only 34 foreign resightings of Moreton Bay banded birds were returned during the year providing additional data on staging areas, and seasonal site fidelity.

Bar-tailed Godwit records (26) were received from northward migration staging areas in South Korea with birds returning to New Zealand rather than Australia for the non-breeding season (3 Bar-tailed Godwit records and 1 Red Knot). One Bar-tailed Godwit was also resighted in Yalu-Jiang in China. A Ruddy Turnstone was resighted in Vladivostok, and a Curlew Sandpiper was seen in Bohai Bay, China both birds on their journey north. A Great Knot with a green leg-flag was also seen in Taiwan.

No birds were reported during their southward migration, but once coastal Australia was reached green leg flagged Grey-tailed Tattler (2), and single Red-necked Stint, Great Knot, and Lesser Sandplover were observed in Cairns. In Townsville there were single records of Great Knot and Grey-tailed Tattler while at Great Sandy National Park there were two Great Knot reported during 2020.

Migrating Bar-tailed Godwit (10) previously banded in Victoria were also recorded from Moreton Bay. White flagged Bar-tailed Godwit (1) and Red Knot (2) apparently returning to New Zealand were also briefly spotted on Moreton Bay. Foreign leg-flagged birds from Japan, China and Kamchatka were recorded in the non-breeding season on Moreton Bay.

In addition to leg flag resightings PTT's provided many thousands of daily data points for species using Moreton Bay in the non-breeding season, providing data 24 hours a day, at all states of the tidal cycle. This source of information is an extremely valuable for understanding the spatial requirements of these threatened migratory species. PTT's were attached to Far Eastern Curlew, Whimbrel, Pacific Golden Plover, Bar-tailed Godwit and Black-tailed Godwit. Both local and migratory movement data were collected for these species.

In 2020 there were 4,892 resightings of individually identifiable birds. To date, leg flags have generated a total of 32,202 individual resightings, with many birds carrying engraved leg flags reported multiple times. While numerous resightings were abroad and interstate, the majority continue to involve repeated resightings of individuals within Moreton Bay, which demonstrates shorebird usage patterns within the Moreton Bay Marine Park. Satellite tracking results also provided similar local movement data increasing our knowledge of foraging patterns and utilising roosting sites for the less approachable species. This data also allows for the calculation of ongoing estimates of survival rates for annual cohort groups.

Local leg flag resightings and satellite telemetry from returning previously banded birds continued to show their high degree of fidelity to Moreton Bay and to their roosting and feeding locations within and between seasons. An increase in roost sites sampling will result in more

comprehensive fidelity data for these and additional species using Moreton Bay. In the 2020 and 2021 non-breeding season a further 12 PTTs will be deployed on Bar-tailed Godwit and Far Eastern Curlew to identify further insights into both species.

Three curlews and one of the returning Whimbrel all carrying PTTs provided data on their trans-hemispheric routes as well as ranging behaviour and stopover durations on both staging and breeding grounds. A further two Whimbrel provided only northward migration traces. The one remaining Bar-tailed Godwit with a functioning device again only performed a partial northward migration, going as far as New Guinea, before returning to Australia, staging at Bowling Green Bay NP before returning to Moreton Bay (Figure 5.3). In comparison, the Whimbrel migration occurred normally (Figure 5.4) but the three Far Eastern Curlew experienced weather-related difficulties moving southward (Figure 5.5). One bird was displaced slightly west of its typical trajectory and course-corrected en-route. The remaining two birds were more severely impacted. One was displaced west to Darwin and the other over 4,000km west of its usual route to western Borneo. Both birds spent several weeks at these new locations before re-adjusting and returning to Moreton Bay, highlighting the remarkable navigation capabilities of these migratory species



Figure 5.3 Northward and Southward Migration tracks in 2020 for Bar-tailed Godwit fitted with PTT's in Moreton Bay



Figure 5.4 Northward and Southward Migration tracks in 2020 for Whimbrel fitted with PTT's in Moreton Bay



Figure 5.5 Northward and Southward Migration tracks in 2020 for Far Eastern Curlew fitted with PTT's in Moreton Bay

5.6 Coochiemudlo Stone Curlews

Since 2008, 189 birds were fitted with individually identifiable leg flags, the majority on Coochiemudlo. Still, small numbers were also banded on Macleay Island, Russell Island, Karragarra, near Cleveland, Victoria Point, Southport and some local parks in the Brisbane area. Monthly visits were made to Coochiemudlo from 2009 to collect flag sightings and count birds. Surveys on other islands in the bay were also made to count stone-curlews and record any leg flags. To date, there have been 1,111 individual resightings, 102 in 2020. These monthly visits also provided an opportunity to record hatching and rearing success for paired birds and note any local and dispersal movements from the island. Many original leg flags have dropped off the birds, and since 2016, there has been a renewed focus on replacing leg flags for continuity. Photographs are now also taken of only metal banded birds, increasing the resighting rate on monthly visits for those birds which have lost flags.

Twenty breeding pairs were monitored in 2020 allowing hatching and rearing success for at least some of those pairs to be recorded. There was no evidence of pairs breeding more than once, a common occurrence in previous years and no unsuccessful breeding attempts were recorded. Hatching success was 1.4 birds per breeding attempt in 2020, with average rearing success per breeding attempt 1.0. This data is shown in the figures below and will continue to be updated annually. Breeding was recorded from August to October.

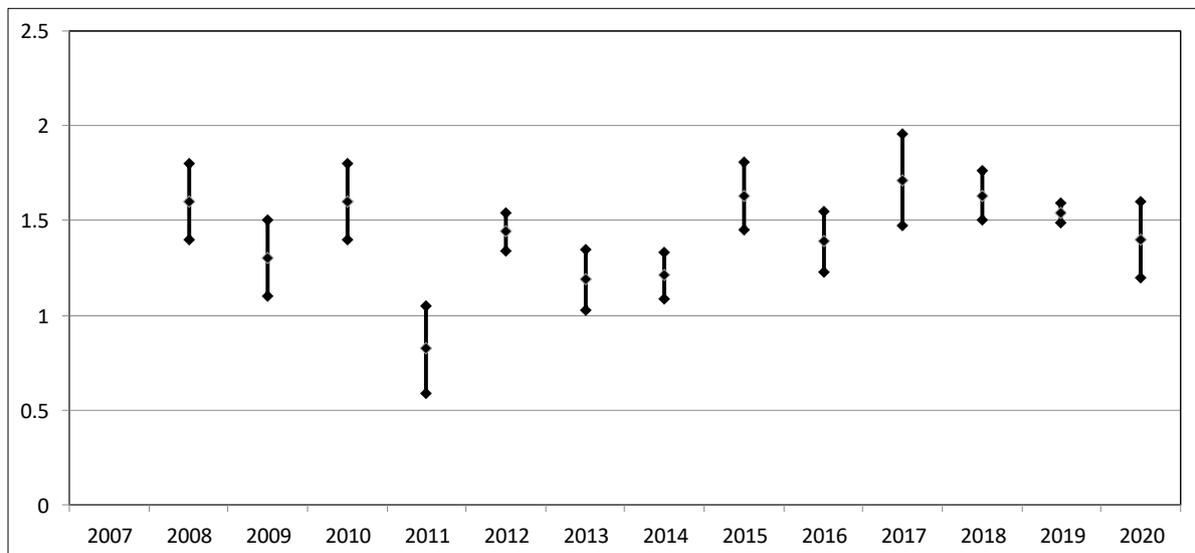


Figure 5.6 Hatching success for Bush-stone Curlews nesting on Coochiemudlo

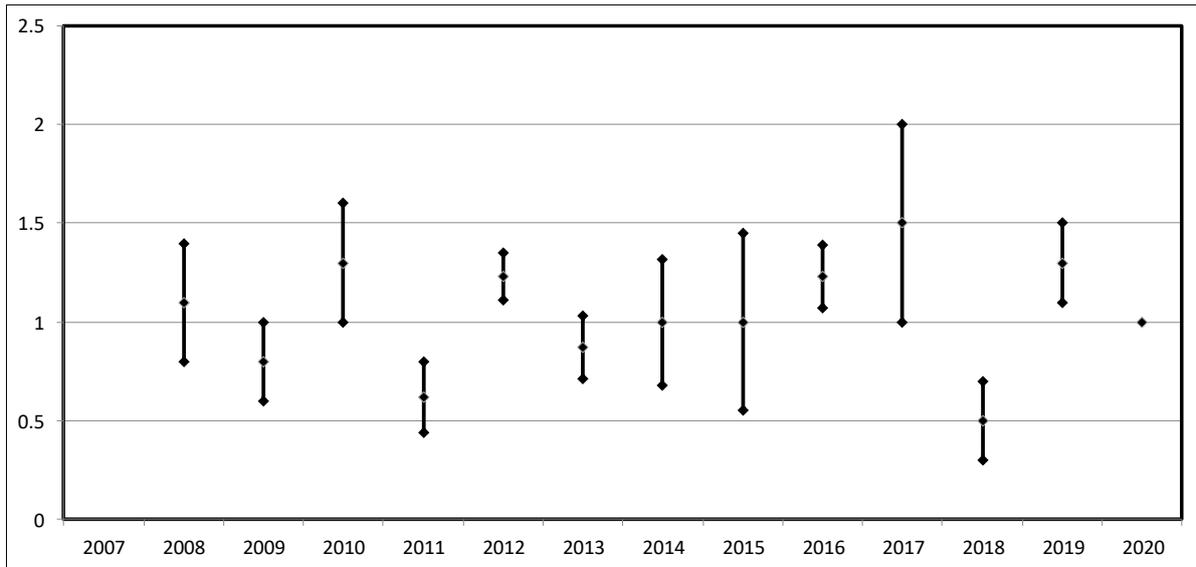


Figure 5.7 Rearing success for Bush-stone curlews nesting on Coochiemudlo

Count data provided by Redland City Council continues to indicate consistent growth in the Coochiemudlo population but due to Covid no count was conducted in 2020. The last count was 171 birds counted in 2019, compared to 216 counted in February 2018, 197 counted in February 2017, 202 counted on the island in February 2016 (Figure 5.8), compared to 187 in 2015 and 188 in 2014. The 2019 count was one of the lowest recorded since 2007. Monthly counts on Coochiemudlo continue to show seasonal variation in the counts as well, with higher counts during the winter months, which may reflect different behaviour at different times or dispersal at certain times of the year (Figure 5.9).

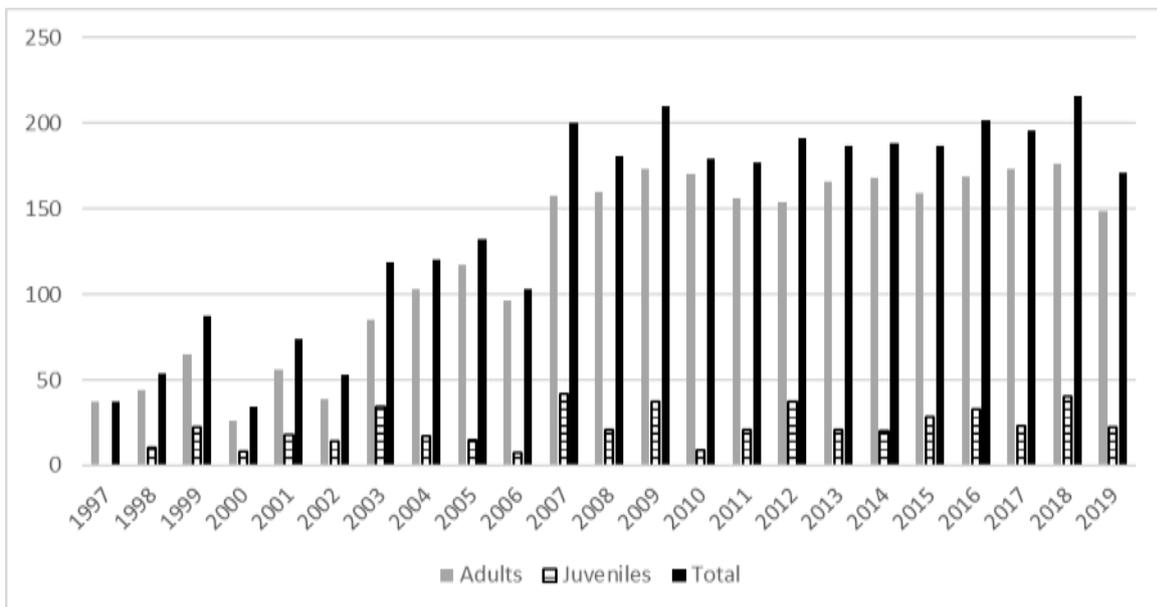


Figure 17 Annual February counts of Bush-stone curlews on Coochiemudlo between 1997 and 2016 (from Redland City Council volunteer survey)

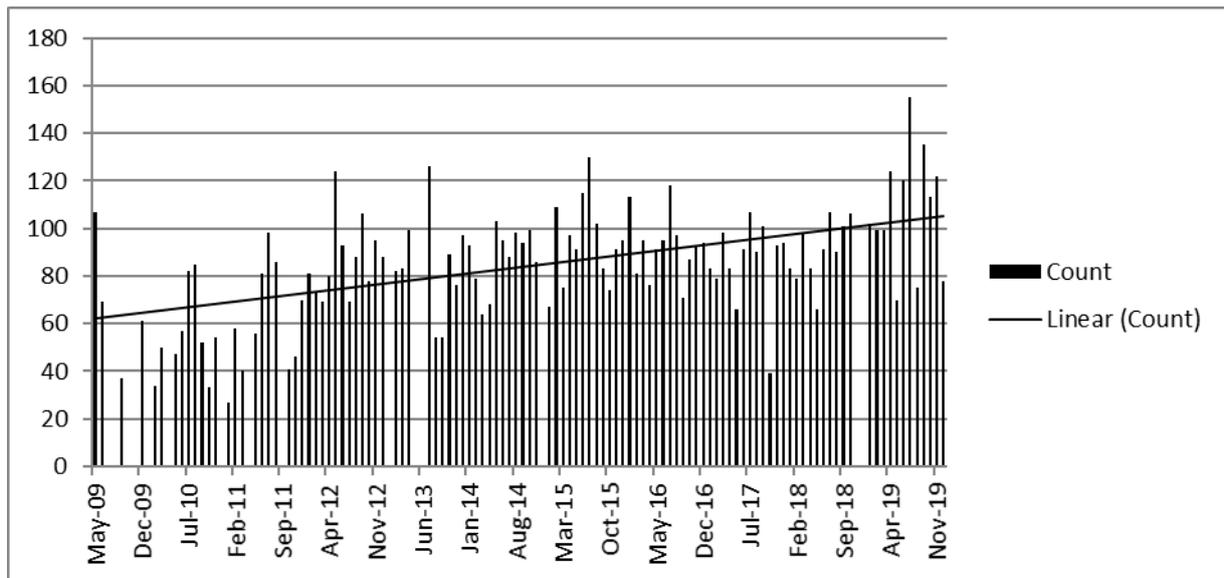


Figure 18 Monthly counts of Bush-stone curlews Coochiemudlo between 2009 and 2020

A number of Coochiemudlo birds were recorded moving to mainland sites in Cleveland, Victoria Point and Redland Bay in 2020. As in previous years the majority of the resightings were locally on Coochiemudlo indicating the highly sedentary nature of the species.

5.7 Publications arising from the Shorebird Project

2012

Coleman J.T., Milton D.A. (2012) **Feeding and roost site fidelity of two migratory shorebirds in Moreton Bay, South-Eastern Queensland, Australia.** *Sunbird*. Vol 42 (2). Pp 41-51

Cannard, Toni M and Milton, David A. (2012) **Habitat preference and factors contributing to the increase in numbers of bush stone-curlews ('*Burhinus grallarius*') on Coochiemudlo Island, South-East Queensland.** *Sunbird: Journal of the Queensland Ornithological Society, The*, Vol. 42, No. 2, Dec 2012: 61-72.

2016

Coleman J., Milton D, Akutsuhit H. (2016). **The migration of eastern Australian Grey-tailed Tattler *tringa brevipes* from Moreton Bay, south-east Queensland identified with geolocators and leg-flag resightings:-** Report to principal funding bodies; Port of Brisbane Pty LTD and Wild Bird Society of Japan – Chiba

Emily L. Weiser, Richard B. Lanctot, Stephen C. Brown, José A. Alves, Phil F. Battley, Rebecca Bentzen, Joël Bêty, Mary Anne Bishop, Megan Boldenow, Loïc Bollache, Bruce Casler, Maureen Christie, J.T. Coleman, J.R. Conklin, W.B. English, H.R. Gates, O. Gilg, M.A. Giroux, K. Gosbell, C. Hassell, J. Helmericks, A. Johnson, B. Katrínardóttir, K. Koivula, E. Kwon, J.F. Lamarre, J. Lang, D.B. Lank, N. Lecomte, J. Liebezeit, V. Loverti, L. McKinnon, C. Minton, D. Mizrahi, E. Nol, V. M. Pakanen, J. Perz, R. Porter, J. Rausch, J. Reneerkens, N. Rönkä, S. Saalfeld, N. Senner, B. Sittler, P.A. Smith, K. Sowl, A. Taylor, D.H. Ward, S. Yezerinac, and B.K. Sandercock. 2016. **Effects of geolocators on**

hatching success, return rates, breeding movements, and change in body mass in 16 species of Arctic-breeding shorebirds. *Movement Ecology* (2016)4:12, DOI 10.1186/s40462-016-0077-6.

Martin Bulla, Mihai Valcu, Adriaan M. Dokter, Alexei G. Dondua, András Kosztolányi, Anne L. Rutten, Barbara Helm, Brett K. Sandercock, Bruce Casler, Bruno J. Ens, Caleb S. Spiegel, Chris J. Hassell, Clemens Küpper, Clive Minton, Daniel Burgas, David B. Lank, David C. Payer, Egor Y. Loktionov, Erica Nol, Eunbi Kwon, Fletcher Smith, H. River Gates, Hana Vitnerová, Hanna Prüter, James A. Johnson, James J. H. St Clair, Jean-François Lamarre, Jennie Rausch, Jeroen Reneerkens, Jesse R. Conklin, Joanna Burger, Joe Liebezeit, Joël Bêty, Jonathan T. Coleman, Jordi Figuerola, Jos C. E. W. Hooijmeijer, José A. Alves, Joseph A. M. Smith, Karel Weidinger, Kari Koivula, Ken Gosbell, Klaus-Michael Exo, Larry Niles, Laura Koloski, Laura McKinnon, Libor Praus, Marcel Klaassen, Marie-Andrée Giroux, Martin Sládeček, Megan L. Boldenow, Michael I. Goldstein, Miroslav Šálek, Nathan Senner, Nelli Rönkä, Nicolas Lecomte, Olivier Gilg, Orsolya Vincze, Oscar W. Johnson, Paul A. Smith, Paul F. Woodard, Pavel S. Tomkovich, Phil F. Battley, Rebecca Bentzen, Richard B. Lanctot, Ron Porter, Sarah T. Saalfeld, Scott Freeman, Stephen C. Brown, Stephen Yezerinac, Tamás Székely, Tomás Montalvo, Theunis Piersma, Vanessa Loveri, Veli-Matti Pakanen, Wim Tijssen & Bart Kempnaers, (2016).

Unexpected diversity in socially synchronized rhythms of shorebirds, *Nature*, 540,109–113, doi:10.1038/nature2056316

2017

Meijuan Zhao , Maureen Christie, Jonathan Coleman, Chris Hassell, Ken Gosbell, Simeon Lisovski, Clive Minton and Marcel Klaassen .2017. **Time versus energy minimization migration strategy varies with body size and season in long-distance migratory shorebirds** *Movement Ecology* (2017) 5:23 DOI 10.1186/s40462-017-0114-0

Meijuan Zhao , Maureen Christie, Jonathan Coleman, Chris Hassell, Ken Gosbell, Simeon Lisovski, Clive Minton and Marcel Klaassen .2017. **Body size shapes inter-specific migratory behaviour: evidence from individual tracks of long-distance migratory shorebirds** *Journal of Avian Biology* (2017) 48: 001–011

2018

Coleman J., Milton D, Akutsuhit H. (2018). **The migration of Grey-tailed Tattler *Tringa brevipes* from Moreton Bay, south-east Queensland.** *Stilt* 72:PP2-8

2019

Coleman J. (2019) **Body condition, survival rates and movements in shorebirds.** *Sunbird* 48: 130-135.

2020

Coleman J., Bush R. (2020). **The local and migratory movements of eastern Australian Pacific-Golden Plover *Pluvialis fulva* spending the non-breeding season in Moreton Bay, south-east Queensland.** *Stilt* 73-74:37-42

Kuang F., Coleman J.T., Hassell C.J., Leung K.K., Maglio G., Ke W., Cheng C., Zhao J., Zhang Z. & Ma Z. (2020) **Seasonal and population differences in migration of Whimbrels in the East Asian–Australasian Flyway**. *Avian Research* 11: 24. <https://doi.org/10.1186/s40657-020-00210-z>

6. BODY CONDITION AND SURVIVAL RATES IN BUSH BIRDS

6.1 PROJECT AIMS

- 1) To establish a representative banded population sample of common indicator species across a range of key habitat types. This is to estimate of baseline survival rates, based on MARK capture/recapture sampling and baseline productivity rates based on juvenile/adult ratios.
- 2) To maintain a representative banded sample of common species across a range of key habitat types, using strict protocols of standard mist netting periods and standardised mist net locations at each site. This facilitates short and long-term changes in survival rates productivity and calculation of abundance indices which can be reported on in a consistent manner, comparable between years and over long time periods.
- 3) To take biometric measurements and weight from every bird captured so that size variation and sexual dimorphism within species can be determined and documented.
- 4) To take biometric measurements and weight from every bird captured to calculate average condition indices for each species caught and compare these results over time to understand recorded changes in productivity, survival or abundance.
- 5) To use a banded population of known age individuals to establish accurate and reliable criteria for ageing and sexing of species on plumage and moult characteristics in this area. Where possible, the data will be compared, with similar species banded elsewhere in Australia.
- 6) To use a banded population of known age individuals to understand and document the moult strategies of species caught and how these may differ between birds of different ages and between species. The data will also be compared, where possible, with data for the same species banded in Australia's other location.

6.2 METHODS

A series of habitat types were targeted, and suitable sites were identified, followed by obtaining access permission. These sites are shown in Figure 6.1. A series of mist-net rides at each banding site was determined before birds were caught, banded, measured and released at each location. At each monthly site visit the same mist-net rides were used between dawn and midday (0600-1200), mirroring the protocols for Constant Effort Site monitoring programmes used by many banding schemes in Europe and North America. When weather permits, the aim is to visit to each habitat type, at least once every two months to ensure data is collected routinely throughout the year.

Each bird caught was banded, aged and sexed if possible. Standard biometric measurements taken by banders to included flattened wing chord length, tail length, tarsus length, total head length, and occasionally, the total head width, bill length to feather, and bill length to skull were taken in millimetres for further analysis. The weight to the nearest 0.1g was also taken for each bird before its release. Body condition or bird health index was calculated by regressing weight against the composite size measurements.

During banding periods, environmental factors, such as weather conditions, actual start and finish times, variation in nets used and the presence of any flowering or fruiting plants that may affect capture rates were noted. In addition to banding a species list was collected for the site.

Over time, the data collected on new birds and the recapture data will be used to determine survival rates in the target species with productivity rates, abundance indices and body condition indices. The consistent nature of the data collection allows long-term trends in the above parameters to be monitored and reported for these specific sites compared to the baseline data collected in the initial years.

In addition to collecting long-term trend data for a range of species in the targeted communities, the methodology also enabled detailed examination of plumage characters, biometric variation and moult strategies in known-age birds for the commoner species. This was used to determine accurate ageing and sexing criteria for some species. It can also be used to compare with data from other sub-specific population studies elsewhere in Australia. The work is ongoing. The collection of moult data may be lacking for some species but examining sub-specific geographical variation in other studied species may be congruent in more detail with these species, elsewhere in Australia.

Finally, biometric variation has been described in many bird species. For larger species biometric variation may be used to explain differences in lifetime reproductive success, recruitment to the breeding population and survival. The data collected will provide an opportunity to look at size variation within species captured both within and between sexes and maybe a criterion that can be introduced, along with body condition index as a variable in the proposed MARK Capture/Recapture survival analysis methods.



Figure 6.1 Banding locations used in this project

6.3 FIELD VISITS INVOLVING TRAPPING

In 2020, 31 banding sites were revisited (Table 6.1) but because of Covid-19 and other logistical issues, the following 16 sites: Cameron's Scrub; Canungra; Copperlode Dam, Cairns; Gatton; University Queensland Campus, Gatton; Geoff Skinner, Wellington Point; Gumdale; King Street, Thornlands; Kipper Creek, Dundas; Lytton Roost; O'Reilley's, Lamington National Park; Port of Brisbane; Robina Waters; Sanctuary Cove: Tinch Tamba; and Toorbul were not visited.

Table 6.1 Monthly field visits to catch birds during 2019

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
BOWRA								8,9,10, 11,12, 13,14, 15,16,				
BROOKLYN RESERVE, MT LEWIS	14						25 26				30	1
BUNCE FARM IMBIL		14 15 16	13 14 15				17 18 19	28	4,5,6	16, 17, 18	27, 28, 29	
CAIRNS AIRPORT MANGROVES											19, 20	
CAMERON'S SCRUB												
CANUNGRA												
CARL CREEK								12, 25	19, 27	31	7, 20	27
CEDAR LAKES ADVANCETOWN	8	19	5		5	9	4					
COPPERLODE DAM, CAIRNS												
CREDITON STATE FOREST					25				15		15, 16	
CURRUMBIN							1					29
DALRYMPLE HEIGHTS					23,24				15, 16, 17,18		15,16, 17	
DOOLAMAI FALLS, EUNGELLA N.P.	1	16 17										
KIPPER CREEK, DUNDAS												
EAGLEBY WETLANDS	11	29			16	6	4	22	12	3	7	
FINCH HATTON GORGE	1 2 3 4, 19				22, 23, 24, 27, 28, 30				12, 13, 14, 15		14, 15	
FOREST TOPS, BORDER RANGES NP			19 20 21									
GARGETT	14, 23											
GATTON												
GATTON, LOCKYER CREEK	4											
GATTON UQ CAMPUS												
GAVEN	9	10 11 15 21 25 27	5 27 28 30	3,5,6,7,1 1,12,13, 14,18,19 ,21,22,2 3,26,27, 30	5,11,12 ,13,15, 19	22						
GEOFF SKINNER WELLINGTON POINT												
GUMDALE												

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
IRON RANGE NATIONAL PARK											22,23, 24,25, 26,27, 28	
KEDRON WETLANDS	27	20	7		10	20		29	19	10		
KING STREET, THORNLANDS												
LYTTON ROOST												
LAKE GALILEE BASIN								30, 31	1,2,3, 4,5,6, 7			
LAKE SAMSONVALE	3 7 14 25 28	1 4 22	7 25 31C		5,8,13 20, 26, 30	3, 9, 13, 20, 25, 27, 30	7 11 28	11 18 25 29	8 15 29	6 10 13 20 24	3 10 14 17	19 22
MANLY MARINA	11				23							
MOOKIN BAH	4				9	13	25	26	26	24		
MOUNT NATHAN						18						
MYALL NATURE REFUGE									15	8	11	4
NUDGE CYCLE TRACK					23	27			20			
NUDGE BOARDWALK		1			23	27			20			
O'REILLEY'S LAMINGTON NP												
OSPREY HOUSE, PINE RIVERS			3			16			22			
PORT OF BRISBANE												
ROBINA WATERS												
SANCTUARY COVE												
SHAILER PARK	10		6 27 28 29	4 5 10 11 12 13 18 19 26	1 3	1	11	23, 30	1	11, 22, 23, 24		25
SOUTHPORT, THE SPIT	16	26			13			28	28	22		16
TEE TREES WETLAND	29	22			7	17	15	21	25	15		20
THE GRAND	14		3		22	12, 25	15	8	10, 24	20	2,5	8
TINCHI TAMBA												
TOORBUL												

A and R Class banders have adopted the sites above and operate these banding stations, adhering to the basic principles identified in the methods by collecting data from multiple stations to be aggregated into a single comparable dataset. Banders operating the listed sites include Brenda Smith, Rainer Ebel, David Braithwaite, Stephen Macdonald, Robert Bush, Patrick Webster and Jon Coleman. Two new long-term sites were added in 2020 in south-east Queensland. At Dayboro, these were in a riparian corridor adjacent to the local housing (Brenda

Smith) and at Myall Park Nature Reserve near Jondaryan, the first Brigalow Belt location introduced into the study (Rainer Ebel). Further banding was also conducted at several adjacent sites in the Lake Galilee basin this year, with monitoring likely to continue 2021 (Ofalia Ho).

6.4 NUMBERS BANDED DURING THIS STUDY

Table 6.2 Numbers of other species (excluding shorebirds and swans) captured and (recaptured) from 2006 to 2020

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Goose, Magpie	22	0	22	0
Duck, Plumed-whistling	17	0	17	0
Duck, Freckled	1	0	1	0
Duck, Pink-eared	3	0	3	0
Duck, Maned	67	3	70	63
Duck, Pacific-black	56	2	58	29
Teal, Chestnut	13	0	13	0
Hardhead	3	0	3	0
Brush-turkey, Australasian	24	2	26	61
Scrubfowl, Orange-footed	2	0	2	0
Quail, Brown	44	5	49	2
Quail, King	3	5	8	0
Ibis, Australian-white	4	1	5	1
Ibis, Straw-necked	6	0	6	0
Spoonbill, Royal	1	0	1	0
Stork, Black-necked	0	1	1	0
Heron, Striated	3	0	3	0
Egret, Cattle	1	0	1	0
Heron, White-faced	1	0	1	0
Egret, Little	1	0	1	0
Goshawk, Grey	1	1	2	0
Goshawk, Brown	6	1	7	0
Sparrowhawk, Collared	1	1	2	0
Rail, Buff-banded	5	1	6	0
Crake, Spotless	2	0	2	1
Swamphen, Purple	23	1	24	11
Moorhen, Dusky	13	0	13	0
Native-hen, Black-tailed	10	0	10	1
Coot, Eurasian	1	0	1	0
Button-quail, Black-breasted	4	0	4	0

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Button-quail, Painted	4	0	4	0
Button-quail, Little	0	5	5	0
Button-quail, Red-backed	0	2	2	0
Gull, Silver	60	2	62	2
Dove, Spotted	218	8	226	46
Cuckoo-dove, Brown	18	7	25	1
Dove, Emerald	117	30	147	105
Bronzewing, Common	17	1	18	3
Pigeon, Squatter	0	5	5	0
Pigeon, Crested	110	13	123	41
Pigeon, Wonga	3	1	4	1
Pigeon, White-headed	0	6	6	0
Dove, Diamond	62	221	283	1
Dove, Peaceful	398	56	454	152
Dove, Bar-shouldered	174	24	198	98
Fruit-dove, Wompoo	1	1	2	1
Fruit-dove, Superb	5	5	10	0
Fruit-dove, Rose-crowned	3	1	4	0
Coucal, Pheasant	1	1	2	0
Bronze-cuckoo, Horsefield's	15	4	19	0
Bronze-cuckoo, Shining	78	2	80	5
Bronze-cuckoo, Gould's	5	2	7	0
Bronze-cuckoo, Little	5	1	6	0
Cuckoo, Pallid	1	0	1	0
Cuckoo, Chestnut-breasted	3	3	6	0
Cuckoo, Fan-tailed	84	3	87	11
Cuckoo, Brush	17	1	18	1
Cuckoo, Channel-billed	0	1	1	1
Frogmouth, Tawny	2	0	2	0
Nightjar, Spotted	1	0	1	0
Nightjar, White-throated	1	0	1	0
Nightjar, Large-tailed	1	0	1	0
Owlet-nightjar, Australian	3	0	3	1
Swiftlet, Australian	0	20	20	0
Needletail, White-throated	1	0	1	0
Dollarbird	1	0	1	0

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Paradise-kingfisher, Buff-breasted	56	35	91	8
Kookaburra, Laughing	108	10	118	40
Kookaburra, Blue-winged	1	0	1	0
Kingfisher, Forest	25	3	28	6
Kingfisher, Collared	45	3	48	8
Kingfisher, Sacred	183	24	207	32
Kingfisher, Red-backed	1	0	1	0
Kingfisher, Yellow-billed	3	3	6	0
Kingfisher, Azure	103	37	140	54
Kingfisher, Little	17	5	22	3
Bee-eater, Rainbow	7	2	9	1
Falcon, Brown	1	0	1	0
Cockatoo, Yellow-tailed Black	1	0	1	0
Galah	35	5	40	18
Cockatoo, Major-Mitchell's	4	0	4	0
Corella, Long-billed	14	3	17	1
Corella, Little	94	14	108	2
Cockatoo, Sulphur-crested	88	5	93	9
King-parrot, Australian	32	1	33	7
Parrot, Red-winged	7	0	7	0
Parrot, Red-rumped	4	0	4	0
Bonnet, Blue	5	0	5	0
Parrot, Mulga	39	3	42	1
Rosella, Crimson	6	0	6	0
Rosella, Pale-headed	68	8	76	30
Ringneck, Australian	62	5	67	1
Parrot, Bourke's	35	4	39	3
Parrot, Blue-winged	1	0	1	0
Lorikeet, Rainbow	1117	211	1328	137
Lorikeet, Scaly-breasted	65	5	70	1
Fig-parrot, Double-eyed	0	1	1	0
Budgerigar	2	182	184	0
Pitta, Noisy	67	7	74	4
Catbird, Green	44	1	45	1
Catbird, Black-eared	4	0	4	0
Catbird, Spotted	13	3	16	3
Bowerbird, Tooth-billed	5	4	9	0

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Bowerbird, Golden	3	1	4	0
Bowerbird, Regent	26	0	26	2
Bowerbird, Satin	28	1	29	13
Bowerbird, Spotted	78	4	82	2
Treecreeper, White-throated	51	9	60	31
Treecreeper, White-browed	16	1	17	1
Treecreeper, Brown	127	34	161	39
Fairy-wren, Lovely	16	2	18	3
Fairy-wren, Variegated	360	30	390	284
Fairy-wren, Superb	308	63	371	204
Fairy-wren, Splendid	144	19	163	10
Fairy-wren, Red-backed	333	30	363	159
Fairy-wren, White-winged	26	2	28	1
Honeyeater, Dusky	371	107	478	69
Honeyeater, Scarlet	479	57	536	2
Honeyeater, Green-backed	7	3	10	0
Honeyeater, Black	0	4	4	0
Spinebill, Eastern	203	26	229	43
Honeyeater, Pied	3	0	3	0
Honeyeater, Rufous-throated	0	1	1	0
Honeyeater, Brown	1628	261	1889	438
Honeyeater, New-Holland	123	49	172	44
Honeyeater, White-cheeked	5	0	5	0
Honeyeater, White-streaked	2	4	6	0
Honeyeater, Striped	34	0	34	1
Honeyeater, Tawny-breasted	50	21	71	5
Friarbird, Little	30	28	58	0
Friarbird, Helmeted	1	0	1	0
Friarbird, Noisy	51	4	55	3
Wattlebird, Little	0	1	1	0
Honeyeater, Blue-faced	101	13	114	135
Honeyeater, Brown-headed	28	0	28	0
Honeyeater, White-throated	166	21	187	76
Honeyeater, Black-chinned	0	2	2	0

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Honeyeater, White-naped	41	15	56	5
Chat, Crimson	5	1	6	0
Honeyeater, Spiny-cheeked	330	15	345	6
Honeyeater, Bridled	16	21	37	6
Honeyeater, Eungella	19	36	55	9
Honeyeater, Yellow-faced	657	37	694	161
Miner, Bell	7	1	8	0
Miner, Noisy	591	146	737	398
Miner, Yellow-throated	119	10	129	1
Honeyeater, White-fronted	2	0	2	0
Honeyeater, Brown-backed	0	1	1	0
Honeyeater, Yellow	10	0	10	5
Honeyeater, Mangrove	174	12	186	76
Honeyeater, Singing	282	14	296	15
Honeyeater, Grey-headed	24	2	26	1
Honeyeater, Grey-fronted	0	13	13	0
Honeyeater, White-plumed	1456	66	1522	266
Honeyeater, Graceful	90	37	127	1
Honeyeater, Cryptic	1	1	2	0
Honeyeater, Fuscous	0	4	4	0
Honeyeater, Yellow-spotted	241	93	334	38
Honeyeater, Lewin's	1138	123	1261	799
Pardalote, Spotted	61	0	61	1
Pardalote, Striated	62	5	67	14
Fernwren	3	7	10	5
Redthroat	1	1	2	0
Warbler, Speckled	13	7	20	7
Scrubwren, Atherton	20	7	27	27
Scrub-wren, White-browed	677	73	750	1012
Scrub-wren, Yellow-throated	405	17	422	274
Scrub-wren, Large-billed	469	34	503	346
Scrub-wren, Tropical	150	31	181	18
Weebill	19	0	19	0
Gerygone, Brown	84	5	89	11

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Gerygone, Mangrove	582	25	607	192
Greygone, Large-billed	0	3	3	0
Gerygone, White-throated	20	2	22	3
Gerygone, Fairy	66	14	80	17
Thornbill, Mountain	10	5	15	3
Thornbill, Brown	185	20	205	63
Thornbill, Inland	67	7	74	11
Thornbill, Chestnut-rumped	141	13	154	7
Thornbill, Buff-rumped	0	1	1	0
Thornbill, Yellow-rumped	40	0	40	5
Thornbill, Yellow	19	0	19	2
Whiteface, Southern	14	6	20	5
Babbler, Grey-crowned	21	2	23	1
Babbler, Hall's	38	2	40	5
Babbler, Chestnut-crowned	65	16	81	15
Logrunner	40	0	40	9
Chowchilla	5	3	8	2
Whipbird, Eastern	161	16	177	114
Quail-thrush, Chestnut-breasted	3	0	3	0
Boatbill, Yellow-breasted	18	13	31	0
Woodswallow, White-breasted	15	1	16	0
Woodswallow, White-browed	3	0	3	0
Woodswallow, Black-faced	7	0	7	0
Woodswallow, Little	1	0	1	0
Butcherbird, Black	16	4	20	3
Butcherbird, Grey	72	2	74	25
Butcherbird, Pied	63	2	65	9
Magpie, Australian	89	3	92	114
Currawong, Pied	41	5	46	8
Cuckoo-shrike, Black-faced	12	3	15	0
Cuckoo-shrike, Barred	6	0	6	1
Cuckoo-shrike, White-bellied	1	0	1	0
Cicadabird	5	1	6	0
Triller, White-winged	9	2	11	1

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Triller, Varied	69	8	77	17
Sittella, Varied	24	2	26	0
Bellbird, Crested	11	2	13	1
Shrike-tit, Crested	1	0	1	0
Whistler, Grey	17	12	29	0
Whistler, Golden	669	45	714	352
Whistler, Rufous	385	36	421	147
Shrike-thrush, Bower's	10	7	17	3
Shrike-thrush, Little	679	160	839	471
Shrike-thrush, Grey	222	25	247	78
Figbird, Australasian	213	62	275	11
Oriole, Olive-backed	91	9	100	6
Oriole, Green	8	1	9	0
Drongo, Spangled	58	8	66	5
Wagtail, Willie	210	24	234	40
Fantail, Grey	659	64	723	105
Fantail, Rufous	656	89	745	159
Monarch, Spectacled	319	70	389	223
Monarch, Black-faced	33	4	37	3
Monarch, Black-winged	4	2	6	1
Monarch, White-eared	28	3	31	8
Monarch, Frill-necked	20	7	27	2
Lark, Magpie	43	0	43	27
Flycatcher, Leaden	63	7	70	3
Flycatcher, Shining	37	16	53	15
Flycatcher, Restless	7	2	9	0
Crow, Torresian	26	22	48	1
Crow, Little	1	0	1	0
Chough, White-winged	1	1	2	0
Apostlebird	8	0	8	0
Manucode, Trumpet	1	0	1	0
Riflebird, Paradise	7	1	8	0
Riflebird, Victoria's	3	1	4	0
Riflebird, Magnificent	31	6	37	6
Robin, Grey-headed	59	23	82	47
Robin, White-browed	5	0	5	1
Robin, White-faced	409	62	471	110
Robin, Pale-yellow	36	4	40	10
Robin, Eastern-yellow	1035	102	1137	1119

Species	Banded 2006 - 2019	Banded 2020	Total Banded	Total Retraps
Robin, Hooded	29	6	35	3
Flycatcher, Yellow-legged	1	1	2	0
Winter, Jacky	33	1	34	3
Robin, Rose	65	5	70	9
Robin, Red-capped	136	21	157	6
Scrub-robin, Northern	10	0	10	1
Swallow, Welcome	49	32	81	0
Martin, Fairy	18	30	48	0
Martin, Tree	17	2	19	0
Reed-warbler, Australian	192	71	263	77
Songlark, Rufous	9	15	24	1
Grassbird, Little	2	0	2	0
Grassbird, Tawny	386	69	455	176
Cisticola, Golden-headed	85	15	100	19
Silvereeye	5035	248	5282	1185
Starling, Metallic	4	4	8	0
Myna, Common	5	0	5	0
Thrush, Russet-tailed	77	5	82	19
Thrush, Bassian	44	1	45	5
Mistletoebird	156	20	176	15
Sunbird, Olive-backed	9	10	19	3
Sparrow, House	76	0	76	8
Finch, Red-browed	2538	347	2885	1014
Finch, Plum-headed	78	6	84	1
Finch, Zebra	457	364	821	25
Finch, Double-barred	759	63	822	76
Mannikin, Chestnut-breasted	381	198	579	17
Parrot-finch, Blue-faced	0	6	6	0
Pipit, Australian	3	1	4	1
TOTALS	34721	5266	39987	12326

6.5 RESULTS TO DATE

An additional 13 species expanded the ageing and sexing field guide for Queensland birds in 2020. Previous species' accounts in this unpublished guide were reviewed and refreshed with new or updated information. The ability to separate adults from juvenile birds help estimate productivity for the 214 species in the guide. These bird accounts also provide breeding evidence based on brood patches, cloacal protuberances and the presence of fledged juvenile birds. Wing moult and wear

were also recorded, providing a snapshot of each species' the annual cycle. The ageing and sexing guide in an updated pdf file are available for researchers upon request.

During 2020, 5,266 new birds were banded with 1,437 recaptures of previously banded birds were captured during this project year. Since 2006 to date, 39,987 birds were banded 12,326 were recaptures for a total of 52,313 bird encounters comprising 273 species (Table 6.2). Habitats regularly surveyed include open eucalypt forest, tropical rainforest, sub-tropical rainforest, temperate rainforest, mangrove and freshwater wetland. Eighteen new species were added from high-altitude wet tropics and Lake Galilee Basin region and sites and habitats only recently adopted in 2020. Regular interior rains in Queensland, and a late seasonal visit to Bowra, the result of Covid-19, furnished Black Honeyeater (4), a winter migrant, and Little Button-quail (5), which has shown significant population growth, in the last 12-24 month throughout inland Queensland. The recent taxonomic split of the Graceful Honeyeater into Graceful (Cape York) and Cryptic (Wet Tropics) added opportunistically another species to our total species count.

Once several years of data are collected many recaptures from a range of species will provide future survival analysis for many commonly caught species. Baseline survival analysis data for the White-faced Robin and Mangrove Gerygone were published in 2012 and 2017, respectively. Other papers published on the Brown Honeyeater, Eastern Yellow Robin and Mangrove Gerygone appear in Corella, and Sunbird. For a complete citation see Section 6.7 (This report) Publications arising from the Bush-bird Project

All netting rides at each banding location were marked using GPS coordinates. These rides were repeatedly used with the same net length, height and mesh sized nets. The number of hours each net was operational at the site and the total length of nets set was used to calculate an effort variable divided into the number of birds caught provides a comparative abundance index discussed in the individual site accounts. The species lists for all banding sites were entered into eBird, an international database based in the USA making our data widely available.

Each monitoring station's status, including if a species abundance and diversity trend was noted is summarised below. In many cases, both the quantity and diversity of species were highly seasonal and more detailed information can be provided upon request.

Field visits to the banding sites in 2020 is listed in Table 6.1

6.5.1. Bowra Nature Sanctuary

Banding at Bowra has been conducted annually each Easter since 2013 to sample the birds on the property. However, in 2020 due to Corvid-19, bird banding activities at Bowra were held in August. The property is within the Mulga belt with a mixture of mature and regrowth Mulga (*Acacia aneura*), Gidgee (*Acacia cambagei*), Callitris forest and arid country scrub. The site has a permanent bore fed water source and several temporary water sources in the form of dams, from when the property was a working cattle station.

The site has been through a period of extreme drought which has seen bird numbers, species diversity, body mass in many species and catch rates decline over time since a number of comparatively wet years from 2014. In contrast the 2019 visit, the driest and lowest catch rate to

date was terminated early due to torrential rain and extensive flooding which commenced towards the end of the visit. Since then, leading to the 2020 visit, there has been regular rainfall on the site resulting in significant regrowth of vegetation and a significant increase in bird numbers as a result on extensive breeding in the better conditions.

In 2020, 1,091 birds of 49 species were captured, and of this total, 41 previously banded birds were recaptured. To date, 6,443 birds of 90 species have been banded with 470 recaptures represented by 37 species. The year 2020 produced high catch rates for certain species reflecting the significant breeding event across inland Australia. Zebra Finch, Diamond Dove and Budgerigar dominated 65.4% of the whole catch, with most recorded as juveniles. White-plumed Honeyeater, a riparian species and usually the most common species caught remained in low numbers, despite captured birds being in better condition. These observations suggest that this species may take longer to recover from the extended drought than other species.

Bird Banding at Bowra Station: 2020 Report provides more details of the banding activities and is available on request.

6.5.2. Brooklyn Reserve, Mount Lewis

This new study site commenced in 2019 and is the first wet tropics high altitude rainforest site introduced to this study. Three visits were made in 2020 with the opportunity to capture and study a range of endemic specialist species and introduce these threatened species into the long-term monitoring regime introduced by this project.

To date, and including historical banding records from the site, a total of 971 birds of 35 species have been banded with 444 recaptures recorded. 2020 contributed 152 new birds, and 115 recaptures to those totals.

Noteworthy records were: a Golden Whistler, originally banded in November 2005, and recaptured in December 2019, which makes this individual 14 years and 2 months old., a Yellow-throated Scrubwren recaptured in January 2020, initially banded in October 2006 (13 years and 3 months), and an Atherton Scrubwren recaptured in December 2019, originally banded in February 2005 (14 years and 10 months and a species' longevity record). These three records show the long-lived and highly sedentary nature of these tropical species and the importance of monitoring their populations to identify threats.

6.5.3. Bunce Farm, Imbil

The site is a mixture of wet sclerophyll and vine forest with some sub-tropical rainforest and commercial plantation. Since 2007 when banding first started there have been 5,343 bird encounters from 91 species (3,651 new birds and 1,692 recaptures of previously banded birds). In 2020, seven visits were made, resulting in the capture of 338 new and 155 recaptures.

The site continues to have a higher diversity of species during the winter months, presumably due to altitudinal migrants coming from rain forest fragments at higher altitudes. Historically, in winter, truer rainforest species such as Noisy Pitta, Green Catbird and Russet-tailed Thrush were present.

The continued maturity of the rainforest and wet sclerophyll areas have resulted in these species become permanent breeding residents.

Other species such as Fairy Gerygone were recorded occasionally in the earlier years of the study. Now, they and the New Holland and Dusky honeyeaters appear in increasingly larger numbers each year, attracted primarily to the Grevillea varietals planted in the property gardens.

Colour banded Eastern Yellow Robin, Golden Whistler, Lewin's Honeyeater, and Little Shrike-thrush provided more granularity on local movements while re-encounters provided survival analysis. The Eastern Yellow Robin recaptures, colour band resightings and detailed behavioural observations also provided detailed data on breeding behaviour and the nest helpers' role.

Double-barred Finches, mostly absent due to the property's dryness in previous years, were caught for the first time in many years and appear to reflect a wetter year as evidenced by increased grasses and other ground covers throughout the site. Recaptures of 10- and 11-year-old Little Shrike-thrushes and 7 and 8-year-old Eastern Yellow Robins indicate both the longevity and sedentary nature of many species present. The recapture of a Regent Bowerbird two years after original banding, combined with increasing sightings of this species on site, suggests another previously transitory species may become resident.

6.5.4. Cairns Airport Mangroves

This new site commenced in 2019 and represented the only tropical mangrove site in this study. The area encompasses intertidal and extralimital mangroves with scrub habitat fringing the mangrove belt, resulting in a large diversity of species.

Only one visit was made to the site in November 2020 which resulted in 25 new birds of 13 species being captured. Since 2019 a total of 46 birds have been banded of 18 species with three recaptures. Low catch rates continue to be a problem for this site, and nets will be repositioned until better locations are identified in subsequent visits, which may provide higher volume catch rates.

6.5.5. Carl Creek, Dayboro

Carl Creek at Dayboro is new to the study and contains a creek surrounded by mature trees on a two-acre new site owned by Moreton Bay Regional Council. The small floodplain area is being revegetated with native plants.

Banding started in Aug 2020 and has shown that there a large diversity of birds that use the site with several resident breeding species as shown by the recaptures and the presence of adults and juveniles. The site is divided into two areas. There were eight visits to the site and 86 birds caught of 18 species, 14 of which have been recaptured.

6.5.6. Cedar Lakes, Advancetown

The banding site at Cedar Lake Country Resort is on private property with a mix of open woodland and grassland with some remnant vine forest. This site has been monitored monthly since July 2015.

In 2020 there were 31 birds banded, and 14 recaptures over 24 species. This is markedly down on previous years and reflects a steady decline in catch rates over time. The decline seems to be due to a loss of habitat in the banding study area most likely due to herbicides and vegetation management. Due to this factor and the relocation of the Bander in Charge of this site to another Region, the monthly banding at the Cedar Lake site has been suspended from September 2020.

6.5.7. Currumbin

Banding at Currumbin is restricted to Rainbow Lorikeets banded after rehabilitation at the Currumbin Wildlife Hospital. The purpose of this work is to gain an understanding of the effectiveness of treatment regimes on this species, as evidenced by return rates into care or location of dead banded birds' post-release. Of particular relevance is the banding of birds that have suffered from Lorikeet Paralysis Syndrome (LPS), a dangerous disease with increasing prevalence. The condition is poorly understood and understanding the effectiveness of treatments is essential in triaging and rehabilitating affected birds successfully.

6.5.8. Eagleby Wetlands

Eagleby Wetlands represents a wide range of habitats, with grassland, scrub and reedbeds, vine forest and open water, riparian and mangrove fringing habitat. As a result, the site has a vast diversity of species. Eagleby Wetlands also displays seasonality with more species, primarily during the winter months, when influxes of migratory honeyeaters, mainly the Yellow-faced Honeyeater. Silvereyes also complement the area during the winter months with increased numbers of the migratory subspecies (*Zosterops lateralis lateralis* and *Z. l. westernensis*), which breed south of Queensland. The winter influx of birds to Eagleby also includes some rainforest species, Noisy Pitta, in some winters and occasionally Rose Robin and Russet-tailed Thrush.

Since 2007 a total of 5,054 birds of 62 species have been banded on-site with 1,674 recaptures. In 2020, 253 birds were banded with a further 60 recaptures. There were no recaptures of birds older than six years. However, two local Brown Honeyeaters caught in 2020 were regularly recaptured since 2014.

An average of 60 avian species in a maturing forest was often encountered during earlier visits to the station before the arrival of locally bush care groups. Their significant efforts to remove invasive plants resulted in a temporary decline in avian catch rates and species abundance. More recent visits to the station have accounted for 70 or more species and an increasing trend in abundance, primarily attributed to the maturing native vegetation and the long term positive effects of effective vegetation management.

The year 2020 saw an almost total lack of migratory honeyeaters and silvereyes during the winter months, which was a continuing trend for the past three years for south-east Queensland banding sites. All silvereyes caught were the local subspecies (*Z. l. cornwalli*) with no winter increases in Yellow-faced Honeyeater catch rates.

6.5.9. Eungella (Credition State Forest, Doolamai Falls (Eungella Nat. Park) and Dalrymple Heights)

Banding at Eungella commenced in January 2019 with a primary focus on gaining a better understanding of the endemic Eungella Honeyeater. This site is currently the only banding study on this poorly understood endemic. There are now five sites established across several locations in the Eungella area at elevations ranging from 950-1080m over a distance of approximately 30 kilometres. These sites are predominately high-altitude mature rainforest on both private property and within the Eungella National Park. However, one site, is in the drier eucalypt woodland in nearby Credition State Forest at an elevation of 650m. Eungella Honeyeaters were caught, and colour banded at all these established sites. A further separate site at Doolamai Falls was established in February to commence monitoring of the Australian Swiftlets with the view of annual visits. Twenty Swiftlets were banded in February 2020.

Banding at Eungella usually coincides with the quarterly banding at Finch Hatton Gorge. In 2020, 328 birds were banded across 30 species with 68 recaptures bringing the total for Eungella to 660 birds represented by 36 species, and 114 recaptures.

In 2020, 36 Eungella Honeyeaters were colour banded raising the total to 55. Three colour banded birds were positively identified in the field, and eight were recaptured. Later in the same year, in September the first colour banded bird was recaptured providing a longevity record of 1 year 8 months. Another recapture in November was of a bird banded 1 year 6 months ago. All recaptures and re-sightings at the banding station were of local residing birds. No inter-site-specific movement has been recorded as yet.

Other noteworthy banded species were subspecies of the White-throated Treecreeper, Brown Gerygone, and Large-billed Scrubwren.

6.5.10. Finch Hatton Gorge

The banding site at Finch Hatton Gorge is in the subtropics of the central Mackay coast at an elevation of 170m and wholly on a private property divided by a permanent gorge stream. The vegetation consists of mature native species as well as subtropical and tropical exotic species.

Banding at Finch Hatton Gorge is now in its 6th year and has been conducted every three months since July 2015. To date, there have been 896 birds banded across 44 species. Of the total, 259 were recaptured, sometimes multiple times, providing 633 recapture encounters. In particular, Emerald Doves and Peaceful Doves, were recaptured frequently with one Emerald Dove caught 12 times and a Peaceful Dove captured 18 times.

This banding site has a heavy focus on doves and kingfishers and currently provides Australia's longevity record for the Wompoo Fruit-Dove and Little Kingfisher. In 2020 a new species was added to the encounters with 7 White-headed Pigeons banded. The ongoing maintenance and nurture of established vegetation, and the development of Canopy Net techniques, are expected to continue to produce increased data on Fruit-Doves and Pigeons.

6.5.11. Forest Tops Loop, Border Ranges National Park

There are three Border Ranges monitoring sites, all representing high altitude temperate rainforest habitats with limited sub-tropical rainforest in the sheltered valleys. These sites produce a greater species abundance and diversity during the summer, but the species diversity and number of birds captured decrease in winter.

It is thought that many resident breeding birds at these altitudes move to lower and warmer altitudes to overwinter within the park or elsewhere along the eastern coast. Typically, larger numbers of *Petroica* robins, several species honeyeaters, and bowerbirds occur in larger numbers during the summer. In contrast, scrub-wrens, Eastern Yellow Robin and the rainforest specialist species such as Australian Logrunner and lyrebird are consistently present year-round. The absence of species such as Rose Robin and Eastern Spinebill during the winter months is offset by the higher catch rates for these species in lowland forest sites during winter supporting evidence for altitudinal migration, despite no evidence to date from banding at these locations.

Access in 2020 was severely constrained by Covid restrictions with only one visit achieved in the whole year resulting in a catch of 69 new birds and 29 recaptures from 19 species caught. This brings the total birds caught since 2007 at the Border Ranges sites to 2,548 birds banded and 1,237 recaptures of 37 species.

Still, there were no recaptures of birds between the three monitoring locations, despite high recapture rates within sites suggesting a very high parochialism by the resident birds and strong site fidelity to breeding locations for the altitudinal migrants. Despite the single visit, a 6-year-old Brown Gerygone and a 10-year-old White-browed Scrubwren were recaptured, demonstrating the longevity for these species.

A recent report to NSW DEC analysing the banding data between 2009 and 2018 at these sites identified consistent catch rates, juvenile proportions, and survival rates for indicator species. This suggests that bird populations at this location are stable with no recorded changes in critical indicators since 2009, when banding at the site commenced (Coleman 2019).

6.5.12. Gargett

Banding was conducted at Gargett, in central coastal Queensland for the first time in 2018. While within agricultural land, this site provided the opportunity to sample a range of lowland tropical species and riparian species such as Olive-backed Sunbird, Yellow Honeyeater, and White-browed Robin.

As part of the study, the location also allows large numbers of pigeon's and other more common species to be captured and banded in another new part of their range.

Unfortunately, due to competing commitments, only one visit in January was made to the site with only 5 birds caught. Since 2018, 228 birds of 28 species have been banded with a further 28 recaptures of already banded birds.

6.5.13. Lockyer Creek, Gatton

The Lockyer Creek site is located in riparian habitat within the agricultural plain at the base of the Dividing Range below Toowoomba. It provides access to many species typically found further inland from the coastal strip. It was only visited once during 2020 in January due to other competing priorities.

To date, 220 birds of 28 species have been banded at this site with 20 recaptures of previously banded birds. It is hoped that a new bander in the area can be identified to manage and continue the banding programme at this site.

6.6.14. Gaven

The Gaven site is a suburban backyard located at Gaven on the Gold Coast. It supports mixed populations of local and migratory birds using the site either as part of a broader regular feeding pattern by local homeowners or during some form of migration or movement.

Since banding began at this site in July 2015, there were 419 individuals banded represented by 25 species, and 188 recaptures. In 2020, 74 new birds were banded and 49 recaptured.

The regular local population of Noisy Miners, Blue-faced Honeyeaters, and Rainbow Lorikeets dominate the data along with 89 Sulphur-crested Cockatoos of which 4 were recaptures. Several cockatoos and corellas were resighted and reported to the ABBBS.

An unusual occurrence of Torresian Crows used the site in April 2020 which resulted in 16 banded birds. Their presences may have been due to the lack of food at the nearby shopping centre during the Covid-19 lockdowns. Crows with bands are now regularly seen at the nearby shopping centre.

6.5.15. Kutini-Payamu (Iron Ranges) National Park

Banding at Kutini-Payamu National Park (formerly Iron Range National Park) has been conducted regularly since 1990, making it one of Australia's most extended long-term monitoring projects. The site is lowland tropical rainforest and represents a habitat and selection of endemic species and subspecies at significant risk from climate change.

Since the start of the project, 5,988 birds of 63 species have been banded and 618 previously banded birds recaptured. The birds are typically long lived and sedentary. Several species' longevity records were set including a Little Shrike-thrush originally banded 28 years ago was recaptured in 2018. Also, a Buff-breasted Paradise Kingfisher banded as a nestling in February 2005 was recaptured in November 2020. This is the current longevity record at 15 years and 9 months

The 2020 visit resulted in 712 new birds caught and 54 recaptures. This was the first visit after a major cyclone passed over the study site in late 2018, resulting in substantial damage to the forest canopy. Despite good numbers of birds caught, the recapture rate was only 7% compared with 14.8 to 26.9% in previous years. As suggested by the differences in the recapture percentages the cyclone may have significantly impacted resident birds. As a result, new birds from more sheltered forest areas have likely colonised the forest regrowth and replaced vacated territories.

Kutin-Payamu is the subject of a more detailed report available on request.

6.5.16. Kedron Wetlands

Kedron Wetlands is an extralimital intertidal mangrove fed by several tidal creeks and man-made channels flowing into the site. The dominant species was the Grey Mangrove (*Avicennia marina*), surrounded by extensive grassland and casuarina habitat. The species caught were primarily mangrove species although many shorebirds and waterfowl also use the site when appropriate.

To date, 676 birds of 36 species have been banded with 177 recaptures. Trends remained relatively consistent between 2010 and 2014, but catch rates dropped significantly during 2015 with very few Mangrove Gerygones caught. Increased mosquito control measures were in place, but it is unclear whether this is responsible for decreasing bird abundance. During 2016, 2017 and 2018 there was a recovery in abundance rates for some species, but these were still lower than in previous years. Larger numbers of Mangrove Gerygones were caught during 2019 and 2020, which improved the site's overall capture rates. Eight visits were made in 2020 contributing 52 new birds, and 14 recaptures to the above totals.

One Mangrove Honeyeater banded in March 2020 was recaptured 4km distant at Nudgee Cycle Track. Later in October, it was again recaptured at Kedron,

Four kilometres makes for the record longest distance travelled by this species. A 5-year-old Mangrove Gerygone and a 5-year-old Australian Reed-Warbler were recaptured in 2020 along with several other birds recording three years between banding and recapture.

6.5.17. Lake Galilee Basin

The Galilee Basin, inland from Mackay, is the only site within the Desert Uplands Bioregion with five separate monitoring stations now established. An avian bird band monitoring site was established in 2020 for an environmental impact assessment but it is doubtful that any banding or monitoring will occur beyond 2021 without a locally trained bander to continue the programme .

Several new species for this study were caught in 2020, along with good numbers of species represented elsewhere in Queensland, providing comparisons between different bioregions. A total of 126 birds of 22 species were caught in 2020 from five locations in this area.

6.5.18. Lake Samsonvale

Lake Samsonvale presents a range of habitats adjacent to the lake and continues to have a good number and diversity of birds on the site, although some species were notable by their absence in 2020. Significantly there was no usual silvereeye migration from further south with only the local subspecies caught this year. This may be due to bush fires in southern NSW and Victoria, disrupting normal behaviour and food supply. Whilst it was a dry summer when the rain did come it meant the grasses on the lakeside grew again and twice an influx of Chestnut-breasted Mannikin feeding on seeding grasses along the lakeshore led to large catches of this species.

Although there was no banding for approximately five weeks due to Covid-19 restrictions, just over 1000 birds were caught in 2020 with 30% of these being retrapped with some four or more years since they were originally banded, including a White-browed Scrubwren which was first banded in 2012.

A family of five King Quail was an unexpected catch late in the year, following capture of Red-backed Button-quail earlier in the year, all presumably benefitting from grasses growing along the lakeshore.

Of note, recovery wise was a Rufous Whistler, banded in May 2020 and found dead in June at Point Vernon, a northward movement of 224km. The reasons for such a large movement of a typically sedentary species are not clear, but some migratory movement on the east coast is believed to occur.

6.5.19. Manly Marina

Banding of birds other than cannon netting shorebirds is done opportunistically on the site with hirundine species targeted which are not regularly caught at other locations. Only two visits were made to Manly in 2020 resulting in only two non-shorebirds being banded. These were a Brown Quail and a Welcome Swallow.

6.5.20. Mookin-Bah Reserve, Manly

Mookin-Bah reserve is a coastal woodland and wetland surrounding Lota Creek. It stretches from Wakerley inland to the mangrove coastal habitat following Moreton Bay's shoreline on Brisbane's southside. The banding site (-27 29 02 94 ,153 10 31 02) within this reserve consists of two habitats; a man-made dam approximately 250 by 120 metres, once used as water storage for a defunct factory and a surrounding woodland of *Eucalyptus sp* and *Melaleuca sp*. with a remnant cover of *Lantana sp*. Clearing of Lantana during the last three years has reduced the habitat for small ground-dwelling passerines. Revegetation within the woodland part of the banding site has been mainly Wattles and *Acacia fimbriata*. During the 2020 winter, the dam was flooded to 0.5 metre to control weeds. By September 2020 the dam had returned to a shallow water reed bed pond. Two reed species are common within the dam, bulrush (*Typha australis*) and reedmace (*Phragmites australis*).

Restrictions on fieldwork due to the Covid-19 pandemic and many wet banding days reduced banding effort in 2020. In the past about 10 banding events per year were completed. In 2020 only seven banding days were completed. Catch size was approximately half that in 2019 (260 birds caught in 2019 compared with 111 in 2020).

Mookin-Bah is a unique site for Australian Reed-Warbler. Over four years there have been 189 Australian Reed-Warbler encounters of which 59 (31%) were recaptured. During winter the area appears more significant as population numbers and species diversity increases due to northward migration of passerines such as Yellow-faced Honeyeater, Scarlet Honeyeater and Silvereye (sub-species *lateralis* and *westernensis*), and winter altitude migrants such as Eastern Spinebill from the Great Dividing Range. The diversity of near ground-dwelling birds such as the scrubwrens were also reduced as the result of the ground cover clearing program but, at present, their populations appear on the upswing.

Research objectives for the site include the long-term study of a discrete woodland and wetland within an increasingly urban setting; the study of winter migratory passerines and the morphometrics and survival analysis of the Australian Reed-warbler. This site also contributes to the overall effort in the study of common birds across multiple banding sites in South-East Queensland.

6.5.21. Mount Nathan

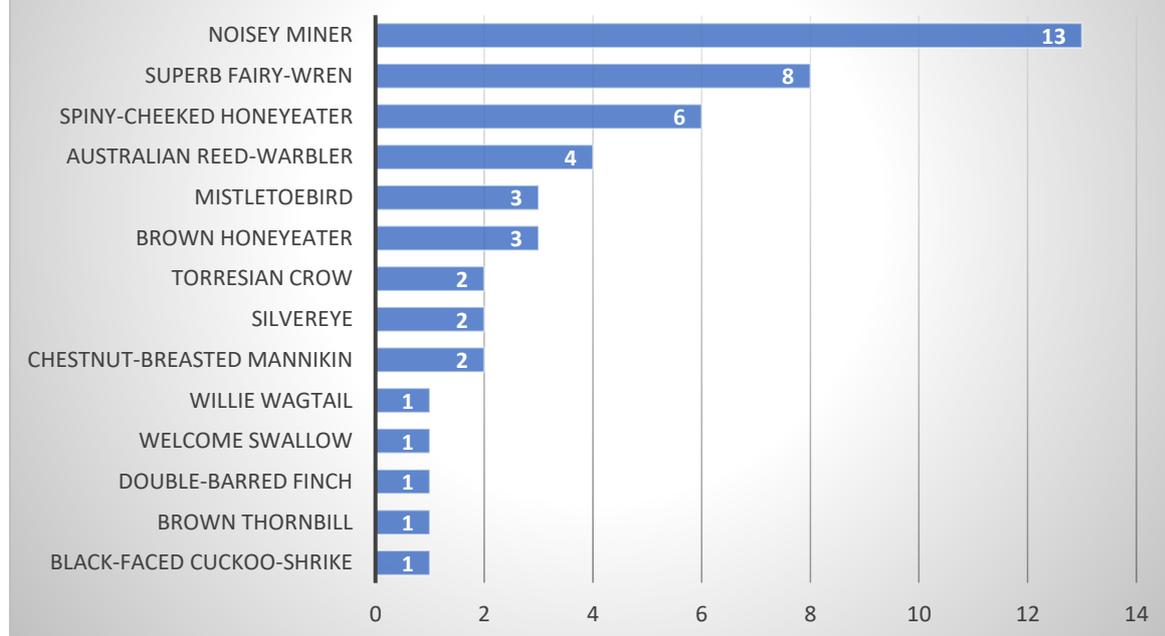
No visits were made to this site during 2020.

6.5.22 Myall Creek Nature Reserve, Jondaryan

Myall Park Nature Reserve (-27.384827 151.614163, or Myall) incorporates a 21-ha remnant and endangered brigalow dominant and sub-dominant vegetation community. The site located approximately 40 minutes north-west of Toowoomba on the Warrego (54) Hwy near Jondaryan was selected in early August 2020 for the potential of encountering both eastern and western bird species but targeting the Painted Honeyeater. With most permits in place banding commenced monthly on the 15 September 2020. Since the inaugural date, the site was visited four times, resulting in 48 birds represented by 14 species.

The Noisy Miner was the most abundant species (n=13, 27%) followed by the Superb Fairy-wren (n=8, 17%) on our site (Figure vv). The Noisy Miner's abundance and central distribution within the study area may account for the lower abundance of smaller and less aggressive species. For example, Fairy-wrens was distributed in the denser shrub cover at the edge of the study site while the mannikins were caught in the disturbed areas dominated by grasses and weeds. The reed-warblers were captured in the Narrow-leaved Cumbungia (*Typha domigensis*) bordering the permanent pond on Doctor's Creek.

Species Diversity and Numbers banded between 17 Sept and 4 Dec 2020.



The target species, Painted Honeyeater, was absent from the capture roster but was frequently heard singing during our exploratory site visit in August and on our first September band date. However, their singing rates noticeably declined in the subsequent months suggesting either the breeding season was well underway or their prime food source- mistletoe- was affected by the region's lack of rainfall. Colour banding this species cooperatively with an NSW banding group is anticipated for 2021. Eight Spiny-cheeked Honeyeater, the only predominantly western visitor to the site, were banded.

6.5.23. Nudgee Beach Mangrove Boardwalk

Nudgee Beach mangrove boardwalk is intertidal mangrove habitat, dominated by Grey Mangrove (*Avicennia marina*). Typically, the avian species diversity and abundance are low in this habitat type where mangrove specialists such as the Mangrove Gerygone, Mangrove Honeyeater and Collared Kingfisher dominate the catch. Mistletoe flowering in adjacent casuarinas brings other species such as honeyeaters and Mistletoebird at certain times of the year.

Banding commenced at this site in 2007, and to date, 407 birds have been banded of 38 species with 126 recaptures. Of the birds banded 31% were Mangrove Gerygones. The dataset has underpinned the publication of two scientific papers, one on survival rates and longevity and the other comparing the biology of the east coast and northern subspecies of the Mangrove Gerygone.

Four visits to the site were made in 2020, resulting in 19 new birds banded and seven recaptures. Avian species that were caught in the same area of the site were typically highly sedentary. Between

this site and Nudgee Cycle Track, which is only 1.5km away and connected by contiguous mangrove habitat, there were no recaptures.

Recapture data has shown most Mangrove Gerygone's live to only 4-5 years old but one bird recaptured in 2018 was again caught in 2019 and was determined to be at least eight years old, representing the longest-lived individual on record. This bird was not caught in 2020, and the only recaptures of Mangrove Gerygones were banded in 2018 and 2019, although one 4-year-old Silvereve was recaptured.

6.5.24. Nudgee Beach Cycle Track

Nudgee Cycle Track is an area of extralimital mangrove, inundated only by the highest of tides. The area is experiencing a significant mangrove die off, and as a result, viable mangroves are only present in the creek channels with much of the rest of the area dying or dead. The catch rates and diversity for mangrove species have decreased, although adjacent scrub and grassland habitats provide additional species that continue to utilise the area.

Three visits were made in 2020. The site continues to provide adequate numbers of Mangrove Honeyeaters with smaller numbers of Mangrove Gerygone. Still, catch rates are typically lower than initially experienced, presumably due to the mangrove die-off. One visit during overcast conditions did result in a large catch of Hirundine species with numbers of both Welcome Swallow, and Tree Martin caught, but this was an exception to the typically low catch rates.

Since banding commenced in 2007, 488 birds of 47 species were banded with 74 recaptured birds. Banding in 2020 contributed 38 new birds, and three recaptures to that total. The three recaptures were all Mangrove Honeyeaters; one, caught seven years after banding, and one 12 years after banding, a new longevity record for this species. The third bird, banded in March 2020 at Kedron Wetlands was recaptured at Nudgee Cycle Track in May 2020, before being recaptured in October back at Kedron. This movement of 4km is the largest recorded movement of this species.

Analysis of the data for both Nudgee sites indicates the Mangrove Gerygone has two breeding seasons, similar to birds in Darwin and that breeding is linked to insect abundance, which correlates with king tide frequency. This work has been written up and was published in 2019 in the journal *Corella*.

6.5.25. Osprey House, Pine Rivers

Since 2010, Osprey House has been regularly sampled for birds. The site contains a mixture of mangrove foreshore, grassland, scrub, and casuarina woodland. In addition, the revegetation with native flora by the Moreton Bay Regional Council continues to support a large diversity of birds.

To date, 1,061 individual birds have been banded with 155 recaptures of previously banded birds (14.6%). In 2020, 98 birds were banded with eight recaptures (7.5%). Recaptures were all recent, representing birds banded initially in 2019 and 2020.

A flock of migratory Brown Honeyeaters were present in September with 42 new birds banded, representing 43% of the total 2020 catch and 34% of all the Brown Honeyeaters caught at this site

since banding began there in 2010. These birds were captured in the revegetation zone, demonstrating the importance of land management practises and revegetation using native species.

6.5.26. Shailer Park

The Shailer Park site represents a combination of suburban garden and parkland with open eucalypt forest. Diversity of species and abundance for this site has remained remarkably consistent throughout the study. Noisy Miner and Rainbow Lorikeet dominate the area with over 1,176 Rainbow Lorikeets and 607 Noisy Miners banded at this site. Since 2016 good numbers of Eastern Spinebill were seen and caught during winter, suggesting several good breeding seasons for this species.

Following the clearing and subsequent regrowth of *Lantana camara*, smaller species such as Superb Fairywren and some honeyeater species appeared to return locally, presumably using this habitat to avoid Noisy Miner aggression. After an absence of several years, Bar-shouldered Doves also returned, predation by Brown Goshawk was considered the reason for this temporary absence.

Since banding commenced in 2006, 2,741 birds of 41 species were banded, and 1,045 recaptures recorded. The year 2020 contributed 311 of the newly banded birds and 74 recaptures to the total. Unprecedented numbers of Noisy Miner and Rainbow Lorikeet were caught during the Covid hard lockdown period, reflecting the lack of artificial feeding by households causing birds to congregate at the fewer functioning feeder stations.

Several recoveries of note were made during 2020. A Long-billed Corella banded at Shailer Park in April 2020 was found dead in Greenbank a month later, a movement of 19km and an Eastern Spinebill banded in Carbrook in 2018 was recaptured 5km NW at Shailer Park in April 2020. A Rainbow Lorikeet captured and banded in 2015 was found dead in Mount Cotton, some 7km from the Shailer Park banding station. A Noisy Miner banded in April 2020 was taken into care in Springwood after being attacked by crows, a movement of 4km. Finally, an Australian King-parrot, banded in November 2007 was resighted on a bird feeder 2km away in Daisy Hill in October 2020 making this the oldest recorded Australian King-parrot at 12 years and 10 months between banding and resighting.

6.5.27. The Spit, Southport

The Spit is a coastal linear foredune separated by the Tasman Sea on the ocean side and by the Broadwater on the other.

The original banding site established in 2015 was primarily to target the species using the Banksia (*Banksia integrifolia*) and immediate surrounding vegetation. This site was decimated by fire soon afterwards, and an alternative banding site was established within 1km.

Foreshores Management and local volunteers implemented a successful reclamation programme for the burnt areas of the Spit. Planting of native vegetation and supplemented by natural regrowth renewed the original site although some of the Banksias failed to adequately thrive.

Banding in 2020 was conducted only at the original site and 98 birds were banded; 58 were recaptures with 18 of those recaptures originally banded in 2015 before the fire. Since banding commenced at The Spit, 1016 birds have been banded with 324 recaptures.

A population of Bush Stone-Curlew exists on The Spit. In 2020, six birds were captured and banded not only with a unique identifying number but also with leg-flags. The Spit is set to be significantly redeveloped in the future under a Master Development Plan. It will be interesting to see the distribution of these birds as the Master Plan moves forward. Banding the same local population will hopefully demonstrate the effects of this development.

6.5.28. Tee Tree Wetlands (Coomabah Lakelands Conservation Area), Arundel

Coomabah Lakelands Conservation Area, Arundel, aka Tee Trees Wetlands protects more than 1200 hectares of wetlands, eucalypt forest, salt marsh and mangrove habitat. Banding commenced in 2018 at a site approximately 300 metres north of the current banding location. The habitat of the first site was a wetland that was surrounded by open scrub dominated with casuarina trees.

A second site was selected in 2019 based on accessibility. It too, is essentially a wet land but includes an extensive reed beds dominated by *Typha sp.*

Since banding commenced at Tee Trees in 2018 there have been 556 birds banded with 177 recaptures. In 2020 there were 243 birds banded and 112 recaptures represented by 28 species.

Of the 34 Australian Reed Warblers banded at this site, 20 were banded in 2020 with only two recaptures.

6.5.29. The Grand Golf Course, Nerang

The capture and banding of birds at the Grand Golf Course started on 5 March 2014. Over the past six years, and up to the end of 2020, surveying was monthly and relatively consistent, dependent on weather conditions and available workforce. In 2020, two of three banding sites on the Grand property were visited, The Tip (-28°0'54" S, 153°18'2" E), and the Orchard site (-28.020401 153.303574). The Orchard was established as a permanent site in June 2020, and the grassland site was only surveyed once on 4 June 2015 and never again. In 2020, the Tip was visited ten times, and the Orchard site only four times. Habitat composition differed between the sites. The Tip site is best described as an 0.30 ha accessible area surrounded by a sizeable unfragmented tract of open dry sclerophyll forest. The Orchard Site is approximately 1.25 ha. It is a mix of planted tree forms with various introduced and native plants surrounded by a citrus orchard, cultivated lawns, reed beds reeds and a constructed water hazard.

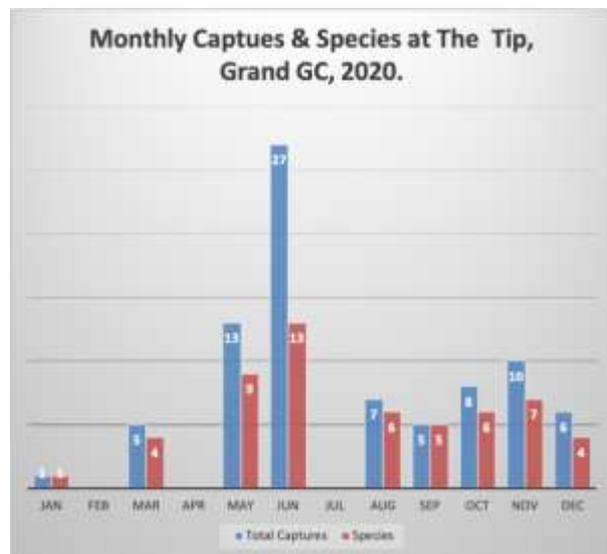
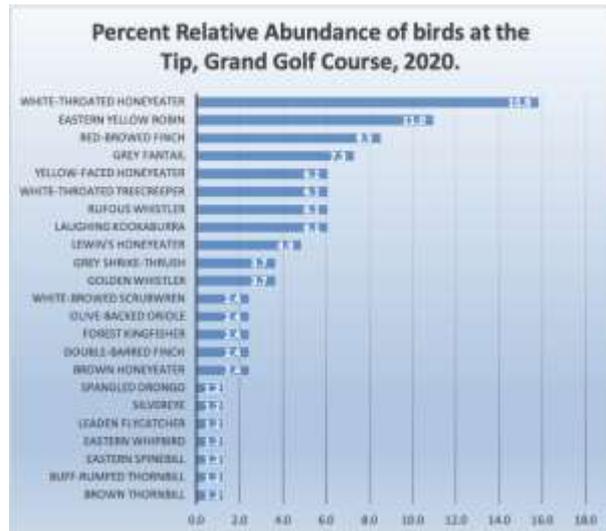
There were 82 birds caught representing 23 species captured and banded at the Tip. Capture and banding at The Orchard site resulted in 46 birds and 13 species. The Tawny Grassbird is unique to the Orchard Site because of the reed beds and has not been encountered at the Tip.

Weather and the number of experienced banders in 2020 dictated the number of nets used at each site. During 2020 an averaged of ten nets, or approximately 120 metres (range 7 to 13 nets) were used at both locations.

Banding Results: The Tip

Monthly total captures and species banded at the Tip are presented in the figure below. May, and June was the most productive months when 13 and 27 birds were caught, respectively. Although we did not band at The Grand in July, it is highly probable it too would have produced relatively high numbers. January capture results were disappointing.

The opposite figure shows the per cent relative abundance of species caught at the Tip during 2020. As a breeding resident, the White-throated Honeyeater was the most abundant species in the golf course's treed margins. The



most captures occurred in June (n=4) and in Dec (n=3) followed in October with two birds. For the remaining months, only single birds were recorded.

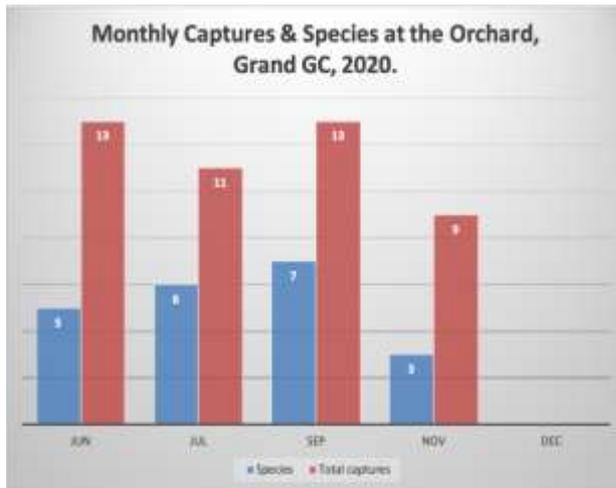
In previous years the Red-browed Finch appeared abundantly more often at the Tip. Still, in 2020 they were either absent or only limited numbers were encountered even though their relative abundance was third overall (Figure XII).

The Buff-rumped Thornbill is a first for The Grand, captured on 12 June 2020. The Buff-rumped is not unusual for the region as it has been recorded occasionally near the Hinze Dam area. Its presences at the banding site may be

due to dispersal behaviour.

The Rufous Fantail, Grey Fantail, Yellow-faced Honeyeater, and Golden Whistler are but some of the captured species suggesting there is a respectable movement of birds through the site during the migration- dispersal period.

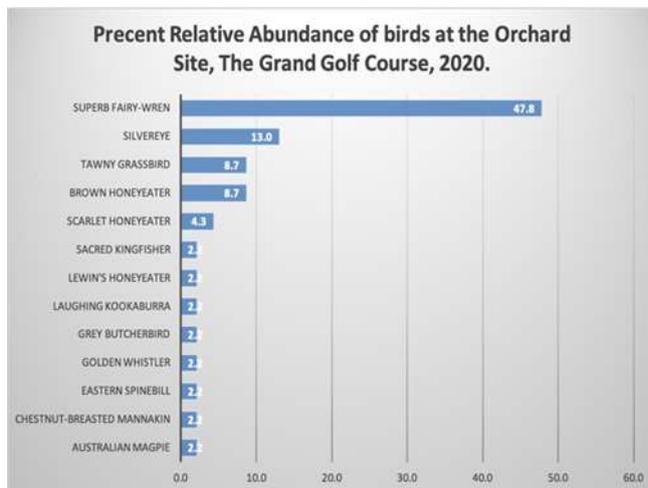
Banding Results: The Orchard



Monthly bird captures and species at The Orchard are shown from June to November are shown in the figure opposite. Netting was not conducted in December due to severe weather conditions.

June, July, and September were the best netting months. Numbers of newly banded and recaptured Superb Fairy-wrens were responsible for the overall relative abundance of 47.8 % for this species at this site (see figure below). The resident breeding population of Silvereeye (*Zosterops*

lateralis cornwalli) was the second most abundant species at the Orchard and ninth at The Tip. The Tasmanian form (*Z. l. lateralis*) is migratory and small numbers have been recorded at the Grand.



6.5.30. Other sites

Canungra, Tinchi Tamba, and Sanctuary Cove (Palms and Pines) Golf Course banding sites were not operational in 2020 due to logistics and time commitments.

6.5 Body Condition and Productivity

Body condition indexes were established for a range of common species and are now updated and trended annually. Data gathered for the Brown Honeyeater, and Mangrove Gerygone were written into a short paper, published in 2009 and 2019, respectively in Sunbird. Similar reports for other species are planned.

Productivity data is shown in the following figures (Figures 6.2-6.6) and again shows a high degree of variability in some species. Some species such as Noisy Miner and Rainbow Lorikeet show entirely consistent juvenile ratios whereas other species such as the honeyeaters show significant variation between years. Mangrove Gerygone had a consistent juvenile proportion in each year of the study until 2015 when the ratio of juveniles decreased by over half. This, combined with a significant reduction in the numbers caught in 2015 at critical sites, was a cause

for concern and required ongoing monitoring. It was pleasing to see a consistent recovery from 2016 to the present day for this species, both in numbers and the proportion of juveniles caught. The data shows much variability between years despite the long-term trends noted. This is likely a reflection of local environmental conditions impacting breeding and food supply requiring further investigation.

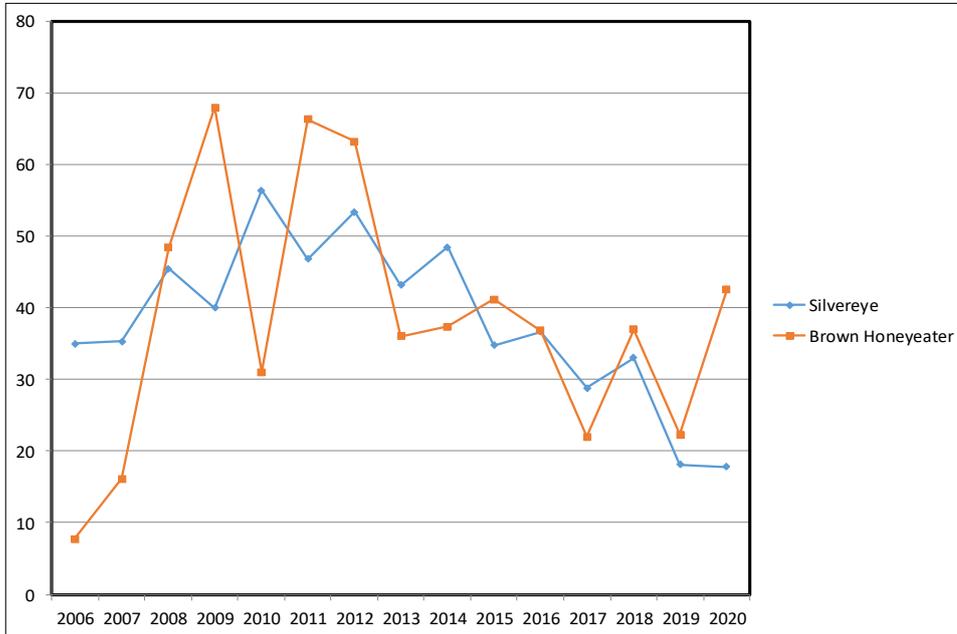


Figure 6.2 Productivity trends for Silereye and Brown Honeyeater

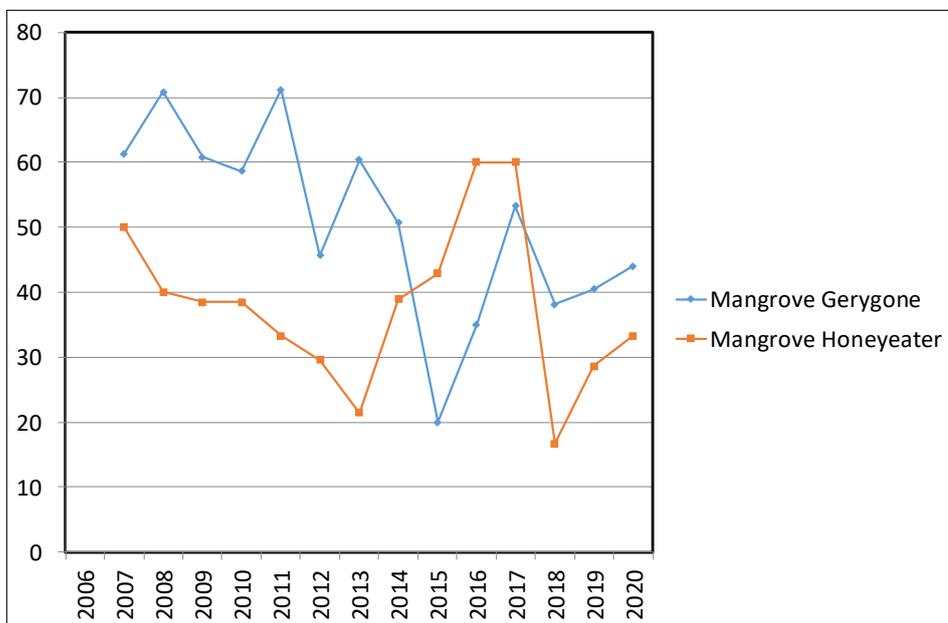


Figure 6.3 Productivity trends for Mangrove Gerygone and Mangrove Honeyeater

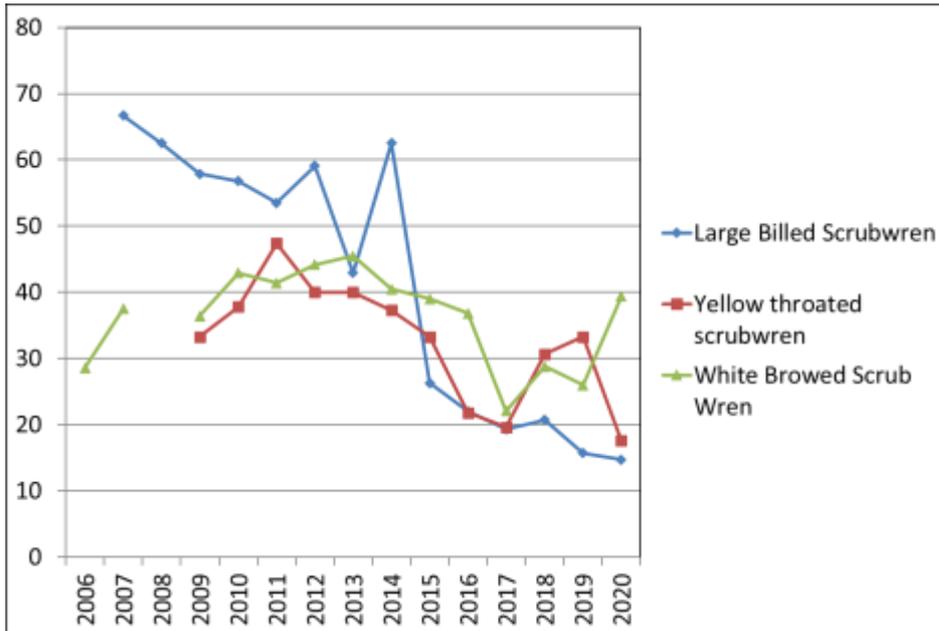


Figure 6.4 Productivity trends for Scrub-wrens

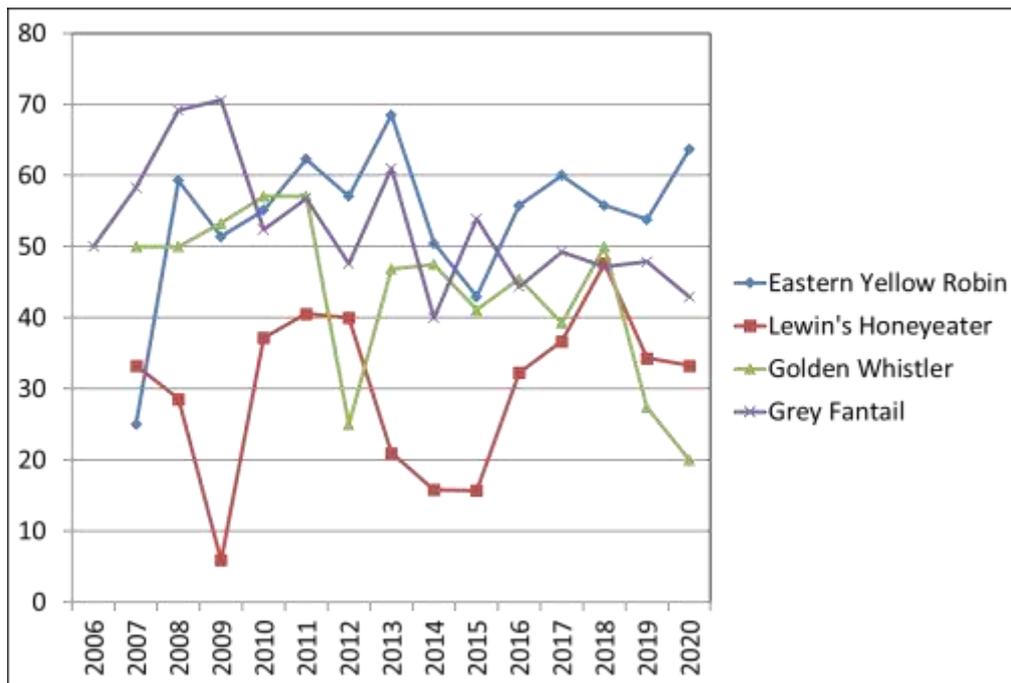


Figure 6.5 Productivity trends for rain forest species at Imbil and the Border Ranges (Other Species)

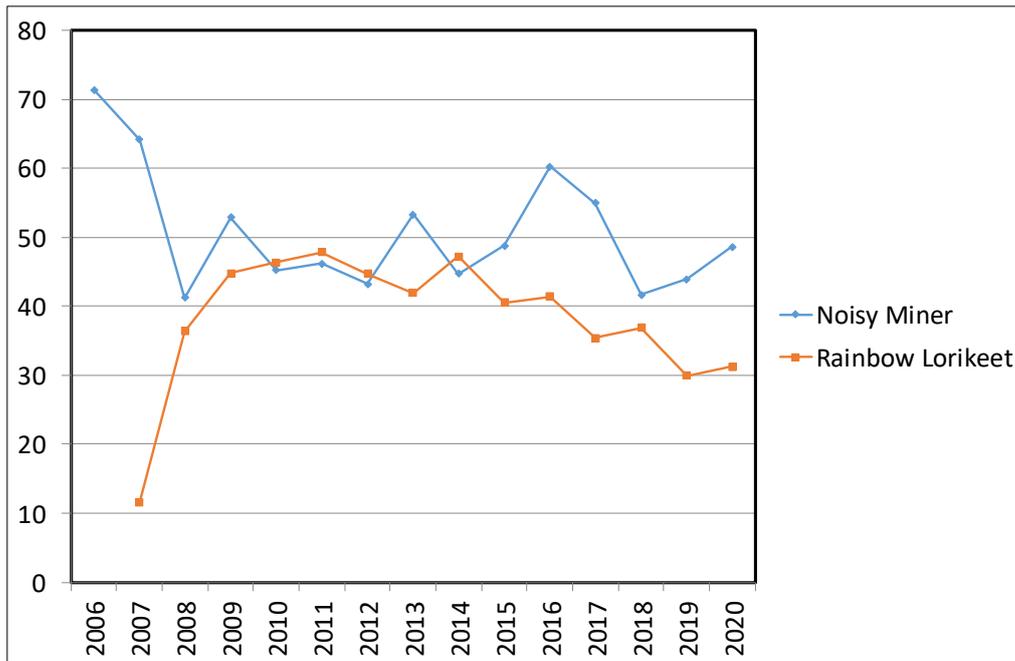


Figure 6.6 Productivity trends for Noisy Miner and Rainbow Lorikeet at Shailer Park

6.7 Publications arising from the Bush-bird Project

2009

Coleman J.T., Macdonald S.H., Smith H.J. (2009). **Analysis of biometric variation in Brown Honeyeater *lichmera indistincta* in south east Queensland.** *Sunbird* 39(2): 39-48

2012

Coleman J.T, Van Gessel F.W, Clayton M. (2012) **Longevity and movements in the White-faced Robin (*Tregellesia leucops albigularis*) in Iron Range National Park, Cape York .** *The Sunbird* (2012) 42(1): 11-23

2017

Coleman J.T. and Noske R.A. (2017). **Mangrove Gerygones *Gerygone levigaster* are short-lived compared to other small Australian passerines.** *Corella* 41:1-7

Coleman J.T. and Lloyd P. (2017) **Using sexual dimorphism in morphometric traits to sex Eastern Yellow Robins *Eopsaltria australis*** *Corella* 41: 15-19

2019

Coleman J.T., Noske R.A., Smith B. and Mulyani Y.A. (2019). **Moult timing and morphometrics of Mangrove Gerygones: a comparison of monsoon-tropical and subtropical populations.** *Corella* 43: 106-113

Coleman J. (2019) **Monitoring long term trends in common Australian birds across a range of habitats in Queensland.** *Sunbird* 48: 136-143.

Coleman, Jonathan T. (2019). **Bird Banding Report for the Border Ranges National Park, NSW: 2009-2018**. Report to NSW DEC.

Coleman J.T. (2019) **Bird Banding Report for the Kutini-Payamu National Park, QLD: 1990-2019**. Report to QLD DES

7 FUTURE ACTIVITIES

The existing fieldwork will continue in its current form and using the existing locations for the foreseeable future so that trend data for species and for the sites can be developed further.

Shorebird banding will continue around Moreton Bay and the use of geolocators and PTT's on certain species will start to provide much more detailed insights into the migration of some species and their utilisation of Moreton Bay.

For passerines and other land birds, this year saw the introduction of more sites and as more banders become certified it is hoped this trend will continue with more sites and more comprehensive data collection made.

APPENDIX 1: BLACK SWAN BANDING DATA FOR 2020

Site/Month	2020												TOTAL	GT
	J	F	M	A	M	J	J	A	S	O	N	D		
GOLD COAST	12	12	7	17	14	11	13	13	15(1)	15	0	0	129(1)	936 (85)
LOGAN CITY	0	0	0		0	0	0	0	0	0	0	0	0	21(2)
PORT OF BRISBANE	0	0	0		0	0	0	0	0	0	0	0	0	10
AUSTRALIAN CAPITAL TERRITORY	0	0	10		0	6	0	0	0	24	21(2)	7	68(2)	141(3)

Figures are numbers of new birds banded; figures in brackets are the number of recaptures

APPENDIX 2: SHOREBIRD BANDING DATA FOR 2020

For the following Tables in Appendix 2, monthly numbers represent new birds banded; numbers within brackets are the number of recaptures.

2.1. GEOFF SKINNER RESERVE, WELLINGTON POINT													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
<i>Bar-tailed Godwit</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	154(4)
<i>Curlew Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	8(1)
<i>Eastern Curlew</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	10
<i>Great Knot</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<i>Greater Sand Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Gull-billed Tern</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Lesser Sand Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2(1)
<i>Masked Lapwing</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Pied Oystercatcher</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Red-capped Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	4(1)
<i>Red-necked Stint</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	49 (5)
<i>Sharp-tailed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	29
<i>Whimbrel</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	8
<i>White-headed Stilt</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	7

2.2. MANLY MARINA													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
<i>Bar-tailed Godwit</i>	0	0	0	0	0	0	0	51(1)	0	0	0	0	51(1)	319 (10)
<i>Black-tailed Godwit</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Broad-billed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	1	1	4(1)
<i>Curlew Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	13	13	222(18)
<i>Double-banded Plover</i>	0	0	0	0	1	0	0	0	0	0	0	0	1	8
<i>Far Eastern Curlew</i>	0	0	0	0	1	0	0	0	0	0	0	0	1	20
<i>Great Knot</i>	0	0	0	0	0	0	0	2	0	0	0	0	2	16 (1)
<i>Greater Sand Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	27(1)
<i>Grey Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Grey-tailed Tattler</i>	0	0	0	0	18	0	0	27	0	0	0	3	48	855(84)
<i>Lesser Sand Plover</i>	0	0	0	0	0	0	0	0	0	0	0	2	2	196 (14)
<i>Masked Lapwing</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	16
<i>Pacific Golden Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	37(4)
<i>Pied Oystercatcher</i>	0	0	0	0	2	0	0	0	0	0	0	0	2	62 (13)
<i>Red Knot</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	12
<i>Red-capped Plover</i>	0	0	0	0	0	0	0	1	0	0	0	0	1	22
<i>Red-necked Stint</i>	0	0	0	0	7	0	0	0	0	0	0	2	9	672(48)
<i>Ruddy Turnstone</i>	0	0	0	0	5	0	0	1	0	0	0	4	10	129(18)
<i>Sharp-tailed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	1	1	218(2)
<i>Terek Sandpiper</i>	0	0	0	0	1	0	0	0	0	0	0	1	2	67(5)
<i>Wandering Tattler</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Whimbrel</i>	0	0	0	0	0	0	0	2	0	0	0	0	2	33(1)
<i>White-headed Stilt</i>	0	0	0	0	0	0	0	44(2)	0	0	0	0	44(2)	74(2)

2.3. MORETON BAY ISLANDS/REDLAND BAY/SOUTHPORT, THE SPIT

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Bush Stone-curlew</i>	0	0	0	0	0	5	0	2	0	0	0	0	7	190 (21)

2.4. TOORBUL

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Bar-tailed Godwit</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	438(21)
<i>Black-tailed Godwit</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Curlew Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	4
<i>Far Eastern Curlew</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Great Knot</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	224(29)
<i>Grey-tailed Tattler</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	22
<i>Pied Oystercatcher</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	12
<i>Red Knot</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	5(1)
<i>Red-capped Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Sharp-tailed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Whimbrel</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	90

2.5. PORT OF BRISBANE

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Bar-tailed Godwit</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	62(1)
<i>Broad-billed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	4
<i>Caspian Tern</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Crested Tern</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Curlew Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	15(1)
<i>Great Knot</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	93(9)
<i>Greater Sand Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Grey-tailed Tattler</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<i>Lesser Sand Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	136(4)
<i>Pacific Golden Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	59(1)
<i>Red Knot</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<i>Red-capped Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<i>Red-kneed Dotterel</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	23
<i>Red-necked Stint</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	56(1)
<i>Ruddy Turnstone</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	16
<i>Sharp-tailed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Sooty Tern</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	4
<i>White-headed Stilt</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2

2.6. NUDGE / KEDRON WETLANDS

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Black-fronted Dotterel</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Masked Lapwing</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Red-kneed Dotterel</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Red-necked Avocet</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1

<i>Sharp-tailed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>White-headed Stilt</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

2.7. HORSESHOE BAY, SOUTH STRADBROKE ISLAND

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Pied Oystercatcher</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2

2.8. LYTTON ROOST

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Grey-tailed Tattler</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	7
<i>White-headed Stilt</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1

2.9. BRISBANE AIRPORT

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Straw-necked Ibis</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	6

2.10. TURKEY BAY AREA, CURTIS ISLAND and FACING ISLAND, GLADSTONE

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Bar-tailed Godwit</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	20
<i>Far Eastern Curlew</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	8
<i>Great Knot</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	7
<i>Grey Plover</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<i>Grey-tailed Tattler</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	33
<i>Little Tern</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2(1)
<i>Pied Oystercatcher</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Red-necked Stint</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	18(1)
<i>Terek Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3

2.11. KING STREET, THORNLANDS

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Bar-tailed Godwit</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	47(1)
<i>Far Eastern Curlew</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Greenshank</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Gull-billed Tern</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Red-necked Stint</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Sharp-tailed Sandpiper</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	8
<i>Whimbrel</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	9
<i>White-headed Stilt</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	10

2.12. CAIRNS AIRPORT MANGROVES

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Whimbrel</i>	0	0	0	0	0	0	0	0	0	0	1	0	1	3

2.13. TEE TREES WETLANDS, ARUNDEL

<i>SPECIES/Month</i>	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
<i>Latham's Snipe</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Red-kneed Dotterel</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	2

APPENDIX 3 : BANDING DATA FOR 2020; ALL OTHER SPECIES

For the following Tables in Appendix 2, monthly numbers represent new birds banded; numbers within brackets are the number of recaptures.

3.1. BORDER RANGES, ALL THREE Sub-SITES COMBINED (High Altitude Rain Forest)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND
														TOTAL
Azure Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Bassian thrush	0	0	1	0	0	0	0	0	0	0	0	0	1	43(5)
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Brown Cuckoo-Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Brown Gerygone	0	0	3(1)	0	0	0	0	0	0	0	0	0	3(1)	67(6)
Brown Goshawk	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Brown Thornbill	0	0	10	0	0	0	0	0	0	0	0	0	10	129(47)
Crimson Rosella	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Eastern Spinebill	0	0	1	0	0	0	0	0	0	0	0	0	1	80(12)
Eastern Yellow Robin	0	0	14(4)	0	0	0	0	0	0	0	0	0	14(4)	253 (151)
Eastern Whipbird	0	0	0	0	0	0	0	0	0	0	0	0	0	26(8)
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Golden Whistler	0	0	1(1)	0	0	0	0	0	0	0	0	0	1(1)	112(33)
Green Catbird	0	0	0	0	0	0	0	0	0	0	0	0	0	35(1)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grey Fantail	0	0	1	0	0	0	0	0	0	0	0	0	1	30
Grey Shrike-thrush	0	0	1(1)	0	0	0	0	0	0	0	0	0	1(1)	17(4)
Large-billed Scrubwren	0	0	7(3)	0	0	0	0	0	0	0	0	0	7(3)	310(200)
Lewin's Honeyeater	0	0	14(1)	0	0	0	0	0	0	0	0	0	14(1)	210(48)
Logrunner	0	0	0(1)	0	0	0	0	0	0	0	0	0	0(1)	41(8)
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Noisy Pitta	0	0	0	0	0	0	0	0	0	0	0	0	0	12(1)
Pale Yellow Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	29(11)
Paradise Riflebird	0	0	1	0	0	0	0	0	0	0	0	0	1	7
Pied Currawong	0	0	0	0	0	0	0	0	0	0	0	0	0	3(5)
Red-browed Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	113(5)
Regents Bowerbird	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Rose Robin	0	0	2	0	0	0	0	0	0	0	0	0	2	7
Rufous Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	191(33)
Russet-tailed Thrush	0	0	1	0	0	0	0	0	0	0	0	0	1	38(6)
Satin Bowerbird	0	0	0	0	0	0	0	0	0	0	0	0	0	25(12)
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Silveryeye	0	0	0	0	0	0	0	0	0	0	0	0	0	26
White-browed Scrubwren	0	0	5(9)	0	0	0	0	0	0	0	0	0	5(9)	294(292)
White-throated Treecreeper	0	0	1	0	0	0	0	0	0	0	0	0	1	9
Yellow-throated Scrubwren	0	0	4(2)	0	0	0	0	0	0	0	0	0	4(2)	377(256)

3.2. BOWRA NATURE SANCTUARY (Mulga)											2020	2006-20
Species/Location	Site	Total	Grand Total									
	1	2	3	4	5	6	7	8	9	10		
Apostlebird	0	0	0	0	0	0	0	0	0	0	0	8
Australian Owlet	0	0	0	0	0	0	0	0	0	0	0	3(1)
Australian Ringneck	0	3	0	0	0	0	0	2	0	0	5	67(1)
Black Honeyeater	0	0	0	2	0	2	0	0	0	0	4	4
Black-faced Cuckoo-	0	0	0	0	0	0	0	0	0	0	0	1
Black-faced	0	0	0	0	0	0	0	0	0	0	0	7
Black-fronted	8	0	0	0	0	0	0	0	0	0	8	30(1)

3.2. BOWRA NATURE SANCTUARY (Mulga)											2020	2006-20
Species/Location	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Total	Grand Total
Black-tailed Native-	0	0	0	0	0	0	0	0	0	0	0	10(1)
Blue Bonnet	0	0	0	0	0	0	0	0	0	0	0	5
Blue-faced	0	0	0	0	0	0	0	0	0	0	0	4
Blue-winged Parrot	0	0	0	0	0	0	0	0	0	0	0	1
Bourke's Parrot	0	0	0	1	0	0	0	0	3	0	4	39(3)
Brown Falcon	0	0	0	0	0	0	0	0	0	0	0	1
Brown Goshawk	1	0	0	0	0	0	0	0	0	0	1	1
Brown Honeyeater	0	0	0	0	0	0	0	0	0	0	0	61(1)
Brown Treecreeper	4(1)	7(5)	16(2)	0	0	0	3(1)	0	1	3(2)	34(11)	160(39)
Brown-headed	0	0	0	0	0	0	0	0	0	0	0	28
Budgerigar	2	48	1	0	0	0	2	0	3	127	183	184
Chestnut-breasted	0	0	0	0	0	0	0	0	0	0	0	3
Chestnut-crowned	7	0	0	0	0	0	0	0	0	9(1)	16(1)	81(12)
Chestnut-rumped	2(2)	0	0	2	2	1	3	1	0	2	13(2)	154(7)
Collared	0	0	0	0	0	0	0	0	0	0	0	1
Common Bronzewing	0	0	0	0	0	0	0	0	0	0	0	12
Crested Bellbird	0	0	0	1	0	0	0	0	0	2	3	14
Crested Pigeon	0	0	0	0	0	0	0	0	0	0	0	17
Crimson Chat	0	0	0	0	0	0	0	0	0	0	0	5
Diamond Dove	64	9	20	1	0	1	20	1	37	59(1)	212(1)	274(1)
Double-barred Finch	0	0	0	0	0	0	0	0	0	0	0	503(32)
Fairy Martin	28	0	0	0	0	0	0	0	0	0	28	28
Galah	0	0	0	0	0	0	0	0	0	0	0	5
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	31(2)
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	30
Grey Shrike-Thrush	2	0	0	0	0	0	0	0	0	0	2	25
Grey-crowned	0	2	0	0	0	2	0	0	0	0	2	23(1)
Grey-headed	0	0	0	0	0	0	0	0	0	0	2	26(1)
Hall's Babbler	0	0	0	2	0	0(1)	0	0	0	0	2(1)	40(5)
Hooded Robin	1	0	0	0	0	0	0	0	0	5(2)	6(2)	35(3)
Horsfield's Bronze	1	0	0	0	0	0	0	0	0	1	4	10
Inland Thornbill	0	0	2	2	1	2	0	0	0	0	7	74(11)
Jacky Winter	1	0	0	0	0	0	0	0	0	0	1	34(3)
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	2
Little Button-quail	1	0	2	0	1	0	0	0	0	1	5	5
Little Crow	0	0	0	0	0	0	0	0	0	0	0	1
Little Friarbird	0	1	0	0	0	0	0	0	1	0	2	16
Little Woodswallow	0	0	0	0	0	0	0	0	0	0	0	1
Maggie-lark	0	0	0	0	0	0	0	0	0	0	0	9
Major Mitchell's	0	0	0	0	0	0	0	0	0	0	0	4
Mistletoe Bird	0	0	0	0	0	0	0	0	0	0	0	24(1)
Mulga Parrot	0	0	0	0	0	0	0	1	1	1	3	42(1)
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	1
Peaceful Dove	6	3	1	0	0	0	6	0	0	0	17	237(22)
Pied Butcherbird	0	0	0	0	0	0	0	0	0	1	1	35
Pied Honeyeater	0	0	0	0	0	0	0	0	0	0	0	3

3.2. BOWRA NATURE SANCTUARY (Mulga)											2020	2006-20
Species/Location	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Total	Grand Total
Plum-headed Finch	0	1	0	0	0	0	0	0	0	0	1	53
Rainbow Bee-eater	0	0	0	0	0	0	0	0	0	0	0	1
Red-backed	0	0	0	0	0	0	0	0	0	0	0	1
Red-capped Robin	1		1	4	3	2	4	2	3(1)	1	21(1)	157(4)
Red-kneed Dotterel	0	0	0	0	0	0	0	0	0	0	0	1
Red-rumped Parrot	0	0	0	0	0	0	0	0	0	0	0	4
Red-winged Parrot	0	0	0	0	0	0	0	0	0	0	0	7
Redthroat	0	0	1	0	0	0	0	0	0	0	1	2
Restless Flycatcher	2	0	0	0	0	0	0	0	0	0	2	8(1)
Rufous Songlark	1	9	3	0	0	0	0	0	1	0	14	23
Rufous Whistler	2	1	0	1	0	1	1	0	1	1	7(1)	89(1)
Sacred Kingfisher	0	0	1	0	0	0	0	0	0	0	1	17
Singing Honeyeater	1	0	3	0	0	0	0	0	2	3	9	291(14)
Southern Whiteface	2(1)	0	0	0	0	0	0	0	1	3(1)	6(2)	20(5)
Spiny-cheeked	6(1)	0	0	0	0	1	0	0	0	1	8(1)	338(5)
Splendid Fairy-wren	0	0	2(2)	6	7(1)	3	0	0	0	0	18(3)	2(9)
Spotted Bowerbird	3	0	0	0	0	0	0	0	0	0	5	81(1)
Spotted Nightjar	0	0	0	0	0	0	0	0	0	0	0	1
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	2
Striped Honeyeater	0	0	0	0	0	0	0	0	0	0	0	21
Tree Martin	1	0	0	0	0	0	0	0	0	0	1	1
Varied Sittella	0	0	0	0	0	0	0	0	0	2	2	12
Variegated Fairy-	1	1	4	0	0	0	0	0	0	0	6	49(4)
Weebill	0	0	0	0	0	0	0	0	0	0	0	19
White-breasted	0	0	0	0	0	0	0	0	0	0	0	14(1)
White-browed	0	0	1	0	0	0	0	0	0	0	1	17(1)
White-browed	0	0	0	0	0	0	0	0	0	0	0	3
White-fronted	0	0	0	0	0	0	0	0	0	0	0	2
White-plumed	17(6)	16(1)	4	0	0	0	11(1)	1	3	7	59(8)	1616(254)
White-winged	0	0	0	0	0	0	0	0	1	0	1	2
White-winged Fairy-	0	0	0	0	0	0	0	0	0	2	2	28(1)
White-winged Triller	0	0	1	0	0	0	0	0	0	1	2	10
Willie Wagtail	7(2)	1	1	0	0	0	2(1)	0	2	6	19(3)	102(9)
Yellow Thornbill	0	0	0	0	0	0	0	0	0	0	0	13
Yellow-rumped	0	0	0	0	0	0	0	0	0	0	0	37(4)
Yellow-throated	2	0	0	0	0	0	0	0	0	0	2	121
Zebra Finch	78(4)	7	65	12	1	18	8	2	34	117	342(4)	799(7)
Total Species Caught:	242	109	129	31	15	51	60	10	94	355	1095	6581

3.3. BROOKLYN RESERVE, MOUNT LEWIS (High Altitude Tropical Rainforest)												2020	2006-20	
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Atherton Scrubwren	1(2)	0	0	0	0	0	2(11)	0	0	0	5(12)	0	8(25)	28(30)
Azure Kingfisher	0	0	0	0	0	0	1	0	0	0	0	0	1	2
Blue-faced Parrot-Finch	3	0	0	0	0	0	0	0	0	0	3	0	6	6
Bower's Shrike-Thrush	0	0	0	0	0	0	0	0	0	0	8(2)	0	8(2)	18(2)
Bridled Honeyeater	4	0	0	0	0	0	4(1)	0	0	0	15(3)	0	23(4)	39(4)
Chowchilla	0	0	0	0	0	0	0	0	0	0	3(2)	0	3(2)	8(2)
Eastern Spinebill	1	0	0	0	0	0	2	0	0	0	1	0	4	7
Eastern Whipbird	0	0	0	0	0	0	0(1)	0	0	0	2	0	2(1)	3(1)
Emerald Dove	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Fernwren	0	0	0	0	0	0	1(1)	0	0	0	7(2)	0	8(3)	11(4)
Golden Bowerbird	0	0	0	0	0	0	0	0	0	0	1	0	1	4
Golden Whistler	1	0	0	0	0	0	0(2)	0	0	0	2(5)	0	3(7)	11(9)
Grey-headed Robin	3(4)	0	0	0	0	0	5(6)	0	0	0	18(12)	0	26(22)	85(37)
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grey Whistler	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Large-billed Scrubwren	1	0	0	0	0	0	1	0	0	0	1(5)	0	3(5)	18(9)
Little Shrike-thush	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Lewin's Honeyeater	1(2)	0	0	0	0	0	2(1)	0	0	0	4(1)	0	7(4)	22(6)
Mistletoebird	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Mountain Thornbill	0(1)	0	0	0	0	0	3(1)	0	0	0	2(1)	0	5(3)	15(3)
Pale Yellow Robin	0	0	0	0	0	0	5	0	0	0	0	0	5	6
Red-browed Finch	17	0	0	0	0	0	0	0	0	0	0	0	17	17
Rufous Fantail	0	0	0	0	0	0	0	0	0	0	3(4)	0	3(4)	8(4)
Spectacled Monarch	0	0	0	0	0	0	0	0	0	0	5(1)	0	5(1)	6(1)
Spotted Catbird	1	0	0	0	0	0	0	0	0	0	2(2)	0	3(2)	16(3)
Tooth-billed Bowerbird	0	0	0	0	0	0	0	0	0	0	4	0	4	9
Victoria's Riflebird	1	0	0	0	0	0	0	0	0	0	0	0	1	4
White-throated Treecreeper	1	0	0	0	0	0	0	0	0	0	1	0	2	5
Yellowthroated Scrubwren	1(1)	0	0	0	0	0	6(4)	0	0	0	5(7)	0	12(12)	28(14)

3.4. BUNCE FARM,IMBIL (Low Altitude Rainforest/Wet Sclerophyll)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australasian Figbird	0	0	0	0	0	0	1	0	35	14(2)	0	0	50(2)	141(8)
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Azure Kingfisher	0	0	1	0	0	0	0	0	0	0	0	0	1	20(13)
Bar-shouldered Dove	0	1	1	0	0	0	0	0	0	0	0	0	2	11(3)
Barred Cuckoo-Shrike	0	0	0	0	0	0	0	0	0	0	0	0	0	6(1)
Bell Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Blue-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	13(1)
Brown Cuckoo-Dove	0	0	1	0	0	0	0	0	1	1	0	0	3	10(1)
Brown Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Goshawk	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Honeyeater	0	5(1)	2(1)	0	0	0	0	0	0	1	2	0	10(2)	94(12)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Brown Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	5(1)
Channel-billed Cuckoo	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Common Cicadabird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Crested Shrike-tit	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Double-barred Finch	0	0	0	0	0	0	0	0	0	8	0	0	8	21
Dusky Honeyeater	0	2(1)	1	0	0	0	1(1)	0	1(1)	3(3)	3(2)	0	11(8)	182(44)
Eastern Spinebill	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Eastern Whipbird	0	0	1(1)	0	0	0	0	0	0(1)	0	0	0	1(2)	35(13)
Eastern Yellow Robin	0	0	9(6)	0	0	0	7(8)	2	5(8)	4(7)	0	0	25(29)	360(415)
Emerald Dove	0	0	2	0	0	0	0	0	0	0	0	0	2	18
Fairy Gerygone	0	0	0(1)	0	0	0	0(1)	0	0	0	0	0	0(2)	18(11)
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	1	0	0	1	38(8)
Forest Kingfisher	0	0	0	0	0	0	0	0	1	0	0	0	1	5
Golden Whistler	0	1	4(4)	0	0	0	2(3)	0	2(1)	7(2)	0	0	15(10)	222(148)
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Green Catbird	0	0	0	0	0	0	0	0	1	0	0	0	1	9
Grey Fantail	0	0	0	0	0	0	4	0	0	0	0	0	4	75(13)
Grey Shrike-thrush	0	0	0	0	0	0	1	0	1	0	0	0	2	37(12)
King Parrot	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Large-billed Scrubwren	0	1	0(2)	0	0	0	1	0	0(1)	2	1	0	5(3)	86(48)
Laughing Kookaburra	0	0	0	0	0	0	0	0	1	1(2)	0	0	2(2)	17(6)
Leadon Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Lewin's Honeyeater	0	4(1)	4(7)	0	0	0	6(4)	0	6(7)	17(5)	1(2)	0	38(26)	324(247)
Little Bronze Cuckoo	0	0	0	0	0	0	0	0	1	0	0	0	1	4
Little Friarbird	0	0	0	0	0	0	0	0	0	1	0	0	1	7
Little Shrike-thrush	0	0(1)	2(2)	0	0	0	0(3)	0	1(6)	1(5)	0	0	4(17)	159(197)
Little Wattlebird	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Mistletoebird	0	0	0	0	0	0	0	0	0	1(1)	1	0	2(1)	16(1)
New Holland Honeyeater	0	1	3(2)	0	0	0	3(1)	0	10(2)	24(3)	12(4)	0	52(12)	188(40)
Noisy Friarbird	0	0	0	0	0	0	0	0	2	0	0	0	2	27(2)
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	3(1)
Noisy Pitta	0	0	0	0	0	0	0	0	0	0	0	0	0	19(2)
Olive-backed Oriole	0	0	0	0	0	0	1	0	1	0	0	0	2	23
Painted Button-quail	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Pale Yellow Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Pale-headed Rosella	0	0	0	0	0	0	0	0	0	0	0	0	0	1(1)
Paradise Riflebird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Peaceful Dove	0	0	0	0	0	0	2	0	1	0(1)	0	0	3(1)	10(1)
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rainbow Lorikeet	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Red-backed Fairy-wren	0	0	0	0	0	0	3(1)	0	1	0	0	0	4(1)	53(10)
Red-browed Finch	0	0	2	0	0	0	0	0	4	12(1)	2	0	16(1)	192(22)
Regent's Bowerbird	0	0	0	0	0	0	0(1)	0	0	0	0	0	0(1)	14(2)
Rose Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Rose-crowned Fruit-Dove	0	0	1	0	0	0	0	0	0	0	0	0	1	3
Rufous Fantail	0	0(1)	2(1)	0	0	0	3	0	0	1	0	0	6(2)	97(19)
Rufous Whistler	0	0	0	0	0	0	0	0	2(1)	1(1)	0	0	3(2)	38(15)
Russet-tailed Thrush	0	0	0	0	0	0	0	0	0	0	1	0	1	29(11)
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Satin Bowerbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Scaly-breasted Lorikeet	0	0	0	0	0	0	0	0	0	1	0	0	1	6
Scarlet Honeyeater	0	0	0	0	0	0	6	0	1	3	0	0	10	155(1)
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	26(2)
Silveryeye	0	1	0	0	0	0	0	0	1	1	0	0	3	249(3)
Spangled Drongo	0	0	0	0	0	0	0	0	0	1	0	0	1	22(2)
Spectacled Monarch	0	0	0	0	0	0	1(3)	0	4(2)	5(4)	2	0	12(9)	183(144)
Spotted Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	2

3.4. BUNCE FARM, IMBIL (Low Altitude Rainforest/Wet Sclerophyl)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Tawny Frogmouth	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tawny Grassbird	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Varied Sitella	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Varied Triller	0	0	0	0	0	0	1	0	0	0	0	0	1	31(7)
Variegated Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	17(3)
Welcome Swallow	0	0	0	0	0	0	0	0	0	0	0	0	0	3
White-browed Scrubwren	0	0	0(1)	0	0	0	1(1)	0	1(1)	0(1)	0	0	2(4)	40(45)
White-cheeked Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White-eared Monarch	0	0	2(1)	0	0	0	0	0	0	0	0	0	2(1)	28(9)
White-naped Honeyeater	0	0	0	0	0	0	7	0	9	0	0	0	16	57(7)
White-throated Gerygone	0	0	0	0	0	0	0	0	1	0	0	0	1	1
White-throated Honeyeater	0	1	0(1)	0	0	0	1	0	0	0(1)	1	0	3(2)	62(19)
White-throated Treecreeper	0	0	0	0	0	0	0	0	0	0	0	0	0	9(12)
Willie Wagtail	0	1	0	0	0	0	0(2)	0	0	0	1	0	2(2)	13(4)
Wonga Pigeon	0	0	0	0	0	0	0	0	0	0	1	0	1	4(1)
Yellow-faced Honeyeater	0	0	0	0	0	0	1(1)	0	0	1	0	0	2(1)	28(5)
Yellow-throated Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.5. CAMERON'S SCRUB/DUNDAS (Wet Sclerophyl)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Black-breasted Button-quail	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Eastern Yellow Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	2

3.6. CANUNGRA (Open Forest/Regrowth)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Bar-shouldered Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Cuckoo-Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Goshawk	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Eastern Whipbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4(4)
Eastern Yellow Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	4(5)
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	21(11)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Grey Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Large-billed Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	7(4)
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lewin's Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	18(2)
Little Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	4(2)
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-backed Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	23(6)
Red-browed Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	15(6)
Rose Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Rufous Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	6(4)
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Russet-tailed Thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Scarlet Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Silvereye	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.6. CANUNGRA (Open Forest/Regrowth)

SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
Spotted Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	8
White-browed Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (1)
White-throated Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Willie Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wonga Pigeon	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	2

3.7. CARL CREEK, DAYBORO (Riparian Scrub)

SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
Bar-shouldered Dove	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Brown Honeyeater	0	0	0	0	0	0	0	2	0	1	0	0	3	3
Common Cicadabird	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Double-barred Finch	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Eastern Whipbird	0	0	0	0	0	0	0	0	0	1	0	1 (1)	2 (1)	2 (1)
Eastern Yellow Robin	0	0	0	0	0	0	0	2	0 (1)	0	2 (1)	0 (3)	4 (5)	4 (5)
Grey Fantail	0	0	0	0	0	0	0	2	0	0	1	1	4	4
Lewin's Honeyeater	0	0	0	0	0	0	0	3	1	0	0 (1)	5 (2)	9 (3)	9 (3)
Little Shrike-thush	0	0	0	0	0	0	0	0	0	0	2	0 (1)	2 (1)	2 (1)
Red-browed Finch	0	0	0	0	0	0	0	0	3	0	0	0	3	3
Rufous Fantail	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Silvereye	0	0	0	0	0	0	0	2	0 (2)	2	15 (1)	0	17 (3)	17 (3)
Superb Fairy-wren	0	0	0	0	0	0	0	0	1	0	3	0	4	4
Tawny Grassbird	0	0	0	0	0	0	0	1	0	0	3	0	4	4
Varied Triller	0	0	0	0	0	0	0	0	0	1	0	0	1	1
White-browed Scrubwren	0	0	0	0	0	0	0	0	0	5	0	2 (1)	7 (1)	7 (1)
White-eared Monarch	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	2	0	2	2

3.8. CEDAR LAKES ADVANCETOWN (Open Forest)

SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
Australasian Figbird	1	0	0	0	0	0	0	0	0	0	0	0	1	7
Australian Magpie	1	0	0	0	0	0	0	0	0	0	0	0	1	6 (3)
Australian White Ibis	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Azure Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (7)
Bar-shouldered Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Black-faced Cuckoo-Shrike	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Blue-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	21 (1)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Thornbill	0	0	0	0	0 (1)	0	0	0	0	0	0	0	0 (1)	3 (1)
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	2

3.8. CEDAR LAKES ADVANCETOWN (Open Forest)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Chestnut-breasted Mannikin	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Double-barred Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	46 (5)
Eastern Spinebill	0	0	0	0	0	0	0	0	0	0	0	0	0	18 (2)
Eastern Whipbird	0	0	0	0	0 (1)	0	0	0	0	0	0	0	0 (1)	8 (16)
Eastern Yellow Robin	0	1	0	0	0	0	0	0	0	0	0	0	1	15 (22)
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Forest Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden Whistler	0	0 (1)	0	0	0	0	1	0	0	0	0	0	1 (1)	51 (43)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Grey Fantail	0	0	0	0	1	0	0	0	0	0	0	0	1	36 (6)
Grey Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	3 (1)
Large-billed Scrubwren	0	2	0	0	0	0	0	0	0	0	0	0	2	9 (13)
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Leaden Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	3 (1)
Lewin's Honeyeater	0	0 (1)	0	0	2 (1)	0	0	0	0	0	0	0	2 (2)	74 (40)
Little Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Little Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Magpie-Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Olive-backed Oriole	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Pacific Black Duck	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Peaceful Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Purple Swamphen	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-backed Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	16 (7)
Red-browed Finch	0	0	0	0	0	1 (1)	0	0	0	0	0	0	1 (1)	200 (81)
Regent Bowerbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rose Robin	0	0	0	0	0	1	1	0	0	0	0	0	2	22 (8)
Rufous Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	12 (1)
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Scarlet Honeyeater	0	0	0	0	0	1	0	0	0	0	0	0	1	28
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (1)
Silvereye	0	0	0	0	0	0	0	0	0	0	0	0	0	336 (48)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Speckled Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (2)
Spectacled Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	5 (1)
Spotted Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Striated Pardalote	0	0 (1)	0	0	1	0	0	0	0	0	0	0	1 (1)	16 (3)
Superb Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	11 (10)
Variegated Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	19 (7)
White-browed Scrubwren	0	0	0	0	0 (1)	0	0 (1)	0	0	0	0	0	0 (2)	15 (27)
White-throated Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.8. CEDAR LAKES ADVANCETOWN (Open Forest)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
White-throated Honeyeater	0	0	0	0	2	0	0	0	0	0	0	0	2	10 (3)
White-throated Treecreeper	0 (1)	0 (1)	0	0	0	0 (1)	0	0	0	0	0	0	0 (3)	9 (5)
Willie Wagtail	0	0	0	0	1	0	0	0	0	0	0	0	1	10 (7)
Yellow-faced Honeyeater	0	0	0	0	4 (1)	0	0	0	0	0	0	0	4 (1)	78 (4)

3.9. COOPERLODE DAM, CAIRNS (Tropical Rain Forest)													2020	2006-20
SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Large-billed Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pale Yellow Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rufous Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Yellow-spotted Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.10. CURRUMBIN WILDLIFE SANCTUARY (Suburban)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Rainbow Lorikeet	0	0	0	0	0	0	20	0	0	0	0	10	30	30

3.11. EAGLEBY SITES 1 AND 2 COMBINED (Freshwater Wetland/Scrub)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australasian Figbird	1	0	0	0	0	0	0	0	0	0	0	0	1	15
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Australian Reed-Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	40 (8)
Azure Kingfisher	0	1	0	0	0	0	0	0	0	0	1 (1)	0	2 (1)	12 (2)
Bar-shouldered Dove	0	0	0	0	1	1	1	0	0	1	0	0	4	38 (9)
Black-faced Cuckoo-Shrike	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Brown Goshawk	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Brown Honeyeater	0	1	0	0	1 (1)	3 (1)	1	1	9	30 (3)	8 (1)	0	54 (6)	472 (119)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (1)
Brown Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Chestnut-breasted Mannikin	1	0	0	0	3	0	0	0	0	0	1	0	5	85 (3)
Double-barred Finch	3	1	0	0	1	0	0	0	0	2	0	0	7	73(7)
Eastern Spinebill	0	0	0	0	0	2	0	0	0	0	0	0	2	15(3)
Eastern Whipbird	0	0	0	0	0	0	0	0	1	0	0	0	1	11(8)
Eastern Yellow Robin	2(2)	0(1)	0	0	0	0(4)	0(1)	0(1)	0(1)	0	1(1)	0	3(11)	63(114)
European Blackbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.11. EAGLEBY SITES 1 AND 2 COMBINED (Freshwater Wetland/Scrub)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Forest Kingfisher	0	0	0	0	0	1	0	0	0	0	0	0	1	3
Golden Whistler	0	0	0	0	0	0	1	0(1)	0	0	0	0	1(1)	42(33)
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	30(9)
Grey Fantail	0	1	0	0	3	3	0	1	0	0	0	0	8	113(22)
Grey Shrike-thrush	0	0	0	0	0	1	0	0	0	0	0	0	1	32(20)
Horsefield's Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Laughing Kookaburra	0	0	0	0	0	0	0	0	1	0	0(1)	0	1(1)	20(6)
Leaden Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Lewin's Honeyeater	0	0	0	0	1(1)	2(4)	2	1(1)	0(2)	1	3	0	10(8)	103(86)
Little Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Little Shrike-thrush	0	1	0	0	0(1)	2	1	0(1)	0	1	0	0	5(2)	48(51)
Mangrove Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Mangrove Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	6(1)
Mistletoebird	0	0	0	0	2	0	0	0	0	0(1)	0	0	2(1)	55(8)
Olive-backed Oriole	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Peaceful Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Pied Currawong	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Red-backed Fairy-wren	1	1	0	0	0	1	0	3(1)	1	1	0(1)	0	8(2)	86(27)
Red-browed Finch	0(1)	2	0	0	4	1	0	1	1	0	4(1)	0	13(2)	530(149)
Rose Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	3(1)
Rufous Fantail	1(1)	2	0	0	0	5(2)	0	2	0	1(1)	2	0	13(4)	140(53)
Rufous Whistler	0	0	0	0	0	0(1)	1(1)	0	0	0	0(1)	0	1(3)	52(26)
Russet-tailed Thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	1(1)
Sacred Kingfisher	1	4	0	0	1	0	0	0	0	1	1(2)	0	8(2)	45(10)
Scarlet Honeyeater	0	0	0	0	0	3	0	3	16	5	0	0	27	223(4)
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	12(1)
Silvereye	1	0	0	0	15	8(1)	0	0	3	1(1)	5(3)	0	33(5)	1965(376)
Spangled Drongo	0	2	0	0	0	1	0	0	0	0	0	0	3	10(1)
Spectacled Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	10(3)
Spotted Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Striated Pardalote	0	0	0	0	0	1	0	0	0	0	0	0	1	5
Superb Fairy-wren	0	0	0	0	0	0	0	0	0	1	0	0	1	68(36)
Tawny Grassbird	5	0	0	0	1	0	0	0	2	1	1(1)	0	10(1)	129(64)
Torresian Crow	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Varied Triller	0	0	0	0	1	0	0	0	0	0	0	0	1	10(1)
Variegated Fairy-wren	0	1	0	0	0	0	0(1)	1	0	1	2	0	5(1)	127(82)
White-browed Scrubwren	1	0	0	0	0	0	0	2	0	4(1)	0(3)	0	7(4)	106(170)
White-throated Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	6

3.11. EAGLEBY SITES 1 AND 2 COMBINED (Freshwater Wetland/Scrub)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
White-throated Honeyeater	0	0	0	0	0	0	0	2	1	0	0	0	3	41 (7)
Willie Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (1)
Yellow Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Yellow-faced Honeyeater	0	2	0	0	0	2	1	3 (1)	0	0	0	0	8 (1)	264 (43)

3.12. FINCH HATTON / DALRYMPLE HEIGHTS/ EUNGELLA NP/GARGETT (Tropical Rainforest/Riparian Scrub)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australian Brush Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (1)
Australian Swiftlet	19	0	0	0	0	0	0	0	0	0	0	0	19	19
Azure Kingfisher	8 (1)	0	0	0	1 (2)	0	0	0	6 (1)	0	1 (3)	0	16 (7)	39 (17)
Bar-shouldered Dove	2	0	0	0	5 (3)	0	0	0	2 (3)	0	0	0	9 (6)	54 (35)
Black Butcherbird	0	0	0	0	0	0	0	0	0 (1)	0	2	0	2 (1)	5 (1)
Black-faced Cuckoo-Shrike	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Black-faced Monarch	1	0	0	0	0	0	0	0	1	0	2	0	4	9 (4)
Blue-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown Cuckoo-Dove	0	0	0	0	1	0	0	0	1	0	2	0	4	5
Brown Gerygone	0	0	0	0	0	0	0	0	1	0	1	0	2	21 (1)
Brown Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	21 (5)
Brown Thornbill	0	0	0	0	2	0	0	0	4	0	2	0	8	17 (6)
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Buff-breasted Paradise-Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Crested Pigeon	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Crimson Rosella	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Dusky Honeyeater	0	0	0	0	0	0	0	0	1	0	11	0	12	52 (11)
Eastern Spinebill	0	0	0	0	0	0	0	0	8 (4)	0	7 (5)	0	15 (9)	35 (10)
Eastern Whipbird	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Eastern Yellow Robin	5 (6)	10 (3)	0	0	6 (4)	0	0	0	9 (5)	0	6 (8)	0	36 (26)	117 (105)
Emerald Dove	1	0	0	0	1 (3)	0	0	0	13 (6)	0	10 (4)	0	25 (13)	106 (103)
Eungella Honeyeater	0	1 (1)	0	0	3	0	0	0	14 (1)	0	18 (2)	0	36 (4)	55 (9)
Fairy Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (2)
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Australasian Figbird	1	0	0	0	0	0	0	0	0	0	0	0	1	8
Forest Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Golden Whistler	0	1	0	0	2	0	0	0	5	0	5 (2)	0	13 (2)	36 (3)
Grey Fantail	0	2	0	0	4	0	0	0	8	0	3 (1)	0	17 (1)	42 (3)
Grey Goshawk	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grey Shrike-thrush	1	0	0	0	0	0	0	0	1	0	0	0	2	3
King Parrot	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Large-billed Scrubwren	2	1	0	0	1 (1)	0	0	0	5	0	6 (2)	0	15 (3)	48 (16)
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Leaden Flycatcher	1	0	0	0	0	0	0	0	0	0	0	0	1	7
Lewin's Honeyeater	1	0 (1)	0	0	11 (3)	0	0	0	6 (5)	0	4 (3)	0	22 (12)	94 (61)
Little Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Little Kingfisher	1	0	0	0	0	0	0	0	0	0	0	0	1	7 (2)
Little Shrike-thrush	2 (5)	0	0	0	4 (3)	0	0	0	0 (3)	0	0 (4)	0	6 (15)	54 (41)
Maggie Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	1 (1)
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Noisy Pitta	0	0	0	0	0	0	0	0	0	0	2	0	2	7
Olive-backed Oriole	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Olive-backed Sunbird	0	0	0	0	0	0	0	0	0	0	0	0	0	6 (2)
Peaceful Dove	7 (3)	0	0	0	5 (5)	0	0	0	7 (7)	0	5 (5)	0	24 (20)	152 (139)
Pheasant Coucal	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pied Currawong	0	0	0	0	2	0	0	0	0	0	1	0	3	3
Rainbow Lorikeet	0	0	0	0	0	0	0	0	0	0	3	0	3	25
Red-backed Fairy-wren	0	0	0	0	2	0	0	0	5	0	0	0	7	7
Red-browed Finch	12 (2)	2	0	0	24	0	0	0	12 (4)	0	38 (8)	0	86 (14)	221 (41)
Rufous Fantail	1	11 (2)	0	0	4 (1)	0	0	0	16 (1)	0	12 (8)	0	44 (12)	87 (14)

3.12. FINCH HATTON / DALRYMPLE HEIGHTS/ EUNGELLA NP/GARGETT (Tropical Rainforest/Riparian Scrub)													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Russet-tailed Thrush	0	1	0	0	1	0	0	0	0	0	1	0	3	11
Sacred Kingfisher	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Scaly-breasted Lorikeet	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Scarlet Honeyeater	0	0	0	0	0	0	0	0	4	0	0	2	6	19
Silvereye	0 (1)	0	0	0	16 (1)	0	0	0	3	0	0	0	19 (2)	96 (9)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Spectacled Monarch	1 (4)	4 (1)	0	0	0 (1)	0	0	0	2 (3)	0	5 (3)	0	12 (12)	68 (43)
Superb Fruit-Dove	1	0	0	0	3	0	0	0	0	0	0	0	4	7
Varied Triller	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White-bellied Cuckoo-Shrike	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White-browed Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
White-browed Scrubwren	0 (2)	5 (4)	0	0	3 (2)	0	0	0	11 (6)	0	11 (6)	0	30 (20)	83 (55)
White-cheeked Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	3
White-headed Pigeon	0	0	0	0	6	0	0	0	0	0	0	0	6	6
White-throated Treecreeper	0	1	0	0	1	0	0	0	1	0	1	0	4	5
Wompoo Fruit-Dove	0	0	0	0	1	0	0	0	0	0	0	0	1	2 (1)
Yellow Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (5)
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	6	0	2	0	8	8

3.13. GATTON, GATTON LOCKYER CREEK & GATTON UQ CAMPUS (Riparian In Agricultural Land)													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bar-shouldered Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	33 (1)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Chestnut-breasted Mannikin	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Chestnut Teal	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Double-barred Finch	9 (1)	0	0	0	0	0	0	0	0	0	0	0	9 (1)	32 (4)
Dusky Moorhen	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Figbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Freckled Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grey Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	2
House Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	60 (5)
Leaden Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lewin's Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Magpie Goose	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Olive-backed Oriole	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Peaceful Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	12 (1)
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Plum-headed Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Plumed Whistling-Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Purple Swamphen	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-backed Fairy-wren	1 (1)	0	0	0	0	0	0	0	0	0	0	0	1 (1)	7 (1)
Red-browed Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	12 (1)
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Scaly-breasted Lorikeet	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Silvereye	0	0	0	0	0	0	0	0	0	0	0	0	0	18 (1)

3.13. GATTON, GATTON LOCKYER CREEK & GATTON UQ CAMPUS (Riparian In Agricultural Land)													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Superb Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	8 (3)
Tawny Grassbird	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (1)
White-browed Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	3
White-headed Stilt	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Willie Wagtail	0 (2)	0	0	0	0	0	0	0	0	0	0	0	0 (2)	15 (2)
Yellow Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	5 (1)
Yellow-rumped Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	3

3.14. GAVEN (Suburban)													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
Australian Brush-turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Australian King-parrot	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (1)
Australian Magpie	0	0	0	0	0 (1)	0	0	0	0	0	0	0	0 (1)	13 (23)
Australian White-ibis	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Blue-faced Honeyeater	0	1	0	4 (5)	5 (14)	0	0	0	0	0	0	0	10 (19)	34 (53)
Common Bronzewing	0	0	0 (1)	0	0	0	0	0	0	0	0	0	0 (1)	1 (2)
Crested Pigeon	0 (1)	4 (1)	1 (4)	5 (2)	1	0	0	0	0	0	0	0	10 (8)	22 (21)
Galah	0	5 (3)	0	0 (2)	0	0	0	0	0	0	0	0	5 (5)	12 (8)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Little Corella	0	0	0	0	0	0	0	0	0	0	0	0	0	49
Long-billed Corella	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Magpie Lark	0	0	0	0	0	0 (1)	0	0	0	0	0	0	0 (1)	5 (2)
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Noisy Miner	0	0 (3)	0	12 (4)	3 (8)	0	0	0	0	0	0	0	15 (11)	39 (56)
Pale-headed Rosella	0	0	0	0	0	0	0	0	0	0	0	0	0	3 (1)
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	6 (7)
Pied Currawong	0	0	0	1	0	0	0	0	0	0	0	0	1	33 (3)
Purple Swamphen	0	0	0	0	0	0	0	0	0	0	0	0	0	5 (8)
Rainbow Lorikeet	0	2	4	1	3	0	0	0	0	0	0	0	10	62 (1)
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Scaly-breasted Lorikeet	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Sulphur-crested Cockatoo	0	5	0	0	0	0	0	0	0	0	0	0	5	85 (4)
Torresian Crow	0	0	0	16	0	0	0	0	0	0	0	0	16	18
Yellow-tailed Black-cockatoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.15. GUMDALE (Open Forest)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Buff-banded Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Striated Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	2

3.16. KEDRON WETLANDS (Extralimital Mangrove)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australia Pipit	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Australian Reed-Warbler	2 (2)	0	0	0	0	0	0	0	1	0	0	0	3 (2)	19 (5)
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Honeyeater	1	0	0	0	1	0 (2)	0	1	0	1	0	0	4 (2)	60 (7)
Chestnut-breasted Mannikin	0	0	2	0	0	0	0	0	0	0	0	0	2	4
Double-barred Finch	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Fairy Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Forest Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grey Fantail	3 (1)	0	0	0	0	0	0	1	0	1	0	0	5 (1)	37 (6)
Grey Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Leaden Flycatcher	1	0	0	0	0	0	0	0	0	0	0	0	1	5
Magpie Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mangrove Gerygone	4 (2)	0	2	0	0	1	0	0 (1)	2	1	0	0	10 (3)	284 (86)
Mangrove Honeyeater	3	0	3	0	0	1	0	2	2 (2)	0 (1)	0	0	11 (3)	79 (40)
Mistletoebird	2	0	0	0	0	1	0	0	1	1	0	0	5	5
Pink-eared Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rainbow Lorikeet	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Red-backed Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	8 (1)
Rufous Fantail	1 (1)	0	0	0	0	0	0	0	1	1 (1)	0	0	3 (2)	13 (2)
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Sacred Kingfisher	0	0	1	0	0	0	0	0	0	0	0	0	1	22 (4)
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	1	0	0	0	0	1	4
Shining Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Silveryeye	1	2	0	0	0	0	0	0	0	0	0	0	3	38 (8)
Striated Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Superb Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	15 (7)
Tawny Grassbird	0	0	0	0	0	0	0	0	1	0 (1)	0	0	1 (1)	15 (8)
Varied Triller	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Willie Wagtail	0	0	1	0	0	0	0	0	0	0	0	0	1	7 (2)

3.17. KUTIN-PAYAMU (Iron Range) National Park (Tropical Lowland Rainforest)					
Species	N 2020	R 2020	Total New	Total Retraps	Total Encounters
Australasian Figbird			1	0	1
Australian Brush-turkey			10	1	11
Azure Kingfisher	17	2	70	6	76
Bar-shouldered Dove			1	0	1

3.17. KUTIN-PAYAMU (Iron Range) National Park (Tropical Lowland Rainforest)					
Species	N 2020	R 2020	Total New	Total Retraps	Total Encounters
Black Butcherbird	1		25	4	29
Black-eared Catbird			11	1	12
Black-winged Monarch	2		14	1	15
Blue-winged Kookaburra			1	0	1
Brown-backed Honeyeater	1		32	0	32
Brush Cuckoo			1	0	1
Buff-breasted Paradise Kingfisher	34	1	255	12	267
Chestnut-breasted Cuckoo	3		13	0	13
Dusky Honeyeater	81		670	8	678
Emerald Dove	3	1	49	7	56
Fairy Gerygone	15		104	3	107
Frilled Monarch	7		75	5	80
Graceful Honeyeater	38		298	4	302
Green-backed Honeyeater	3		21	0	21
Grey Whistler	12		67	5	72
Intermediate Egret			1	0	1
Large-billed Gerygone	2		5	0	5
Large-tailed Nightjar			3	0	3
Leaden Flycatcher			2	0	2
Little Bronze-Cuckoo	3		11	0	11
Little Kingfisher	4		27	0	27
Little Shrike-thush	162	17	1006	237	1243
Lovely Fairy-wren	3	1	102	5	107
Magnificent Riflebird	6	2	101	12	113
Marbled Frogmouth			1	0	1
Metallic Starling	4		77	0	77
Mistletoebird			10	0	10
Noisy Pitta	5		64	2	66
Northern Fantail			9	0	9
Northern Scrub-robin		1	28	2	30
Orange-footed Scrubfowl			8	0	8
Rainbow Lorikeet	17		17	0	17
Red-bellied Pitta			1	0	1
Red-browed Finch	5		7	0	7
Royal Spoonbill			0	0	0
Rufous Fantail			36	0	36
Satin Flycatcher			1	0	1
Shining Flycatcher	15	5	78	11	89
Silvereye	9		33	0	33
Spangled Drongo	2		12	0	12
Spectacled Monarch	40	2	223	23	246
Superb Fruit-Dove	1		3	0	3
Tawny Grassbird			1	0	1
Tawny-breasted Honeyeater	21		177	8	185
Tropical Scrubwren	31	2	395	33	428
Trumpet Manucode			4	0	4
Varied Triller	2		9	0	9

3.17. KUTIN-PAYAMU (Iron Range) National Park (Tropical Lowland Rainforest)					
Species	N 2020	R 2020	Total New	Total Retraps	Total Encounters
White-breasted Woodswallow			3	0	3
White-browed Robin			11	3	14
White-eared Monarch			1	0	1
White-faced Robin	62	14	994	145	1139
White-streaked Honeyeater	4		34	0	34
White-throated Nightjar			1	0	1
Yellow Oriole	1		16	1	17
Yellow-bellied Sunbird	1		15	0	15
Yellow-billed Kingfisher	3		29	1	30
Yellow-breasted Boatbill			54	2	56
Yellow-legged Flycatcher	1		10	0	10
Yellow-spotted Honeyeater	91	6	650	76	726
TOTALS	712	54	5988	618	6606

3.18. LAKE GALILEE BASIN													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Black-chinned Honeyeater	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Common Bronzewing	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Crested Pigeon	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Diamond Dove	0	0	0	0	0	0	0	1	7	0	0	0	8	8
Double-barred Finch	0	0	0	0	0	0	0	0	3	0	0	0	3	3
Fuscous Honeyeater	0	0	0	0	0	0	0	0	4	0	0	0	4	4
Grey-fronted Honeyeater	0	0	0	0	0	0	0	2	11	0	0	0	13	13
Little Friarbird	0	0	0	0	0	0	0	4	19	0	0	0	23	23
Pale-headed Rosella	0	0	0	0	0	0	0	0	4	0	0	0	4	4
Peaceful Dove	0	0	0	0	0	0	0	6	7	0	0	0	13	13
Plum-headed Finch	0	0	0	0	0	0	0	4	0	0	0	0	4	4
Rufous-throated Honeyeater	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Singing Honeyeater	0	0	0	0	0	0	0	0	7	0	0	0	7	7
Spiny-cheeked Honeyeater	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Spotted Bowerbird	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Squatter Pigeon	0	0	0	0	0	0	0	0	5	0	0	0	5	5
Striated Pardalote	0	0	0	0	0	0	0	0	1	0	0	0	1	1
White-breasted Woodswallow	0	0	0	0	0	0	0	0	1	0	0	0	1	1
White-plumed Honeyeater	0	0	0	0	0	0	0	2	2	0	0	0	4	4
White-throated Honeyeater	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Yellow-throated Miner	0	0	0	0	0	0	0	0	8	0	0	0	8	8
Zebra Finch	0	0	0	0	0	0	0	8	14	0	0	0	22	22

3.19. LAKE SAMSONVALE (Grassland/Scrub/Open Forest)													2020	2006-20
SPECIES/ Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australian Pipit	1	0 (1)	0	0	0	0	0	0	0	0	0	0	1 (1)	1 (1)
Australian Reed-Warbler	8	1	0	0	0	1	0	0	0	0	0	0	10	23

3.19. LAKE SAMSONVALE (Grassland/Scrub/Open Forest)													2020	2006-20
SPECIES/ Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Bar-shouldered Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (4)
Bell Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Black-faced Cuckoo-Shrike	0	0	0	0	0	1	0	0	0	0	0	0	1	3
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Brown Cuckoo-Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Brown Honeyeater	5 (2)	1	0 (1)	0	1 (2)	3 (4)	0	3 (1)	1	1	0 (1)	3 (1)	18 (12)	396 (104)
Brown Quail	1	0	0	0	0	0	2 (1)	0	0	1	0	0	4 (1)	22 (1)
Brown Thornbill	0	0	0	0	0	0	0	0	0	0	0	1	1	10 (5)
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Chestnut-breasted Mannikin	104 (7)	8	2 (1)	0	2	5	0	1	0 (1)	1	9	46 (2)	178 (11)	457 (13)
Cicadabird	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Double-barred Finch	1	2	0	0	0	0	0	2 (1)	0	0	1	0	6 (1)	26 (6)
Eastern Spinebill	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Eastern Whipbird	0 (2)	0	0 (1)	0	1 (1)	1 (2)	2	1 (2)	0 (1)	2	1	1	9 (9)	71 (61)
Eastern Yellow Robin	0 (2)	0	0	0	3 (6)	0 (3)	0 (1)	0 (1)	0 (1)	0	3	1	7 (14)	191 (184)
Fan-tailed Cuckoo	0	0	0	0	1	0	1 (1)	0	0	0	0	0	2 (1)	22 (4)
Australasian Figbird	0	0	0	0	0	0	0	0	0	4	0	1	5	12 (1)
Forest Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden-headed Cisticola	9 (1)	0 (1)	0	0	4	0	0	0	1	0	0	0	14 (2)	32 (3)
Golden Whistler	0	0	0	0	1 (2)	2 (1)	0 (1)	0	0	0	0	1	4 (3)	101 (38)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grey Fantail	4	0 (1)	0	0	3	2 (1)	0 (1)	1	0	1	4	1	16 (3)	180 (30)
Grey Goshawk	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Grey Shrike-thrush	1	0	0	0	0 (1)	2	0	0	0	0	0	0	3 (1)	47 (18)
Horsefield's Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	6
King Quail	0	0	0	0	0	0	0	0	0	0	5	0	5	8
Large Billed Scrubwren	0 (2)	0	0	0	0	0 (1)	2 (2)	0	1	0	0	0 (1)	2 (6)	26 (20)
Laughing Kookaburra	0	0	0	0	0	0	0	0	1	0	0	0	1	15 (3)
Leaden Flycatcher	0	0	0	0	1	0	0	0	0	0	0	0	1	7
Lewin's Honeyeater	1 (6)	2 (2)	1 (1)	0	4 (7)	1 (6)	2 (3)	1 (1)	0	1 (2)	2 (6)	1 (6)	16 (40)	304 (255)
Little-bronze Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Little Friarbird	0	0	0	0	0	0	0	0	1	0	0	0	1	3
Little Shrike-thrush	1 (1)	0	0	0	3	0	0	0	0	0	0 (1)	0	4 (2)	40 (22)
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Noisy Pitta	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mistletoebird	0 (1)	0	0	0	2	0	0	0	0 (1)	1	0	0	3 (2)	30 (3)
Olive-backed Oriole	0	0	0	0	1	0 (1)	0	0	0	0	1 (1)	1	3 (2)	25 (3)
Painted Button-quail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Peaceful Dove	0	0	0	0	1	1	0	0	0	0	0	0	2	5
Pied Butcherbird	0	0	0	0	0	1	0	0	0	0	0	0	1	4

3.19. LAKE SAMSONVALE (Grassland/Scrub/Open Forest)													2020	2006-20
SPECIES/ Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Plum-headed Finch	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Red-backed Button-quail	2	0	0	0	0	0	0	0	0	0	0	0	2	2
Red-backed Fairy-wren	0	0(1)	0(1)	0	1	2(1)	0(1)	0	2	1(1)	0	0	6(5)	95(77)
Red-browed Finch	54(13)	5(4)	2(1)	0	16(5)	21(16)	11(5)	2(5)	6(2)	7(5)	3(1)	13(3)	140(60)	1101(475)
Rose-crowned Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rose Robin	0	0	0	0	1	0	0	0	0	0	0	0	1	13
Rufous Fantail	1	0	0(1)	0	2	0	1	0	0	0	1	0	5(1)	39(4)
Rufous Songlark	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Rufous Whistler	0	0	1	0	4(1)	2(3)	0(2)	0	1(2)	2(1)	0(1)	3	13(10)	137(85)
Sacred Kingfisher	3	0	0	0	0	0	0	0	0	0	1	0	4	30(2)
Scarlet Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	49
Shining Bronze-Cuckoo	0(1)	0	0	0	0	0	0	0	0	0	0	0	0(1)	19(1)
Silveryeye	23(6)	3(3)	1(2)	0	17(7)	6(4)	6(1)	1(2)	7(2)	12(2)	9(5)	5(8)	90(42)	1403(410)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Spectacled Monarch	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Speckled Warbler	0	0	0	0	1	0	1	3	0	2	0	0	7	17(5)
Spotless Crake	0	0	0	0	0	0	0	0	0	0	0	0	0	2(1)
Spotted Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	19(5)
Striped Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Superb Fairy-wren	0(1)	0	0	0	2	2(3)	0	0	0(2)	0(1)	1	1	6(7)	108(46)
Tawny Grassbird	7(6)	3(2)	0	0	2	10(4)	1	1(3)	1(1)	5(1)	4(1)	1	35(18)	181(62)
Tree Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Varied Sitella	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Varied Triller	0	0	0	0	1	0	2	0(1)	0	0	0	0	3(1)	24(10)
Variegated Fairy-wren	0	0(2)	0	0	3(4)	6(2)	1(1)	0(3)	0	2(2)	0(1)	0	12(15)	111(146)
Welcome Swallow	1	0	0	0	0	1	0	0	0	0	1	0	3	10(1)
White-browed Scrubwren	3(6)	0	0(1)	0	2(9)	4(5)	1(1)	0(4)	0(2)	4(3)	1(4)	1(2)	16(37)	148(306)
White-eared Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White-naped Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White-throated Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	11(2)
White-throated Honeyeater	0	0	0	0	0	0	1(2)	0	2	0	2	0	5(2)	27(5)
White-throated Treecreeper	0	0	0	0	0(1)	0	0	0	0	0	0	0	0(1)	10(7)
White-winged Triller	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Willie Wagtail	4	0	0	0	0	0	0	0	0	0	0	1	5	27(4)

3.20. MANLY/WELLINGTON POINT/BENOWA/ROBINA/CLEVELAND/LYTTON ROOST/PORT OF BRISBANE/KING STREET (Estuarine / Open Water)

SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Australian Pipit	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Australian Reed-Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Quail	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Buff Banded Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Chestnut Teal	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Dusky Moorhen	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Hardhead	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Little Egret	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pacific Black-duck	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Pink-eared Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Purple Swamphen	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Silver Gull	0	0	0	0	2	0	0	0	0	0	0	0	2	61
Superb Fairy Wren	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tree Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Welcome Swallow	0	0	0	0	1	0	0	0	0	0	0	0	1	30
White-faced Heron	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wood Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	17

3.21. MOOKIN-BAH, MANLY (Reedbed)

SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
Australian Reed-Warbler	0 (2)	0	0	0	4	2 (2)	0 (3)	3 (1)	4 (2)	22 (3)	0	0	35 (13)	132 (59)
Brown Honeyeater	0	0	0	0	0	2	0	1	1	16	0	0	20	27
Chestnut-breasted Mannikin	0	0	0	0	0	0	0	0	0	0	0	0	0	23 (1)
Eastern Spinebill	0	0	0	0	0	1	0	0	0	0	0	0	1	3
Eastern Whipbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	17 (3)
Eastern Yellow Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	10 (2)
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lewin's Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (2)
Little Grassbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Rainbow Lorikeet	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-backed Fairy-wren	0	0	0	0	0	0	0	0	0	1	0	0	1	8 (2)
Red-browed Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	46 (10)
Rufous Fantail	0	0	0	0	1	0	0 (1)	1	1	0	0	0	3 (1)	15 (3)
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1 (1)
Scarlet Honeyeater	0	0	0	0	0	0	0	1	0	0	0	0	1	1

3.21. MOOKIN-BAH, MANLY (Reedbed)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Silvereye	0	0	0	0	2	13	0 (1)	0 (1)	0 (1)	9 (5)	0	0	24 (8)	302 (40)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Superb Fairywren	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tawny Grassbird	0	0	0	0	0	0	0	0	0	0	0	0	0	10 (4)
Variegated Fairy-wren	0	0	0	0	0	1	0	0	0	1	0	0	1	9 (8)
White-browed Scrubwren	0	0	0	0	0	0	0	0	0	3	0	0	3	17 (17)
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	13

3.22. MOUNT NATHAN (Dry Eucalypt)														
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	2020 TOTAL	2006-20 GRAND TOTAL
Blue-faced Honeyeater	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Double-barred Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Forest Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lewin's Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White-throated Needletail	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.23. MYALL PARK NATURE REFUGE (Brigalow Belt)														2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL	
Australian Reed-Warbler	0	0	0	0	0	0	0	0	2	0	1	1	4	4	
Black-faced Cuckoo-shrike	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
Brown Honeyeater	0	0	0	0	0	0	0	0	1	1	0	1	3	3	
Brown Thornbill	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
Chestnut-breasted Mannikin	0	0	0	0	0	0	0	0	0	0	0	2	2	2	
Double-barred Finch	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
Mistletoebird	0	0	0	0	0	0	0	0	0	2	1	0	3	3	
Noisy Miner	0	0	0	0	0	0	0	0	0	4	2	7	13	13	
Silvereye	0	0	0	0	0	0	0	0	0	2	0	0	2	2	
Spiny-cheeked Honeyeater	0	0	0	0	0	0	0	0	0	2	2	2	6	6	
Superb Fairy-wren	0	0	0	0	0	0	0	0	2	0	2	2 (1)	6 (1)	6 (1)	
Torresian Crow	0	0	0	0	0	0	0	0	0	0	2	0	2	2	
Welcome Swallow	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
Willie Wagtail	0	0	0	0	0	0	0	0	0	0	0	1	1	1	

3.24. NUDGEE BEACH, NUDGEE CYCLE TRACK, WYNNUM BOARDWALK COMBINED (Mangrove Forest)													2020 TOTAL	2006- 20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
Australasian Figbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Australian Reed-Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Australian White Ibis	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bar-shouldered Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	10 (1)
Black-faced Cuckoo-shrike	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Brown Honeyeater	0	2	0	0	0	1 (1)	0	0	0	0	0	0	3 (1)	97 (15)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Buff-banded Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Chestnut Teal	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Collared Kingfisher	0	0	0	0	1	1 (1)	0	0	0	0	0	0	2 (1)	41 (6)
Crested Pigeon	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Double-barred Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Fairy Martin	0	0	0	0	2	0	0	0	0	0	0	0	2	2
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	25 (1)
Grey Shrike-thrush	0	1	0	0	2	0	0	0	0	0	0	0	3	29 (8)
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Leaden Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Magpie Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Mangrove Gerygone	0	0	0	0	6	2 (1)	0	0	5 (2)	0	0	0	7 (3)	274 (90)
Mangrove Honeyeater	0	2	0	0	1 (1)	0	0	0	1	0	0	0	4 (1)	92 (29)
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	15 (1)
Olive-backed Oriole	0	0	0	0	0	0	0	0	1	0	0	0	1	9 (1)
Pale-headed Rosella	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Pallid Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1 (1)
Rainbow Bee-eater	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Red-backed Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Red-Browed Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Rufous Fantail	0	0	0	0	1	0	0	0	0	0	0	0	1	20
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	17(4)
Sacred Kingfisher	0	1	0	0	1	0	0	0	2	0	0	0	4	42(7)
Scarlet Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Shining Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Silveryeye	0	0(1)	0	0	0	0	0	0	0	0	0	0	0(1)	64(18)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	7(1)
Spectacled Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Spotted Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Striped Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	7(1)
Superb Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tawny Frogmouth	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tawny Grassbird	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Torresian Crow	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Tree Martin	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Varied Triller	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Variegated Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Welcome Swallow	0	0	0	0	25	0	0	0	0	0	0	0	25	27
Willie Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	19(2)

3.25. OSPREY HOUSE (Intertidal Mangroves/Grassland/Scrub)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australian Figbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Azure Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (1)
Bar-shouldered Dove	0	1	0	0	0	1	0	0	0	0	0	0	2	8
Black-faced Cuckoo-Shrike	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Blue-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Brown Honeyeater	0	1	0	0	0	3 (1)	0	0	37 (1)	0	0	1	42 (2)	125 (13)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Buff-banded Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cattle Egret	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Chestnut-breasted Mannikin	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Cicadabird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Collared Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (2)
Double-barred Finch	0	0	0	0	0	4	0	0	1	0	0	6	11	15
Eastern Whipbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Eastern Yellow-robin	0	2	0	0	0	0	0	0	0	0	0	0	2	8
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Forest Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (3)
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	15 (2)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grey Fantail	0	1	0	0	0	0	0	0	0	0	0	0	1	26 (2)
Grey Shrike-thrush	0	0	0	0	0	4	0	0	1 (1)	0	0	0	5 (1)	24 (3)
Mangrove Gerygone	0	0	0	0	0	0	0	0	0	0	0	2	2	39 (5)
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Leaden Flycatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lewin's Honeyeater	0	0	0	0	0	0	0	0	1	0	0	0	1	28 (18)
Little Friarbird	0	0	0	0	0	1	0	0	0	0	0	0	1	2
Little Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Magpie Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mangrove Honeyeater	0	0	0	0	0	0	0	0	0	0	0	1	1	14 (1)
Mistletoebird	0	0	0	0	0	2	0	0	0	0	0	0		4
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0		7
Pale-headed Rosella	0	0	0	0	0	0	0	0	0	0	0	0		1
Red-Backed Fairy-wren	0	0	0	0	0	0	0	0	1	0	0	0		43 (11)
Red Browed Finch	0	0	0	0	0	0	0	0	0	0	0	1		50 (8)
Rose Robin	0	0	0	0	0	0	0	0	0	0	0	0		3
Rufous Fantail	0	0	0	0	0	0	0	0	3	0	0	0	0	29 (5)
Rufous Whistler	0	0	0	0	0	1	0	0	0	0	0	1	2	23 (9)
Sacred Kingfisher	0	2	0	0	0	0	0	0	0	0	0	0	2	17 (2)
Scarlet Honeyeater	0	0	0	0	0	1	0	0	2	0	0	0	3	10
Shining Bronze-cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Silveryeye	0	1	0	0	0	0	0	0	4	0	0	1	2	159 (9)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Spectacled Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	13 (5)
Striped Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Superb Fairy-wren	0	0	0	0	0	4 (1)	0	0	2 (1)	0	0	1 (2)	7 (4)	22 (6)
Tawny Grassbird	0	0	0	0	0	0	0	0	1	0	0	0	1	44 (15)
Torresian Crow	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Varied Triller	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Variegated Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	24 (3)
White-browed Scrub-wren	0	0	0	0	0	1	0	0	0	0	0	1	2	26 (14)
White-throated Honeyeater	0	0	0	0	0	0	0	0	0 (1)	0	0	0	0 (1)	7 (1)
Willie Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	23 (5)

3.26. SANCTUARY COVE (Suburban)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Dusky Moorhen	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Pacific Black Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Plumed Whistling-duck	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Purple Swamphen	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Torresian Crow	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Willie wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.27. SHAILER PARK (Suburban Bushland/Open Forest)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australasian Figbird	0	0	0	0	0	0	1	0	0	3	0	0	4	63 (2)
Australian Magpie	0	0	0	0	0	0	0	0 (1)	0	0	0	0	0 (1)	28 (90)
Australian White Ibis	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Australian Wood Duck	0	0	0	0	0	2	0	0	0	1	0	0	2	46 (58)
Bar-shouldered Dove	0	0	0	1	0	0	0	0	0	0 (1)	0	0	1 (1)	39 (38)
Black-faced Cuckoo-Shrike	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Blue-faced Honeyeater	0	0	1 (3)	0 (1)	0	0	0	0	0	0	0	0	1 (4)	45 (87)
Brush Turkey	0	0	1	0 (1)	0	0 (1)	0	0	0	0	0	0	1 (2)	18 (59)
Common Bronzewing	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (1)
Common Mynah	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Crested Pigeon	0	0	0	1	0	0	0 (2)	0	0	0 (1)	0	0	1 (3)	76 (20)
Eastern Spinebill	0	0	0	0 (1)	0	1 (1)	0 (1)	0	0	0	0	0	1 (3)	29 (8)
Eastern Whipbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Galah	0	0	0	0	0	0	0	0	0	0	0	0	0	23 (8)
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (2)
Grey Butcherbird	0	0	0	1	0	0	0	0	0	0	0	0	1	25 (13)
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
King Parrot	0	0	0	0	0	0	0	1	0	0	0	0	1	27 (2)
Laughing Kookaburra	0	0	0	1	0	0	0	0	0	1	0	0	2	26 (15)
Lewin's Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Little Corella	0	0	0	5 (1)	6	0	0	1	0	1	0	1	14 (1)	59 (1)
Little Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Long-billed Corella	0	0	0	3	0	0	0	0	0	0	0	0	3	13
Magpie Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	14 (22)
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Noisy Miner	2	0	2 (1)	76 (22)	27 (10)	0 (1)	2	0	0	2	0	2	113 (34)	607 (336)
Olive-backed Oriole	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Pacific Black Duck	0	0	0	0	0	0	0	0	0	0	0	0	0	36 (29)
Pale-headed Rosella	0	0	0	0	0	1 (1)	2	0	0	1 (1)	0	0	4 (2)	63 (24)
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pied Currawong	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Rainbow Lorikeet	0	0	25 (4)	112 (10)	13	0	0	0	0	0	0	0	150 (14)	1,176 (124)
Rufous Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Scaly-breasted Lorikeet	0	0	0	2	0	0	0	0	0	0	0	0	2	41
Scarlet Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Spotted Dove	0	0	3	1	0	3	0	0 (1)	0	0	0	0	7 (1)	219 (43)

3.27. SHAILER PARK (Suburban Bushland/Open Forest)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Sulphur-crested Cockatoo	0	0	0	0	0	0	0	0	0	0	0	0	0	8 (3)
Torresian Crow	0	0	0	0	0	0	0	0	0	0	0	1	1	13 (1)
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	2
MONTHLY TOTAL	2	0	31 (8)	193 (36)	40 (10)	4 (4)	4 (3)	1 (2)	0	1 (3)	0	4	296 (64)	2730 (986)

3.28. TEE TREES WETLAND (Fringing Wetland Habitat)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australasian Figbird	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Australian Magpie	0	0	0	0	0	0	0	1	0	0	0	0	1	5
Australian Reed-Warbler	5	1	0	0	0 (1)	2	0	1	5 (1)	3	0	3	20 (2)	34 (2)
Azure Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bar-shouldered Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Blue-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Brown Honeyeater	0	4 (3)	0	0	14 (4)	4 (6)	16 (7)	6 (2)	7 (3)	12 (3)	0	2	65 (28)	92 (30)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	1 (1)
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buff-banded Rail	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Chestnut-breasted Mannikin	0	6	1	0	0	0	0	0	3	1	0	0	11	12
Double-barred Finch	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Eastern Spinebill	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastern Whipbird	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastern Yellow Robin	0	0	0	0	0	0	0	0	1	0	0	0	1	3
Eurasian Coot	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Fairy Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Forest Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	6 (1)
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grey Fantail	0	0	1	0	1	1	0	0	0	0	0	0	3	19
Grey Shrike-thrush	0	0	0	0	0	0	0	0	1	0 (1)	0	3	4 (1)	5 (2)
Hardhead	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Large-billed Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laughing Kookaburra	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leaden Flycatcher	0	0	0	0	1	0	0	0	0	0	0	0	1	2
Lewin's Honeyeater	0	0	0	0	1	0	0	0	0 (1)	0	0	0	1 (1)	5 (1)
Little Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magpie-Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mangrove Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	3 (1)
Noisy Miner	0	0	0	0	0	0	0	1	0	3	0	0	1	5

3.28. TEE TREES WETLAND (Fringing Wetland Habitat)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Olive-backed Oriole	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Peaceful Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purple Swamphen	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Rainbow Lorikeet	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-backed Fairywren	0	1	0	0	0	0	0	2	0	0	0	0	3	9
Red-browed Finch	3	4 (1)	1	0	11 (3)	45 (14)	0 (7)	1 (5)	1 (5)	5 (1)	0	1 (1)	71 (37)	138 (73)
Rose Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Rufous Fantail	0	0	0	0	2	0	0	0	0	1	0	0	3	5 (2)
Rufous Whistler	0	0	1 (1)	0	1 (1)	0 (1)	0	0	1	0 (1)	0	0	3 (4)	17 (4)
Sacred Kingfisher	0	0	0	0	0	0	0	1	1	0	0	0	2	4
Scaly-breasted Lorikeet	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scarlet Honeyeater	0	0	0	0	2	2	2	0	0	0	0	0	6	9
Shining Bronze-Cuckoo	0	0	0	0	0	0	0	0	0	1	0	0	1	3
Silvereeye	4 (2)	1	0 (1)	0	0	1 (1)	9	0	0 (1)	1 (1)	0	2 (1)	9 (7)	28 (12)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Speckled Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spectacled Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spotted Dove	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Spotted Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striated Pardalote	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Superb Fairy-wren	1 (1)	0 (2)	1	0	3 (6)	0 (1)	3 (2)	3	1 (2)	1 (2)	0	0 (3)	9 (19)	37 (41)
Tawny Grassbird	0 (2)	1	1	0	2	0	0	1	1	2 (1)	0	1	9 (3)	15 (3)
Torresian Crow	1	0	0	0	2	0	0	0	0	0	0	0	3	7
Variiegated Fairywren	0 (1)	0	0	0	0 (1)	0 (1)	0 (1)	0	0	1 (1)	0	3	4 (5)	11 (7)
Welcome Swallow	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White-browed Scrubwren	0	0	0	0	1	0	1	0	0	0	0	0	2	4
White-headed Stilt	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White-throated Gerygone	0	0	0	0	0	0	1	0	0	0	0	0	1	2
White-throated Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	0
White-throated Treecreeper	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Willie Wagtail	2	2 (1)	0	0	1	0 (1)	0	0	0	0	0	0	5 (2)	10 (2)
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.29. THE GRAND, NERANG (Open Dry Sclerophyll Forest/Golf Course)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australian Magpie	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Black-faced Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Honeyeater	0	1 (1)	0	0	0	1	2	0	0 (1)	0	0	0	4 (2)	43 (5)
Brown Thornbill	0	0	0	0	0	0	0	0	0 (1)	0	0	0	0 (1)	16 (6)
Brush Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Buff-rumped Thornbill	0	0	0	0	0	1	0	0	0	0	0	0	1	1

3.29. THE GRAND, NERANG (Open Dry Sclerophyll Forest/Golf Course)													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
Chestnut-rumped Mannikin	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Double-barred Finch	0	0	0	0	0	0	0	0	0	0	2	0	2	5
Eastern Spinebill	0	0	0	0	0	1	1	0	0	0	0	0	2	16 (2)
Eastern Whipbird	0	0	0	0	0	1	0	0	0	0	0	0	1	5 (2)
Eastern-yellow Robin	0	1	0	0	2	2	0	0	0 (1)	0	0 (1)	1	6 (2)	34 (30)
Fan-tailed Cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Forest Kingfisher	1	0	0	0	0 (1)	0	0	0	0	0	0	0	1 (1)	4 (1)
Golden Whistler	0	0	0	0	1	2	0	1	0	0	0	0	4	65 (22)
Grey Butcherbird	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grey Fantail	0	0	0	0	2	4	0	0	0	0	0	0	6	44 (12)
Grey Shrike-thrush	0	0	0	0	0	1	0	0	0	1 (1)	0	0	2 (1)	7 (1)
Large-billed Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (9)
Laughing kookaburra	0	1	0	0	0	0 (2)	1	0	1	0	0	1	4 (2)	16 (3)
Leaden Flycatcher	0	0	0	0	0	0	0	0	0	1	0	0	1	5
Lewin's Honeyeater	0	0	0	0	2 (1)	2	0	0	0	0	0	0	4 (1)	22 (7)
Noisy Friarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Olive-backed Oriole	0	0	0	0	0	0	0	0	1	0	1	0	2	3
Peaceful Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Red-backed Fairywren	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (1)
Red-browed Finch	0	0	0	0	1	2	0	2	0	0 (2)	0	0	5 (2)	214 (112)
Rose Robin	0	0	0	0	0	0	0	0	0	0	0	0	0	7 (2)
Rufous fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	44 (1)
Rufous Whistler	0	0	0	0	2	2	0	0	0	0	1	0	5	8
Sacred Kingfisher	0	0	0	0	0	0	0	0	1	0	0	0	1	6
Scarlet Honeyeater	0	0	0	0	0	0	2	0	0	0	0	0	2	18
Shining Bronze-cuckoo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Silvereeye	0	0	0	0	0	3	1 (1)	0	1	0	1	0	6 (1)	113 (34)
Spangled Drongo	0	0	0	0	0	1	0	0	0	0	0	0	1	10
Spectacled Monarch	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Spotted Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Superb Fairy-wren	0	0	0	0	0	7	1 (2)	0	4 (3)	0	1 (4)	0	13 (9)	31 (29)
Tawny Grassbird	0	0	0	0	0	0	0	0	1	0	1 (1)	0	2 (1)	2 (1)
Varied Sitella	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Variegated Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	16 (7)

3.29. THE GRAND, NERANG (Open Dry Sclerophyll Forest/Golf Course)													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
White-browed Scrubwren	0	0	0	0	0	0 (1)	0	0 (1)	0	0	0	0	0 (2)	16 (28)
White-throated Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White-throated Honeyeater	0	0 (1)	0	0	0	3 (1)	0	0 (2)	1	1 (1)	1	2 (1)	8 (6)	41 (34)
White-throated Treecreeper	0	0	0	0	0	2	0	0	0	0 (1)	0	0 (1)	2 (2)	14 (5)
Willie Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	6 (1)
Yellow-faced Honeyeater	0	0	0	0	1	0	0	1	0	0	2 (1)	0	4 (1)	34 (2)

3.30. THE SPIT, SOUTHPORT, (Sand Dunes/ Banksia Scrub)													2020 TOTAL	2006-20 GRAND TOTAL
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D		
Australian Reed-Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Azure Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bar-shouldered Dove	2 (2)	0	0	0	0 (1)	0	0	0	0	2	0	0	4 (3)	20 (3)
Blue-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Brown Honeyeater	14 (2)	1 (2)	0	0	5 (3)	0	0	5 (8)	2 (1)	1 (2)	0	0	28 (18)	303 (91)
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Buff-banded Rail	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Dollarbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Double-barred Finch	1 (1)	0 (2)	0	0	6	0	0	1	1	0	0	3 (2)	6 (5)	68 (14)
Eastern Spinebill	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Figbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	11 (2)
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Leaden Flycatcher	0	0	0	0	1	0	0	1	0	0	0	0	2	15 (2)
Mangrove Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	3 (1)
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Noisy Friarbird	1	0	0	0	0	0	0	0	1	0	0	0	2	5
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Olive-backed Oriole	0	0	0	0	0	0	0	1	0	1	0	0	2	7 (1)
Pheasant Coucal	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Pied Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Rainbow Beeeater	1	0	0	0	1	0	0	0	0	0 (1)	0	0	2 (1)	5 (1)
Rainbow Lorikeet	0	0	0	0	1	0	0	0	0	0	0	0	1	4
Red-backed Fairywren	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Silveryeye	6 (9)	2 (2)	0	0	0 (1)	0	0	0	0 (1)	2 (1)	0	4 (1)	14 (15)	396 (163)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Superb Fairywren	4 (3)	0 (1)	0	0	2 (1)	0	0	0 (1)	0	1	0	0 (1)	7 (7)	40 (21)
Tawny Grassbird	1	0 (1)	0	0	2 (1)	0	0	0 (1)	0	0	0	0	3 (3)	26 (6)
Tree Martin	0	0	0	0	0	0	0	0	0	0	0	0	0	1

3.30. THE SPIT, SOUTHPORT, (Sand Dunes/ Banksia Scrub)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Varied Triller	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Welcome Swallow	0	0	0	0	0	0	0	0	1	1	0	0	2	7
Willie Wagtail	0	0	0	0	0	0	0	0	0	0	0	0	0	13 (2)

3.31. TINCHI TAMBA (Grassland/Scrub)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Australian Figbird	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Australian Magpie	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (1)
Azure Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (1)
Brown Thornbill	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Quail	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Collared Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Double-barred Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Golden-headed Cisticola	0	0	0	0	0	0	0	0	0	0	0	0	0	8 (4)
Golden Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grey Butcherbird	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (1)
Grey Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	11 (2)
Grey Shrike-thrush	0	0	0	0	0	0	0	0	0	0	0	0	0	5 (4)
Magpie Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mangrove Gerygone	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Mistletoebird	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Noisy Miner	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Olive-backed Oriole	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pale-headed Rosella	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Red-Backed Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (9)
Red Browed Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	20 (1)
Rufous Fantail	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Rufous Whistler	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	13 (5)
Scarlet Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Silveryeye	0	0	0	0	0	0	0	0	0	0	0	0	0	38 (3)
Spangled Drongo	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Striated Pardalote	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tawny Grassbird	0	0	0	0	0	0	0	0	0	0	0	0	0	2 (1)
Variiegated Fairy-wren	0	0	0	0	0	0	0	0	0	0	0	0	0	8 (8)
White-browed Scrubwren	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Yellow-faced Honeyeater	0	0	0	0	0	0	0	0	0	0	0	0	0	9

3.32. TOORBUL (Intertidal Mangroves)													2020	2006-20
SPECIES/Month	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL	GRAND TOTAL
Magpie Lark	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sacred Kingfisher	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Silver Gull	0	0	0	0	0	0	0	0	0	0	0	0	0	1