The avifauna of Rockhampton revisited after 45 years: additions, deletions and a checklist covering 135 years

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Abstract

The avifauna of the Rockhampton region, in central coastal Queensland, was first documented in 1887, based on six months of observations, then again in 1924, based on sightings made during a campout of one week. These and other historical records of birds in the region (comprising c. 10,500 km²), as well as in the neighbouring Shoalwater Bay Training Area, were summarised by Longmore (1978), who resided in Rockhampton for 20 months during 1973-1974, adding 88 species to previous lists. Longmore listed 324 currently recognised species, but after scrutinising the literature and available online data, we conclude that 17 of these species are insufficiently documented to be considered valid. On the other hand, we found reports of eight species that were recorded prior to the 1970s, yet were not listed by Longmore, and all have since been recorded at least once. Since 1975, no fewer than 35 species have been added to the region's checklist, doubtless the result of larger numbers of resident and visiting birdwatchers, as well as birding sites. Of the 35 additional species, 13 (37%) are shorebirds and seven (20%) are seabirds, most of which were added during the late 1970s and 1980s, during and after the first national atlas of Australian birds. Twelve species (35%) are Palearctic migrants. Only seven of the additional species have been added since 2000. At least five tropical species, including three mangrovedependent sedentary species, appear to have expanded their range southwards into the region in recent decades, possibly due to increasing temperatures associated with climate change. Eleven species have been extirpated from the region over 135 years, resulting in one of the highest regional extinction rates in Australia. A checklist, summarising the past and present status of all 350 validated species of the region, is provided in the appendix.

Introduction

Since European colonisation over 230 years ago, the Australian avifauna has undergone massive changes (Recher & Lim 1990; Ford *et al.* 2001; Olsen *et al.* 2005). Partly due to the relatively low human population, there are few regional studies of avifaunal changes in tropical and subtropical Australia compared to those of temperate Australia. One significant exception is Coomooboolaroo, a large (454 km²) pastoral property in eastern central Queensland, where the avifauna over the 60 years between 1873 and 1933 was chronicled by Barnard (1925, 1934), and re-surveyed 66 years later (Woinarski & Catterall 2004). Combining both periods, 45% of the total number of species had decreased, while only 13% had increased or colonised over that period, the majority during the second (1934-1999) period (Woinarski & Catterall 2004).

Only 100 km northeast of Coomooboolaroo lies the city of Rockhampton, 290 km southeast of Mackay and 93 km NW of Gladstone, Queensland. The earliest account of its avifauna was that of Broadbent (1888) who listed species observed in the Rockhampton area during his residence of six months, though the list also includes birds encountered on trips to Springsure and Barcaldine (260 km WNW, and 533 km W of Rockhampton, respectively). Almost four decades later, the

Royal Australasian Ornithologists Union (RAOU; later renamed BirdLife Australia) held its annual congress in Rockhampton from 15 to 21 October 1924, followed by a Campout at Byfield (Fig. 1) from 22 to 25 October, and a brief visit to North Keppel Island on the following day (Barrett 1925; Chisholm 1925; Sharland 1925; Wolstenholme 1925a,b).

Fifty years later, Longmore (1978) resided in Rockhampton for 20 months from February 1973 to October 1974, and provided a comprehensive annotated list of the avifauna of the region, based on his field notes from October 1970 to November 1975, as well as records from the historical literature and unpublished manuscripts, and contemporary observers during the 1970s. His report provided species accounts of 329 species (*sensu lato*), comprising 258 species that he had personally recorded, and 71 species that had been reported in the literature (Longmore 1978). In addition to those within c. 70 km from Rockhampton, Longmore included records from Shoalwater Bay Army Training Area (SWBTA; 2940 km²) to the north, based on a 3-week fauna survey by Nix (1972) in September 1971. Two decades later, SWBTA was more thoroughly surveyed over four months in 1991-1992 by Schodde *et al.* (1992).

Since Longmore's (1978) study, there has been no published review of the avifauna of the Rockhampton region. The first author has lived in the region, including Rockhampton, Yeppoon and Coowonga, since 1984, and has conducted systematic surveys on behalf of BirdLife Capricornia, and collected opportunistic records, in all parts of Longmore's study area. This work has yielded sufficient contemporary data to assess changes that have occurred since Longmore's review in the 1970s. In this paper we provide details of records of species that have been added since Longmore's review, critically assess records of species that appear to have been erroneously listed for the region, and finally, append a tabular checklist of all confirmed species of the region. Regionally extinct and declining species are dealt with in another report (Noske & Briggs, in press).

Study region

The region covered by Longmore (1978) was centred on Rockhampton (23°22'51"S, 150°30'53"E), and extended north to Byfield (60 km north of the Post Office), east to North and Great Keppel Islands (c. 50 km NE), south to Mount Larcom (68 km SE), and west to the Dawson River (88 km SW), covering c. 10,500 km². Longmore's report included a map showing the location of 37 sites that he visited or mentioned in the text, and although the map legend was inadvertently omitted when it was published, the names of the locations were subsequently provided to the first author by Longmore (in litt.). Figure 1 shows the same area and sites, as well as the boundaries of Shoalwater Bay Training Area and the polygon used in our online database searches for records of species of interest.

The site for Rockhampton was established in 1853, when Charles and William Archer, in search of grazing land, sailed up the Fitzroy River. The river and its tributaries drain the northern, western and central sections of the region, forming a large floodplain with many lagoons and swamps, such as Gracemere, Woolwash, Murray and Pink Lily Lagoons near Rockhampton. Low mountain ranges (maximum elevation, 664 m asl) and plateaux are present in the southwest (e.g. Mt Morgan), centre (Berseker Range) and northeast (e.g. Byfield) of the region, with undulating hills in the north. The Fitzroy Delta encompasses many mangrove-fringed islands, and Keppel Bay contains numerous offshore islands which are varied in form and structure, with some fringing reefs. There are also several swamps on the coastal plain, some of which are brackish, e.g. Corio Bay area, Iwasaki Wetlands and Kinka Wetlands.

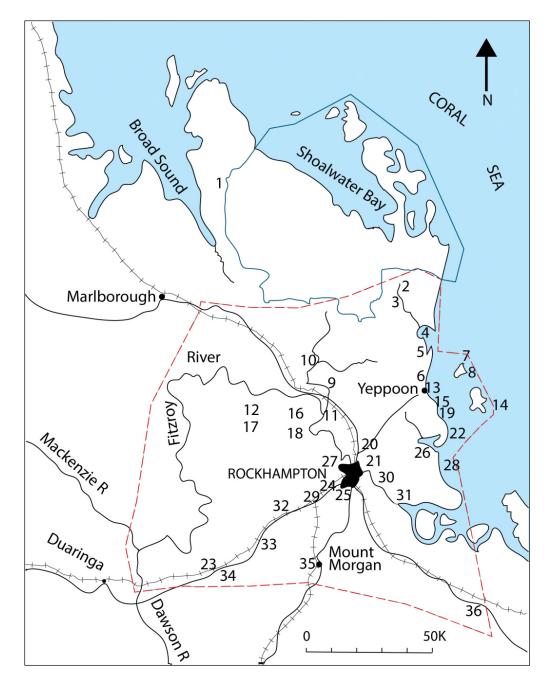




Figure 1. Map of Rockhampton region reproduced from Longmore (1978), with addition of boundaries of Shoalwater Bay Training Area (green line) and polygon (red dashed line; see text). Numbers correspond to locations as per original, except for #1 and #23, which have been corrected.

Although Rockhampton straddles the Tropic of Capricorn, the climate is classified as humid sub-tropical, characterised by mild dry winters and hot wet summers (Nix 1977; Lloyd 1984). Mean maximum temperatures for Rockhampton Aero Club from 1939 to 2019 were highest in December (32.2°C), while minimum temperatures were lowest in July (9.7°C) (Fig. 2). Over the same 80 years, annual rainfall varied from 296 mm to 1,631 mm, with a mean (± standard deviation) of 808 (± 289) mm (BOM 2020). About two-thirds (68%) of this rain falls from October to March, a period hereafter called the wet season, when northwest monsoons often bring heavy rain and flooding. Rockhampton has experienced several large cyclones in 1918, 1949, 1976 and 2015, each of which caused significant damage to buildings in the city and/or surrounding areas (BOM 2020).

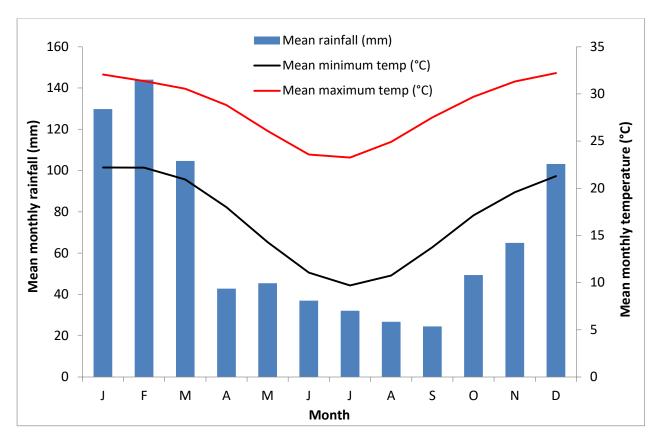


Figure 2. Mean monthly rainfall and minimum and maximum temperatures from 1939 to 2019 at Rockhampton Aero Club (source: BOM 2020).

The period during which Longmore resided in Rockhampton (1973-74) was atypically wet, and 1973 was the wettest recorded (1,631 mm) in the 77 years between 1939 and 2018. However, annual rainfall declined over the following three decades, with below-average rainfall in 24 (80%) of the 30 years from 1980 to 2009, and during the 1990s and 2000s, half (50%) of the years received less than 600 mm. Consistent with global warming, mean decadal minimum and maximum temperatures for Rockhampton have significantly increased by 0.23°C and 0.13°C per decade, respectively (Noske & Briggs, in press).

Despite the loss of almost two-thirds of its original vegetation cover due to clearing for pastureland, plantations, agriculture and urban areas (Noske & Briggs in press), a remarkable diversity of habitats still occurs in ROR today. Eucalypt woodlands and forests account for c. 78% of current vegetation cover, almost half of which is dominated by ironbarks of three species (38%) and Spotted Gum *Corymbia citriodora* (16%) on the ranges, hills and sand plains, and Coolibah (*Eucalyptus coolabah* or *E. microtheca*) or Red Gum (*E. tereticornis*) on floodplains

(10%). Semi-evergreen vine thickets (rainforest), such as those in the Byfield area (Plate 1), persist on the coastal ranges and dunes, comprising c. 6% of total vegetation cover. Along the coast and in estuaries such as Corio Bay (Plate 1) and Coorooman Creek large expanses of mangroves (c. 4% of total cover) provide habitat for mangrove-specialised bird species. Once covering over 1,000 km² (10%) of the region, Brigalow (Acacia harpophylla) has been almost eradicated, covering only 1.2% of ROR. The remaining cover comprises saltpans and tussock grasslands (7%), other Acacia-dominated woodlands (2.4%), paperbark (Melaleuca) forests, freshwater swamps and shrubland.



Plate 1. Some habitats and popular birding sites in the Rockhampton region. Clockwise from top left: tidal saltflats at Corio Bay, saltmarsh at Twelve Mile Creek, freshwater swamp at Kinka Wetlands, ironbark woodland at Cawarral, bloodwood woodland with grass-trees and cycads on Mount Archer, and rainforest at Byfield (all photographs, Allan Briggs)

Data sources and methods

Longmore (1978) assessed the status of all bird species recorded in the Rockhampton region from his own field notes, published historical accounts, and several unpublished sources, including a manuscript by W. B. Alexander concerning birds of the Westwood area during the 1920s. Neither of the unpublished sources was available to the present authors. In addition, Longmore (1978) conducted regular 2-h periods of observation in each of the region's major habitats, though he did not provide details of his sampling design. Since 2002, the first author and other BirdLife Capricornia volunteers have conducted surveys throughout the region, sampling all of the sites that Longmore visited (Fig. 1), as well as many additional ones, resulting in *c.* 20,000 records. The majority of those surveys were 20 min counts of 2 ha sites, in which both species and their abundance were recorded. They were conducted in all of the habitats sampled by Longmore, so the data are broadly comparable, though collected over a much longer period of time. Additional records from ROR were obtained from the following citizen science databases: eBird (2020), Birdata (2020), Atlas of Living Australia (ALA 2020) and WildNet (2021).

For historical records of birds in the region, we consulted the above mentioned published sources, and checked for additional records among the nine annual bird reports (1983–1991) published in *The Sunbird*. As Broadbent (1888) listed species seen at Springsure and Barcaldine as well as Rockhampton, we excluded species recorded only in the former two localities. For each species of interest, we consulted pertinent volumes of the *Handbook of Australian, New Zealand and Antarctic Birds*, and the two national bird Atlases, covering the periods 1977–1981 (Blakers *et al.* 1984) and 1998–2002 (Barrett *et al.* 2003), hereafter referred to as Atlas 1 and Atlas 2, respectively. As distribution maps in both atlases are based on 1° cells, we checked for records in the cell encompassing Rockhampton (23/150), as well as adjacent cells, including those to the north (22/150, encompassing SWBTA), west (23/149, encompassing Coomooboolaroo), and east (23/151, encompassing Gladstone). We also collated publicly available data on the birds of SWBTA and Coomooboolaroo for comparison with the Rockhampton region. Scientific names are provided in the Appendices. To avoid confusion, we abbreviate the city of Rockhampton as ROK, and the region surrounding it as ROR.

Results

Longmore (1978) listed 329 bird taxa, of which five (Northern Masked Lapwing *Vanellus miles miles*, Yellow Figbird *Sphecotheres viridis flaviventris*, Eastern Striated Pardalote *Pardalotus striatus ornatus*, Yellow-tipped Pardalote *Pardalotus s. striatus* and Western Striated Pardalote *Pardalotus s. substriatus*) are no longer considered species. We found records of 43 species in ROR that were not listed by Longmore (section 1, below). However, based on the evidence available, we conclude that 17 of the 324 species listed by Longmore are unconfirmed (section 2). On the other hand, five species listed as doubtful by Longmore appear to be valid (section 3). With the addition of 43 unlisted species, the total number of validated species recorded from ROR is 350 (Appendix 1).

In the following species accounts, records refer to ROR unless indicated otherwise by bold type; SWBTA denotes Shoalwater Bay Training Area. Sources are abbreviated in brackets as follows: Birdata (D), eBird (E), BirdLife Capricornia group (BC), ALA (A) and WildNet (W). Distances and directions of locations were measured as straight lines from Rockhampton Post Office using Google Earth, and are approximate only. Sites featured in the Figure 1 are indicated with a number preceded by the symbol '#'. Scientific names of species in Sections 1 and 3 are shown only in the checklist (Appendix 1), whereas in Section 2 (unconfirmed species), both English and scientific names are shown because these species are excluded from the checklist.

1. Additional species not listed by Longmore (1978)

Red-tailed Tropicbird

One record only, pertaining to a bird that was found on the golf course on Great Keppel Island on 15 November 1999 (A, B). It was exhausted, suggesting it was blown in by a storm, and later died. Also reported from Heron Island (c.143 km E) in 1986, 1987 and 2000, as well as Northwest Island (122 km E) in 1984 (A). The closest breeding colony is on Lady Elliot Island (240 km SE).

Diamond Dove

A specimen, held in Museums Victoria, was collected from Bimbi, Dawson River, in 1903 (A). Reported from Yeppoon in 1985 (Niland 1986). Reported from ROK cell during Atlas 1. Since then recorded near ROK and Causeway Lake in 1997 (E), The Caves (25 km N) in 2008 (D), near ROK and Marmor (39 km S) in 2013 and 2014 (E), Kinka Beach in 2017 (D), and Glendale (15 km N) in 2020 (BC). **SWBTA:** recorded by Schodde *et al.* (1992) but not by Nix (1972). **Coomooboolaroo**: between 1873 and 1933, appeared in times of drought, and during one such drought (1902) bred freely in all kinds of situations (Barnard 1925).

Spotted Nightjar

One observed at Limestone Creek, Bungundarra (38 km NNE), near Yeppoon, on 31 August 1957, and two on 28 February 1958 (Wheeler 1959). Also recorded at Coorooman Creek near Cawarral (22 km NE) on 28 December 1996 (W) and at Fernleigh (#1; 110 km NW), Torilla Plain, in April 2004 (R. Black, in litt.). **SWBTA:** observed on Stanage Bay Road near Banksia in April 2004 (R. Black, in litt.). **Coomooboolaroo:** Barnard (1925) found eggs of the species, which was considered very rare. Southern Australian populations are at least partly migratory, moving north in autumn and over-wintering in the monsoon tropics (Higgins 1999; Griffioen & Clarke 2002; McCrie & Noske 2015), suggesting that some of the ROR records involve other populations.

Oriental Cuckoo (Plate 2)

During Atlas 1, recorded in ROK cell and surrounding cells, while in Atlas 2, recorded in three adjacent cells only. **SWBTA**: Nix (1972) saw one bird at Freshwater Bay in September 1971, and Schodde *et al.* (1992) recorded it in 14 habitats, in two cases as "abundant". Single birds reported from Byfield in December 1998, Dawson River near Duaringa in February 2000 (D) and Yeppoon in February 2020 (BC).



Plate 2. Oriental Cuckoo, Yeppoon (Graham Durant)

Australian Spotted Crake

A specimen, held in Museums Victoria, was collected from Port Curtis, Rockhampton, but is undated (A). One recorded in Yeppoon on 10 April 1986 (Redhead 1988). Since 1986, only two known records from region surrounding ROR, one involving a bird observed southeast of Duaringa in 2000 (D) and another a bird at Fernleigh (#1; 110 km NW), Torilla Plain, on 2 July 2003 in beds of sedge *Schoenoplectus subulatus in muddy brackish marsh* (R. Jaensch, *in litt.*).

Short-tailed Shearwater

In September 2014, a storm blew several birds off course and they were found in gardens and paddocks just west of the coast (BC). Count of 134 birds off **SWBTA** in December 2011, and 32 birds in Corio Bay in November 2013 (E). Hundreds of dead birds washed up on beaches along Capricorn Coast in November 2013 and November 2015 (BC). Beach-washed specimens have been found as far north as Cairns, Innisfail and Townsville (Baker & Gill 1974; Longmore 1985). The closest breeding colony is probably Broughton Island, NSW (c.1,040 km S).

Australian Little Bittern

Recorded on track from Causeway Lake to Lammermoor Beach (35 km NE) on 4 November 1997 and on a dam at Glendale (15 km NNW) in October 2013 (E); also Archer Station (30 km SE) in March 2015 and Barmaryee Wetlands (34 km NE) in 1 February 2020 (R. Black, *in. litt.*). **SWBTA**: Nix (1972) reported flushing a small bittern from fringing reeds in Louisa Creek, and suggested it was possibly a "colour phase" of this species, but his description of the bird's plumage does not accord with any of this species; not recorded during 1991-92 surveys (Schodde *et al.* 1992). Reported from Gladstone cell (23/151) during both Atlas 1 and Atlas 2. Nearest recent record from St Lawrence Wetlands (150 km NW) in November 2007, where an adult female was discovered in tall bulrushes *Typha* sp. and captured opportunistically for the purposes of verifying its identity and sex with photographs, then released unharmed (R. Black and R. Jaensch, in. litt.). Although populations in southeast Australia are thought to be migratory, moving north as far as New Guinea in autumn and winter (Marchant & Higgins 1990; Jaensch 1988), some in northern Australia may be sedentary (Jaensch 1988).

Great-billed Heron

Ramsay (1877) observed this largely tropical species at the Fitzroy River mouth, as well as Wide Bay and Moreton Bay in southeast Queensland, and as far south as the Clarence River, NSW, indicating that it once occurred further south than now (Marchant & Higgins 1990). One observed at Bungundarra (38 km NNE) in August 1990 (Britton 1991). **SWBTA:** Nix (1972) observed a single bird on mangrove-fringed Shoalwater Creek in 1971, but not recorded during 1991-1992 survey. Birdata records south of ROK (e.g. Eurimbula NP in 1998, Tin Can Bay in 2000, and Deepwater NP near Agnes Waters in 2001) demonstrate that the species occasionally ventures further south.

Great Frigatebird

On the mainland, first reported from Bluff Rock (37 km NE) on 1 January 1983 (A). Subsequently reported from near Water Park Creek at Byfield in July 1998 (Atlas 2; B), and Emu Park-Bicentennial Park (39 km NE) on 14 July 2012 (E, A). Offshore records include Peak Island on 1 November 1995 (43 km E) and Great Keppel Island on 5 February 1999 and 2 May 2000 (B, A). Like the Lesser Frigatebird, this species is probably blown towards the mainland during storms. Closest breeding colony is on Raine Island, GBR.

Common Ringed Plover

An adult observed at Kinka Beach on 20 February 1987 (Redhead 1990; Crawford 1992) represented the second Queensland record, the first involving a bird at Boonooroo (350 km SE), near Maryborough, in July-August 1983 (Stewart 1984; Marchant & Higgins 1993). There have been no reports of this Palearctic-breeding species in Queensland since 1987.

Little Ringed Plover

A single bird seen at Lower Gracemere Lagoon (10 km W) on the Fitzroy River floodplain on 16 October 2003 (Jaensch *et al.* 2004a). Nearest recent records are of a single bird at Wunjunga Wetlands (500 km NNW), c.96 km SE of Townsville, from December 2018 to March 2020 (E). This East Asian-breeding species is a regular, albeit rare, migrant to northwest Australia.

Double-banded Plover

First reported from ROK cell during Atlas 1. A record from Sandy Point, Corio Bay, in 1995, is undated, while another from Leekes Creek mudflats on Great Keppel Island was made in December 1999 (A). Up to 45 birds seen during monthly counts from May to August 1995 at Sandy Point, Corio Bay (Houston & Mitchell 1997). Recorded at Kinka Beach (#19) from May to September each year from 2005 to 2011 (BC). Lack of sightings in 2012, 2013, 2014 and 2016 are probably due to increasing disturbance by people walking their dogs off-leash. Nevertheless, 15 were seen in 2017, seven in 2018, two in 2019 and seven in

2020 (BC). Although this New Zealand-breeding species winters mainly on the shores of southeast Australia, there are records as far north as Cape Tribulation, NQ (eBird 2020).

Oriental Plover

This Palearctic-breeding species migrates annually to inland northern Australia, but vagrant individuals have been recorded as far south as Victoria and eastern Tasmania. One bird recorded at Sandy Point, Corio Bay, in October 1996 (D); three birds at Kinka Wetlands (#19) in November 1997 (E), and one bird at 'Fitzroy Vale' (#30) in May 2016 (BC).

Australian Painted-snipe (Plate 3)

Two specimens, held in Museums Victoria, were collected from Rockhampton, but are undated (A). Reported from ROK cell during Atlas 1. Up to six birds counted at several locations on coastal grazing property of Balnagowan (35 km SE) on the Fitzroy River delta in June 2005, and a pair at Gavial Swamp (4 km SE) on 3 March 2008 (Black *et al.* 2010). In June 2013, 23 birds at ROK Botanical Gardens (BC) and three at Shalom Lagoon in north Rockhampton. Also one bird at Marmor (39 km S) in April 2014 (E). Black *et al.* (2010) provided compelling evidence that a significant proportion of the global population migrate annually from southeast Australia to the wetlands of coastal C and N Qld during autumn and winter. The species also breeds in the wider region, with at least three breeding records from coastal freshwater and brackish marshes on Torilla Plain and western Broad Sound, e.g. 30 May 2003 and 11 May 2007 (Jaensch *et al.* 2004b; Melzer *et al.* 2008), and it is likely that other local breeding by this secretive Endangered species has gone undetected.



Plate 3. Left, Australian Painted-snipe south of Emu Park (Gary Knight); right, Black-tailed Godwit at Murray Lagoon (Gary Knight)

Little Curlew

Single birds reported from Kelly's Landing Road (51 km NNE) on 4 November 1997 (A), on treeless coastal plain at Glenprairie (86 km NW) on 13 November 2007 (R. Jaensch, *in litt.*), and at Sea Hill, Curtis Island (49 km ESE) on 18 October 2019 (A). Also reported in ROK cell during Atlas 1 and Atlas 2.

Black-tailed Godwit (Plate 3)

First recorded on Casuarina Island at the Fitzroy River mouth in November 1978, then at Gracemere in November 1979 (Atlas 1; A). Since then, seen regularly on lagoons around ROK and Capricorn Coast, e.g. Kinka Beach (D). Between 1982 and 2018, eight records at Murray Lagoon (E, D), with 82 birds in October 2018 (BC); 55 birds at Gracemere Lagoon, and 120 at Lower Gracemere Lagoons, in October 2003 (R, Jaensch *in litt.*); 120 birds at Lotus Lagoon in 2012 (E). Also occurs regularly in freshwater and brackish wetlands on Torilla Plain and western Broad Sound, e.g. 58 birds on Torilla Plain on 1 May 2003 (R. Jaensch *in litt.*); 450 birds in brackish marsh on Bar Plain east of St Lawrence town on 28 March 2007 (Melzer *et al.* 2008).

Long-toed Stint

One at Twelve Mile Creek (40 km SE) on 24 November 2004 (Houston *et al.* 2006; M. Mathieson, in litt.). Also one on 29 October 2014 on saltflats on north-eastern Curtis Island (R. Black, in litt.), 55 km ESE of ROK. The only other records from eastern Queensland are from Cairns, where recorded 24 October 1988 (Britton 1990a), December 1995 and December 2005 (E), and Brisbane region, where recorded in December 1986 (Redhead 1988) and February 1987 (Redhead 1990), as well as in January, February and October 2018 (up to three birds), and March and December 2019 (E). This Siberian-breeding species is a regular migrant in small numbers to Australia, especially the northwest.

Pectoral Sandpiper

First recorded at Kinka Beach (#19) on 5 March 1987 (M. Crawford in Redhead 1990). Since then, only one record from ROR at Lake Mary (31 km NE) in March 2017 (D). Just northwest of ROR, a bird at Bar Plain (135 km NW), 18 km southeast of St Lawrence, 22-23 November 2006 (Melzer *et al.* 2008), and another at St Lawrence Wetlands on 24 October 2019 (E).

Asian Dowitcher

Seven birds at Yeppoon on 3 January 1988 (M. Crawford in Britton 1990a). Although single birds were seen annually from 2013 to 2019 in the Brisbane region, Southeast Queensland, there have been no further records in ROR since 1982 (D, E).

Wood Sandpiper

Seven records from Kinka Beach between December 1986 and February 1987 (D). Also two birds at Kinka Wetlands in March 2004 (D).

Australian Pratincole (Plate 4)

First recorded at Long Island Conservation Park (17 km NW) in December 1978 (Atlas 1; A). After a gap of 25 years, recorded at Shalom Lagoon (5 km N) in October 2003 (A). One record near Marmor in October 2009, and another from Cheetham Salt Works (29 km S) in December 2012 (D, E). Recorded at 'Fitzroy Vale', Fitzroy River (BC): July 2014 (4 birds), June 2015 (1), July 2015 (5), August 2015 (2), October 2015 (5) and May 2016 (4).



Plate 4. Australian Pratincole at Fitzroy Vale (Bob McTrusty)

Oriental Pratincole

Recorded at Windmill Plains, near Yeppoon, on 5 December 1989 (M. Crawford in Britton 1990b). No Birdata or eBird records for the region. This Palearctic-breeding species migrates regularly to northern Australia, but is occasional south of Hughenden (Higgins & Davies 1996).

Brown Noddy

First reported from ROK cell during Atlas 1, and recorded at Lake Mary near Yeppoon, in February 1985 (M. Crawford in Niland 1986), apparently blown c. 18 km inland during a storm. **SWBTA:** reported from Black Rock in February 1986 and November 1988 (A). One bird at Corio Bay in 2010 (E). The nearest records since 2010 are from Tannum Sands (130 km SE) on the mainland in 2013 (D), and well offshore in open ocean in 2017, when over 1,000 birds were counted (E). The closest breeding colony is on Lady Elliot Island (240 km SE) (King 1993).

Black Noddy

Reported from Great Keppel Island in March 1999 and January 2001 (D), and at sea between North and Great Keppel Islands in January 2003 (E). On mainland, reported from Corio Bay in February 2010 (E), and Kinka Beach in January 2013 (D). The closest breeding colony is on North West Island (122 km E) (King 1993), where over 100,000 breeding pairs bred most years from 1996 to 2000 (Dyer *et al.* 2005).

Sooty Tern

Observed close to Rosslyn Bay Harbour, Yeppoon, on 14 March 1989 (M. Crawford in Britton 1990b). Since then, recorded at Kinka Beach in 2013 (D) only. The closest breeding colony is probably Michaelmas Cay (c.890 km NW).

Black-naped Tern

Reported from ROK cell during Atlas 1. Also reported from Conical Is. near North Keppel Is. in December 1989, and from Shoal Is., Fitzroy River (25 km SE), in October 1999 (A). Since then, one record of six birds at Iwasaki Wetlands, north of Yeppoon in May 2002 (D). **SWBTA:** reported from Black Rock in February 1986 and November 1988 (A). The nearest breeding colony is on One Tree Island (162 km E) (King 1993).

Eastern Grass Owl

Museums Victoria holds a clutch of six eggs collected from Torilla (111 km NNW) by F.L. Berney on 19 March 1917 (A). Not reported from ROR during either atlas Atlas 1 or Atlas 2, but reported from Bajool (34 km S) in 1982 (E). Also flushed several times at sites on the Kunwarara Magnesite mines (50 km NNW) in May 2012 (R. Black, *in litt.*). **SWBTA:** Nix (1972) alleged that a Grass Owl "crash-landed" into a small tree beside his camp fire on the beach at Sabina Point in 1971, but it was not recorded during the 1991-1992 surveys. Two birds also observed on Curtis Island marine plain (72 km ESE) in October 2009 and October 2018, believed to be resident (R. Black, *in litt.*).

Black-breasted Buzzard (Plate 14)

First observed at Lake Mary, Yeppoon, on 16 June 1991 (Britton 1992). More recent records from Causeway Lake in 1997, Fitzroy Vale in 2013 and Lake Mary, Yeppoon, in 2016 (E); also Kinka Beach in March 2018, and Mulara on the Capricorn Coast in October 2018 (BC).

Little Kingfisher

One bird was sighted three times in mangroves on a tidal creek near Kelly's Landing, Corio Bay (#4), on 18 March 2012 (Roberts 2012a; E, D). **SWBTA:** recorded in mangroves along creeks in August-September 1991 (Schodde *et al.* 1992) and in April 2011 (M. Mathieson, pers. comm.). It has not since been seen at Corio Bay, and the nearest locality where the species is regularly recorded is Mackay, 255 km NW of Corio Bay. It is possible that the aforementioned bird was blown southward by Tropical Cyclone Yasi in February 2011. See also Mangrove Golden Whistler and Discussion.

Buff-breasted Paradise-Kingfisher (Plate 5)

This migratory species was previously known to breed in five areas of lowland rainforest in NE Queensland from islands of SW Torres Strait south to Mackay, where it was first discovered in 1981 (Nix 1984; Legge and Heinsohn 2001). In March 1975 an Australian Museum expedition collected an immature bird in an isolated patch of lowland rainforest at Eurimbula National Park (160 km SE), south of Gladstone (Nix 1984). The species was first recorded in ROR at Byfield in January 1985, and subsequent observations indicated that 20 pairs bred in the Byfield area (Black 2005). In February 1988 also recorded at Yeppoon

(V. Bartlem in Britton 1990a). Since 2005, at least two pairs have been observed annually, nesting on a private property on Mt Bayfield, near Byfield (BC). A bird hide has been installed near the nests to avoid disturbing the birds when they are feeding young. **SWBTA:** recorded at one site during 1992 wet season survey (Schodde *et al.* 1992).



Plate 5. Buff-breasted Paradise-Kingfisher at Byfield (Kevin Vins)

Long-billed Corella (Plate 6)

First noted in April 1991 on Great Keppel Island (Britton 1992), where a single bird was fed by local residents until 2017 when it was last seen. On the mainland, escapees were first recorded at Murray Lagoon (3 km SW) in August 1992 and Yeppoon in 2001 (E, D). At both latter locations, populations have slowly increased from 1-3 birds to 20 birds (BC). Native to extreme southeast Australia only, this species has established feral populations from escaped aviary birds at many localities further north in eastern Australia (Higgins 1999).

Crimson Rosella

An "unusual" record of this species from Yeppoon on 3 February 1985 (M. Crawford in Niland 1986) most likely concerned an aviary escapee. However, a pair was observed in stringybark forest on the Blackdown Tableland (150 km WSW) in late 1989 or early 1990 (Cody 1991). The nearest record is from Mount Walsh National Park (295 km SE) in November 2012 (E).

Superb Fairy-wren (Plate 6)

First recorded at Farnborough resort area, north of Yeppoon, in January 1978 (A) during Atlas 1, and also reported from ROK cell in Atlas 2. Since then, recorded around lagoons at Victoria Park, South Rockhampton, in 2005 (D), Yeppen Yeppen Lagoon (4 km S) in 2006 (D), Duck Ponds (5 km S) in 2011 (BC) and Limestone Creek, North Rockhampton, in 2011 (D). Also recorded east of Duaringa in 2003, near Yaamba (#11) in 2016, near Bajool (34 km S) in 2017 and The Caves (25 km N) in 2018 (BC, D). Not recorded in SWBTA or on Coomooboolaroo. Higgins *et al.* (2001) considered the northern limits of the

species' range as 23°S, but noted an observation at Moranbah (294 km NW; 22°00'S, 148°02'E) in June 1988 (Britton 1990a).



Plate 6. Left, Long-billed Corella in Rockhampton (Allan Briggs); right, Superb Fairy-wren at Blackdown Tablelands (Allan Briggs)

White-naped Honeyeater (Plate 7)

First recorded near Johanssen's Cave (23 km N) in 1977 (Atlas 1; A). Subsequently reported from Kinka wetlands (#19) in November 1997 (E), and Capricorn Coast in June 2000. In 2002 observed at Alligator Creek (17 km NW), Canal Creek (37 km N), and Werribee Creek (52 km N) during 19-21 November (A). Also at Byfield in June 2004 (D), Gracemere (9 km SW) in February 2007, Mount Morgan (#35) in June-July 2014, and at Lammermoor (#15) in May 2016 (E). Up to 26 birds at Stanwell (#32) throughout year in 2018, 2019 and 2020. **SWBTA:** described as common in 1971, when birds assumed to be migrants were moving south in September (Nix 1972), and in October 2000, at Tilpal Creek (A), but not recorded during 1991-1992 surveys. **Coomooboolooroo:** "common in the rangy country" (Barnard 1925), but during 1999 surveys, recorded in only two out of 476 quadrats, suggesting a decline since 1934 (Woinarski & Catterall 2004). In contrast, the increasing frequency of records in ROR since 2000 indicates that its local status has changed from irregular migrant to partial resident.





Rufous-throated Honeyeater

This tropical species was not recorded in ROR during Atlas 1 or Atlas 2, though many birds were observed as far south as Gin Gin and the lower Burnett River in October 1959 (Robertson 1962), and vagrants reported from as far south

as Noosa and Beerwah, SE Qld, by the late 1970s (Roberts 1979). First recorded in ROR in September 2003 at Byfield State Forest (A, E); also from Glendale in April 2017 (A, E) and Yaamba in October 2019 (B). **SWBTA:** Nix (1972) reported numbers feeding on the blossoms of *Melaleuca leucadendron* in a swamp at Freshwater Bay; but not recorded during 1991-1992 surveys.

Singing Honeyeater

Occasional visitor, first recorded from Westwood in October 1881 (A). One seen in trees on Fitzroy River bank in ROK in October 1924 (Wolstenholme 1925b). One in North ROK in March 1999 (D); four in the Marmor area in August 2008, June 2017, November 2018 and August 2020 (E); and one at ROK Botanical Gardens in March 2017 (E). **SWBTA:** Nix (1972) reported that "it occurs in brigalow and bauhinia groves to the west of the northern railway line and could be expected to occur in the drier western sectors", but not recorded in 1991-1992. **Coomooboolooroo:** between 1873 and 1933 numerous in a small patch of brigalow with mistletoes (Barnard 1925), but not recorded during 1999 survey (Catterall & Woinarski 2003).

Brown Gerygone

Campbell (1900) reported a nest of this species, listed as Brown Flyeater *G. fusca*, on the margin of the Fitzroy River on 2 October 1885, though Longmore incorrectly attributed it to the Western Gerygone (see below), which Campbell listed as Southern Flyeater [*G.*] *culicivora*. Higgins & Peter (2002) regarded this record as doubtful, yet the species was reported from ROK cell during both Atlas 1 and Atlas 2. Recorded on Capricorn Coast in 1998 (D), at Yeppoon in 2016 and Byfield in 2018 (E). No published records from SWBTA.

Mangrove Golden Whistler (Plate 8)

On 18 May 2012, Roberts (2012a; eBird 2020: S41297544) saw and photographed an adult male while kayaking among mangroves within 1.5 km east of Kelly's Landing (56 km NNE), Corio Bay. Outside ROR, an adult female was seen in a band of mangroves at Fernleigh (#1; 110 km NW), Torillo Peninsula, on 11 November 2003 (R. Black, *in litt.*). **SWBTA:** not recorded during CSIRO survey in 1971, but in August 1991, three specimens were collected from near Sabina Point (109 km NNW) and Ross Creek (A; Higgins & Peter 2002), though they had initially been misidentified as Golden Whistlers (Schodde *et al.* 1992). Another specimen was collected Akens Island (116 km NNW) in September 1993. Also observed on Warginburra Peninsula (103 km N) in December 2012 (A) and another site in April 2016 (M. Mathieson, *in. litt.*). As the species has not been re-sighted in Corio Bay since 2012, and the nearest locality where the species is regularly recorded is Mackay, 255 km NW of Kelly's Landing, it is possible that the bird seen in 2012 had been blown southward by Tropical Cyclone Yasi. See also Little Kingfisher and Discussion.



Plate 8. Mangrove Golden Whistler (immature male) at Corio Bay (Greg Roberts)



Plate 9. Broad-billed Flycatcher at Corio Bay: left, adult male (Greg Roberts); right, female (Gary Knight)

Broad-billed Flycatcher (Plate 9)

Although early reports of this species on the eastern coast of Australia had previously been treated as unconfirmed due to possible confusion with Leaden Flycatcher (Higgins *et al.* 2006), an immature male collected at Casuarina Island at the mouth of the Fitzroy River on 14 January 1901, and held at University Museum of Zoology, Cambridge, was confirmed to be this species (Boles 1984, 1988). In 2000, one bird was observed at Corio Bay. Since 2000, 1-5 birds seen at Corio Bay in 2008 (BC), 2012 (E, D; Roberts 2012b), 2013 (BC), and Stockyard Point in 2010 (D). **SWBTA:** observed in mangroves at Sabina Point beach in 1971 (Nix 1972), and at Ross Creek in 1991 (Schodde *et al.* 1992). Reports as far south as Sunshine Coast (Menkhorst *et al.* 2017) suggest the species may be expanding its range southwards.

Shining Flycatcher

Reported from ROK cell during Atlas 1 (1977-1982), by which time it was known to occur as far south as Moreton Bay (Storr 1984; Boles 1988). Recorded in mangroves at Corio Bay in 1999, 2014 and 2019 (E, D), around Ross Creek, Yeppoon, in 2017 (BC), Kinka Beach in 2018 and Yeppoon in 2020 (E). Since 2005 also seen on annual surveys in mangroves along Mulambin Creek which feeds into Causeway Lake, 8 km S of Yeppoon (BC). **SWBTA:** Not recorded in 1971, but found at Sabina Point and the mouth of Ross Creek in both 1991 and 1992, when no fewer than nine specimens were collected by Schodde *et al.* (1992). Yet the species was known from sites as far south as Noosa in 1958 (Officer 1969), Redcliffe in 1987 (Bielewicz & Bielewicz 1996) and Pumicestone Passage in 1988 (Britton 1990a). It was allegedly collected at the Tweed River in 1905, but was not recorded again in the far northeast corner of New South Wales until the 1970s (Cooper *et al.* 2020).

Brown Songlark (Plate 10)

Four observed at Limestone Creek, Bungundarra (38 km NNE), near Yeppoon, on 26 August 1956 (Wheeler 1957). Reported from ROK cell during both Atlas 1 and Atlas 2. Recorded near Stanwell (#32) in 1983 and 1998 (A). In the decade from 2000 to 2009, nine records, but from 2010 to 2019, excluding those from the same site in the same month, 82 records, mostly between ROK and Mt Larcom, especially on intertidal saltflats and large evaporation ponds surrounded by pastoral properties, east of a line between Bajool (34 km S) and Marmor (39 km S) (D, E, A). Surveys of marine plain grasslands over seven years from 2005 indicated a resident breeding population in the region, with peak counts of 24-25 birds at Twelve Mile Creek in December of 2010 and 2011 (Black & Houston 2013). **SWBTA:** in 1971, it was "often seen in the more open woodland areas of the western sectors and also near the coast at Pine Mountain" (Nix 1972), though not recorded in 1991-1992. **Coomooboolaroo:** a regular visitor in late 1800s, but "very seldom seen" by 1933 (Barnard 1925) and not recorded during 1999 survey (Catterall & Woinarski 2003).



Plate 10. Brown Songlark at Twelve Mile Creek (Allan Briggs)

Barnard (1925) attributed its regional decline during the 20th century to the scarcity of grass, which in turn was blamed on poor rains, though Woinarski & Catterall (2004) suggested that the expansion of short grasslands due to livestock grazing was an important factor in its regional decline. This decline stands in striking contrast to the status of the resident population in ROR, and corroborates the view that the latter is separate, perhaps genetically, from the migratory populations of southern and inland populations (Black & Houston 2013).

Barn Swallow

Although there are several records of this Palearctic migrant reaching as far south as North Canungra in SE Queensland during 1970s (Higgins *et al.* 2006), the first and only ROR record was from Kinka Beach, Yeppoon, on 21 January 1989 (D. Stewart in Britton 1990b). No records in either eBird or Birdata.

Common Myna

Despite reports of the species from the ROK cell in both Atlas 1 and Atlas 2, this introduced species did not arrive in ROR until 2012 (BC) but since then, has spread across the region in both urban and rural areas. Reports indicate that the local population is still increasing, with 330 records (n=235 and 95, BC and E, respectively) until the end of 2020. Over 100 birds counted in one flock at Yeppoon, and 63 at Gracemere in 2019 (A).

2. Doubtful or unconfirmed species

Of the 324 species he listed for the region, Longmore (1978) considered ten as doubtful, indicating so with an asterisk beside their names. After assessing the evidence, we concur with Longmore on the doubtful status of five of these species (Masked Owl, Silver-crowned Friarbird, Varied Honeyeater, Scarlet Robin and Pale White-eye), as detailed below. On the other hand, the remaining five species that were flagged as 'doubtful' for ROR are accepted here, based on records since the 1970s and/or an assessment of the historical evidence. Records of four of these species are detailed below (see section 3), while those of the fifth (Powerful Owl) are dealt with elsewhere (Noske & Briggs, in press). However, we believe that twelve other species listed by Longmore (1978) are invalid, due to insufficient documentation. Furthermore, we found historical records of two additional species (Red-browed Treecreeper and Yellow-tinted Honeyeater) that were probably erroneously reported from ROR and overlooked or omitted by Longmore. Thus, the total

number of unconfirmed species is 19. In the following species accounts, 'L' denotes Longmore's (1978) description of the species' status.

Marbled Frogmouth Podargus ocellatus

L: "rare vagrant", based on a possible sighting of a bird from Byfield area in 1924, which was attributed to Wolstenholme. However, there is no mention of the species by Wolstenholme (1925a, b). ROR is north of the accepted range of the southern subspecies, and well south of the northern race. Nearest records are from Bulburin National Park in 1998 (D), Eurimbula National Park in 2011 (D) and Seventeen-Seventy in 2014 (D), all 160-170 km SE of ROK.

Wandering Albatross Diomedia exulans

L: "winter vagrant". Although Longmore stated that there were "several references to birds seen in region", neither of the cited sources (Nix 1972; Storr 1973) provide records. Indeed Storr (1973, 1984) stated that the species is seldom seen north of 24°S. Nearest records are from Heron Island (150 km E) in 2007 (E) and east of Swain Reefs (360 km NE) in 2001.

Northern Giant-Petrel Macronectes halli

L: "vagrant", based on an immature bird that was photographed at Emu Park, date unknown (Frauca 1974, in Longmore 1978). An unpublished record from Corio Bay on 20 June 2004 (A) requires confirmation. Nearest sightings are from Gannet Cay, Swain Reefs (255 km NE) in 2009 (D), and off the coast near Bundaberg in 2020 (BC).

Sooty Shearwater Ardenna griseus

L: "vagrant", based on sighting of five birds resting on the water c. 1 km east of North Keppel Island during a boat trip on 2 June 1974 (Longmore 1974, 1978). Identification based on "ashy coloured feathers on the undersides of the wings", but as Longmore (1974) admitted, some Short-tailed Shearwaters also show a pale flash on the underwing, and the latter species seems more likely on distributional grounds (see above account). Nearest records are from Gladstone Harbour in 1981, Heron Island in 2014, and several records near Swain Reefs in 2001 (E).

White-fronted Tern Sterna striata

L: "rare vagrant", based on a mounted immature specimen in National Museum of Victoria, which is labelled as being collected from Rockhampton, but has no accompanying data (Hindwood 1946). Neither Storr (1984) nor Higgins & Davies (1996) considered the provenance as valid. Breeding in New Zealand, this species is an uncommon winter visitor to southeast Australia and is rare north of Brisbane (Storr 1984). Nearest records are from Fraser Island (325 km SE; D) and Mooloolaba (450 km SE; E) in 1993.

Masked Owl Tyto novaehollandiae

L: "rare vagrant", based on a casual mention of the species by Broadbent (1888), with no details. Ramsay (1875, p. 580) "noticed in Mr. J.B. White's collection, obtained at Springsure (c. 260 km WSW), a very dark-faced variety; the facial disk was of a deep chestnut...". Barnard (1925) reported capturing a single bird with a rat-trap set at a bird cage in Coomooboolaroo (110 km WSW). Nearest records are from Dysart (240 km WNW; D) and near Theodore (180 km SSW; E) in 2001. Notwithstanding Barnard's (1925) record, we agree with Longmore that this species cannot be confirmed for ROR.

Red-browed Treecreeper Climacteris erythrops

Though not listed by Longmore, Broadbent (1888) listed this species along with the two other treecreeper species known for ROR (Appendix 1). However, the northern limits of this species are in the Conondale Ranges (Higgins *et al.* 2001), *c.* 400 km southeast of ROK.

Silver-crowned Friarbird Philemon argenticeps

L: "rare vagrant", based on two records, one of which is an unsourced sighting of two birds at Parkhurst (#20) on 22 September 1973. **SWBTA:** Bell (1968) claimed it was "very numerous" in the western parts, which were low-lying and very dry, but not in the eastern portion, where the land was better watered, hilly and more forested; however, neither Nix (1972) nor Schodde *et al.* (1992) found the species. Nearest sightings to ROK are from Cape Hillsborough (315 km N) in 2006 (E) and near Townsville in 2008 (D), whereas southern limit of similar Helmeted Friarbird *P. buceroides yorki* (Plate 11) near Clairview (180 km NW), and *possibly* as far as Shoalwater Bay (Higgins *et al.* 2001), the latter probably based on Bell's (1968)

statement that "I feel sure that Helmeted Friarbirds were among the flocks of [Noisy Friarbirds] that occurred in the more dense forests of Shoalwater Bay". We consider that Bell and others may have mistaken Helmeted Friarbirds for Silver-crowned as the two species are commonly confused where they co-occur in the Darwin region (McCrie & Noske 2015).



Plate 11. Helmeted Friarbird at Broadsound (Steve Kerr)

Eastern Spinebill Acanthorhynchus tenuirostris

L: "rare vagrant", based on a report of a bird heard calling several times in dry forest at Mount Wheeler on 9 February 1972 (observer unnamed), and "a mention" by R. Gannon, though Gannon (1962) does not mention ROR under this species. Nearest records are from Blackdown Tablelands (150 km WSW) and Kroombit Tops (120 km SSE), where it is a regular winter visitor. In view of the lack of published sightings, we treat the historical ROR record as unconfirmed.

Regent Honeyeater Anthochaera phrygia

L: "rare vagrant", based on two historical records. In August 1930, while crossing Byfield Creek, Ratcliffe (1938: 122) "caught a glimpse of the most beautiful of all the honey-eaters, the regent, whose black plumage is barred with gold". Also an undated, unconfirmed record of a single bird seen near Westwood (Longmore 1978). At Coomooboolaroo, "plentiful" in one year (not given) between 1873 and 1933 (Barnard 1925), but not since recorded (Catterall & Woinarski 2003). No records from C Qld in either atlas. Nearest record since 2000 is from Rainbow Beach, near Fraser Island, in 2018 (E). It may not be coincidental that Ratcliffe's site is one of the few in ROR where the White-cheeked Honeyeater (which also has black and yellow in its plumage) occurs (R. Black, in litt.).

Varied Honeyeater Gavicalis versicolor

L: "rare vagrant", based on historical records and report of calls heard on Corroboree Island, north of Great Keppel Island in 1974. Wolstenholme (1925b) considered this species to be the commonest bird on North Keppel Island during the 1924 RAOU Campout, but his description of birds having brown and yellow streaked underparts, and some having streaked throats, indicates that they were Mangrove Honeyeaters *G. fasciogularis* (Plate 12) instead. Annual BC surveys of the island since 2013 have failed to find the Varied

Honeyeater, though Mangrove Honeyeaters are common. In SWBTA, Nix (1972) stated that the former species "is ever present in mangrove habitat and appeared to be much more numerous than the Mangrove Honeyeater", while Schodde *et al.* (1992) did not record the latter but reported Varied Honeyeaters at all mangrove sites. These historical records were considered doubtful by Higgins *et al.* (2001), who noted the similarity of the two species in habitats and calls. As the two species hybridise between Cardwell and Townsville (Ford 1978), it is unlikely that pure *versicolor* reaches Rockhampton. A report from ROK in 1999 (D) is the only record south of Bowen and might refer to a misidentified Mangrove Honeyeater or hybrid.



Plate 12. Mangrove Honeyeater on North Keppel Island (Mick Barker)

Grey-fronted Honeyeater Ptilotula plumula

L: "rare vagrant", based on specimens collected in 1881 from Gracemere (Mathews 1913), and another collected from Yaamba, on Fitzroy River, presumably also during late 1880s (Broadbent 1888). Both localities accepted by Storr (1973, 1984). In August 1956, five and 12 birds allegedly seen on outskirts of Rockhampton and at Cawarral, respectively (Wheeler 1957), accepted by (Gannon 1962), considered unconfirmed by Higgins *et al.* (2001). Since 1880s, the only record in ROR is from Mt Wheeler (25 km NE) in 1955 (E). SWBTA: Nix (1972) described it as locally common in woodland and part-cleared open woodland in the south-west, though it was not recorded by Schodde *et al.* (1992), nor at Coomooboolaroo during 50 years of residence by Barnard (1925). Nearest records are from Nebo (260 km NNW) in 1989 (Britton 1990b), near Clermont (300 km WNW) in 2001 and 2013 (D); and 13 birds in 2011 and seven in 2020 near Alpha (450 km W; E). Given the known current range of the species, it seems likely that historical specimens were mislabelled, and that Nix misidentified this, as well as two other *Ptilotula* species (see below).

Yellow-tinted Honeyeater Ptilotula flavescens

Although not listed by Longmore, there is an undated record from Yaamba (30 km N) (A). **SWBTA:** Nix (1972) claimed to have seen this species once, feeding in a flowering *Eucalyptus alba* near Banksia station in the western sector, in September 1971, but it was not recorded by Schodde *et al.* (1992). Not recorded at Coomooboolaroo. The nearest record is from Blackbraes National Park near Gilberton (780 km NW) in 2002 (D).

White-plumed Honeyeater Ptilotula penicillatus

L: "rare transient", based on Storr's (1973: 120) listing of "Rockhampton (rarely)" under its range. Subsequently, however, Storr (1984: 146) asserted that records of this species from the Fitzroy drainage probably referred to Grey-fronted Honeyeater (but see above), and that any reports east of Great Dividing Range required confirmation. Not recorded during either Atlas. **SWBTA:** Nix (1972) claimed it was moderately common wherever *Eucalyptus tereticornis* occurs, but it was not recorded during 1991-1992 surveys (Schodde *et al.* 1992). Not recorded from Coomooboolaroo, but reported from near Boolburra (75 km SW) in 2000 (A), and Dawson River, south of Duaringa (Fig. 1) in 2018 (D), on edge of ROR. Few other records within 200 km of coast (E).

Large-billed Gerygone Gerygone magnirostris

L: "rare vagrant", based on a report of a pair of birds in Berserker Ranges in December 1973. **SWBTA**: Nix (1972) claimed it was "quite common" in vine-forest, vine-thicket and dune-thicket habitat in the eastern sector, though he failed to find Fairy Gerygone *G. palpebrosa*. Schodde *et al.* (1992), on the other hand, found the latter species in those and several other habitats, whereas the Large-billed Gerygone was never recorded. Higgins & Peter (2002) dismissed records of the latter from the region, defining the southern limit of the species' range as Pleystowe (286 km NW) and elsewhere near Mackay (21°S). The nearest record is from Clairview (173 km N) in 2020 (E).

Western Gerygone Gerygone fusca

L: "rare vagrant", based on record(s) by W.B. Alexander (unpubl. MS per G. Storr) from western part of study area, probably during 1920s, and an alleged record by Campbell (1900). However, Campbell (1900) did not record this species in the region, and his gerygone record from the Fitzroy River refers to Brown Gerygone (see above). Western Gerygone was not recorded from ROR during Atlas 1, but during Atlas 2 it was reported from two adjacent cells to the west, and reporting rates increased nationally between the two periods (see Barret *et al.* 2003). Indeed, although Barnard (1925) did not record the species at Coomooboolaroo between 1873 and 1934, surveys in 1990s showed it to be present year-round (Catterall & Woinarski 2003). Nearest recent records are from near Wowan (80 km SW) in 2009 (D), south of Thangool (155 km S) in 2004, and Blackwater (166km W) in 2019 (E).

Scarlet Robin Petroica multicolor

L: "rare vagrant". Longmore rightly questioned Broadbent's (1888) report of this species, which was allegedly seen in the "scrubs" at Black Gin Creek in c. 1887. Chisholm (1960) did not doubt this record, nor an alleged record for Rockingham Bay (>700 km NW) by E.P. Ramsay prior to 1857, but Storr (1984) ignored both records. In Queensland, this species is largely confined to the Granite Belt in the extreme southeast (Chisholm 1960; Roberts 1979; Higgins & Peter 2002; Niland & Grimshaw 2019), though vagrants have been reported near Brisbane, and as far north as Nanango (395 km S; D).

Pale-yellow Robin Tregellasia capito

L: "rare resident", based on Broadbent's (1888) report of the species at Black Gin Creek in June 1887, and an unsourced sighting of one at Byfield in October 1970. In addition, two birds allegedly seen at Bungundarra (38 km NNE), near Yeppoon, in August 1957 (Wheeler 1959). These sites are well north of the normal range of the southern nominate race, and well south of the northern race *nana* (Higgins & Peter 2002). Nearest records are from Rainbow Beach (475 km S; D, E) in 2015 and 2020.

Ashy-bellied White-eye Zosterops citronella

L: "rare vagrant", based on Wolstenholme's (1925b) report of several sightings of silvereyes with a uniformly green back, yellow throat and greyish-white underparts, in the "scrubs" at Byfield and Yeppoon during the RAOU Campout in 1924. Longmore (1978) rightly listed this species as doubtful, as there are no confirmed records south of Cape York Peninsula. Higgins *et al.* (2006) considered Wolstenholme's record, and records from Low Isles and Green Island, as erroneous and referring to Silvereyes *Z. lateralis vegetus*,

which occurs north of Burdekin River Drainage. However, on geographical grounds, birds in ROR most likely represent *Z. l. cornwalli*, which occurs south of that Drainage to about Hunter River, New South Wales. Storr (1984) used the trinomial *westernensis* for birds in south-eastern Queensland north to Byfield, though this name is now used for more southern populations (Higgins *et al.* 2006). Parenthetically, Kikkawa (1973) contended that birds from Green Island, off Cairns (now treated as race *vegetus*), had predominantly olive backs, approaching the appearance of the Pale White-eye.

3. Apparently valid species considered doubtful by Longmore (1978)

Five species that were flagged by Longmore (1978) as 'doubtful' for ROR are accepted here, based on records since the 1970s and/or an assessment of the historical evidence. Records of four of these species are detailed below, while those of the fifth (Powerful Owl) are dealt with elsewhere (Noske & Briggs, in press).

Pale-vented Bush-hen

A single bird was observed near the Botanic Gardens, Rockhampton, in September 1967 (A.R. McGill, pers. comm. in Longmore 1978). Recorded in ROR cell during Atlas 1. Reported from Stanwell Power Station in January 1983 (A) and Cawarral (between Rockhampton and Yeppoon) in June 1990 (Britton 1991). Since 2000, recorded at Belmont (16 km N; A); Corio Bay (#4) in 2013, Rossmoya (#9) in 2014, and Mt Morgan (#35) in 2016 (E); and Gracemere (#29) in 2015 (D). **SWBTA:** in 1971, Nix (1972) disturbed single birds from tussock and sedge in drainage lines at several widely-spaced locations, including 'The Glen' (63 km NNW) and north of Samuel Hill camp on the Freshwater Bay road (74 km NNE); but not recorded during 1991-1992 surveys (Schodde *et al.* 1992).

Greater Sooty Owl

Broadbent (1888) reported one bird on the Upper Fitzroy River, probably in Louisa Creek area. Neither Storr (1984) nor Higgins (1999) accepted this record. Nevertheless, in 1993 Hobcroft (1997) observed a bird at Eungella National Park, 325 km NW of Rockhampton and 750 km N of its previously documented range. In the same year, he also recorded one at Kroombit Tops (120 km SSE), west of Gladstone (Hobcroft 1997). **SWBTA:** reported from Shoalwater Creek on 9 January 2003 (A). Nearest recent records near Monto (175 km SSE; D), and Kroombit Tops (120 km SE; E) in 2015. Given that the species has been recorded further north than ROK, we consider this species to be a confirmed vagrant.

Rufous Owl

During the 1924 RAOU Campout, a large owl was flushed from thick scrub on the bank of Water Park Creek, near Byfield, and after settling for a short while on a tree limb, was watched by several campout participants, including "Messrs Chenery, Barnard and Alexander A few days later Mr Sharland saw a bird which he identified as this species" (Wolstenholme 1925b: 243). While Longmore considered these records doubtful, the calibre of the ornithologists involved suggests otherwise. Storr (1984) and Higgins (1999) accepted these and an additional record from Mt Jim Crow NP, about halfway between Yeppoon and Rockhampton (P. Doyle in Higgins 1999). Also reported from Blackdown Tablelands (150 km WSW) in late August 1976 (Pavey 1993). Nearest records since 1976 are from Sarina (250 km NNW; D) and Eungella (320 km NW; E), west of Mackay, in 2001. In view of a record further south than ROK, we consider this species to be a confirmed vagrant.

Bar-breasted Honeveater (Plate 13)

Prior to 1980, only one published record, of 30 birds feeding in *Callistemon* at Rossmoya on 18 October 1975 (A.E.F. Rogers, pers. comm. in Longmore 1978). Reported breeding at Duaringa during Atlas 1. Recorded at Kinka Beach (#19) in September 1985, December 1989 and January 1990 (M. Crawford in Niland 1986, Britton 1990b, 1991), and at Fitzroy Barrage in Rockhampton in October 1990 (Britton 1991). During 20 years from 1999 to 2019, recorded in 60 months, and from over 30 sites, including the Botanic Gardens, Kershaw Gardens and Woolwash Lagoon in Rockhampton, Lammermoor Native Gardens near Yeppoon and Springer's Lagoon in Gracemere (A). Up to three individuals observed in each month from June 1996 to May 1997, at a site west of Yeppoon (Chan 1998), and six birds present at nearby Lake Mary in March 2017 (A). Breeding was reported at Twelve Mile Creek (40 km SE) in 2005 (Houston *et al.* 2006). **SWBTA**: not recorded in 1971 (Nix 1972), but during 1991-1992 surveys, three specimens collected in August, and two in May, all from the vicinity of billabongs along two freshwater creek systems (Schodde *et al.* 1992).



Plate 13. Bar-breasted Honeyeater on Hedlow Creek (Allan Briggs)

Discussion

Species accumulation over time

The number of bird species known to occur in ROR has risen steadily with each published study over the 145 years since Broadbent's account (Fig. 3). Of the 140 species he listed for ROR, Broadbent (1888) recorded five species (Masked Owl, Red-browed Treecreeper, Grey-fronted Honeyeater, Scarlet Robin and Pale-yellow Robin) that we believe were misidentified, leaving 135 valid species. Of these, three species (Greater Sooty Owl, Paradise Riflebird and Crimson Finch) were never recorded again in ROR. Nearly 40 years later, the RAOU campout in 1924 (Wolstenholme 1925a, b) produced a list of 182 species, of which 85 species had not been recorded by Broadbent. On the other hand, 40 (30%) of the species reported by Broadbent were not recorded by Wolstenholme (1925a, b), and of these, only three had probably already become locally extinct (Noske & Briggs, in press). That so many species were not recorded during the RAOU campout is probably due to its short duration and limited geographical scope. Only two species (Varied Honeyeater and Pale White-eye) were apparently misidentified by participants.

Fifty years later, after 20 months of residency and an additional three years of collecting field data and collating historical records, Longmore (1978) listed 324 full species for the region. As shown above, 17 of these species appear to be doubtful or lacking sufficient documentation. Of the remaining 307 species, only 95 were shared with both Broadbent's and Wolstenholme's lists, while 40 were shared only with Broadbent (1888) and 85 only with Wolstenholme (1925). Longmore's (1978) list included 88 valid species that had not previously been listed.

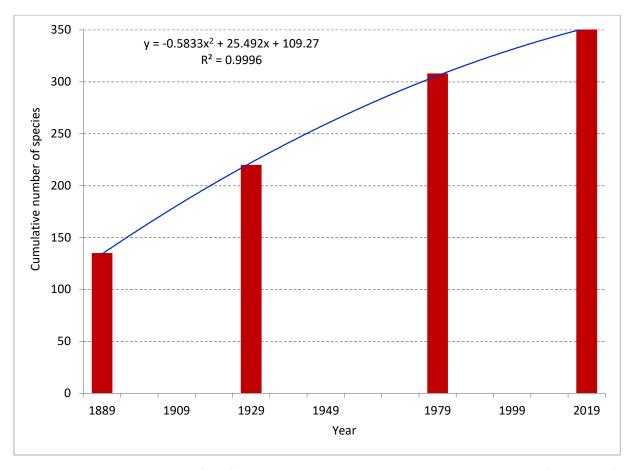


Figure 3. Cumulative number of confirmed bird species recorded in Rockhampton region (1889-2019), with line of best fit, polynomial equation and coefficient of determination (R²).

We found historical reports of eight species that were recorded prior to the 1970s, yet were not listed by Longmore (1978). Three of these species were first recorded in the late 1800s (Great-billed Heron, Singing Honeyeater and Brown Gerygone) and five (Diamond Dove, Spotted Nightjar, Eastern Grass Owl, Broad-billed Flycatcher and Brown Songlark) between 1900 and 1960, and all have been observed at least once since the 1970s. The vast majority (35) of additional species, however, were first recorded after Longmore's (1978) review period (1970-1975), a fact that is not surprising given a large increase in the number of birdwatchers, both resident and visitors, since that time. Indeed ten species were added during the first Atlas (1977-1981), though only two were added during the second Atlas period (1998-2002). Moreover, the number of regularly visited birding sites has increased since the 1970s. Several additional species are found mainly on private properties to which Longmore and his predecessors may not have had access. Somewhat surprisingly, only seven species have been added this century.

Of the 35 species that have been added to the ROR checklist since 1975, 13 (37%) are shorebirds, ten of which were first recorded in the late 1970s and 80s. Of these ten species, seven are Palearctic-breeding migrants, two are Australian-breeding migrants (Australian Painted-snipe and Australian Pratincole) and one is a New Zealand-breeding migrant (Double-banded Plover). Seven (20%) of the additional species are seabirds, three (Black-naped Tern, Brown Noddy and Black Noddy) of which breed on islands of the Capricorn-Bunker Cays of the Southern Great Barrier Reef, only 120–240 km from Rockhampton. Of eight additional species that are landbirds, five are normally sedentary, while three are migratory, two of which breed in Northeast Asia (Oriental Cuckoo and Barn Swallow) and one in Australia (Buff-breasted Paradise Kingfisher). One of the additional species is non-indigenous (Common Myna) and two apparently derived from aviaries (Long-billed Corella and Crimson Rosella), though the latter has not persisted. Only two

additional species are waterbirds (Australian Spotted Crake and Australian Little Bittern). Further species are likely to be added in the future, perhaps including Swinhoe's Snipe *Gallinago megala* or Eastern Yellow Wagtail *Motacilla tschutschensis*, both of which were recorded at Bar Plain, east of St Lawrence in 2006 (R, Jaensch, *in litt.*).

Range expansions

Five tropical species appear to have expanded their ranges southwards into ROR in recent decades. Three of these species are normally sedentary and strongly associated with mangroves. Although the Broad-billed Flycatcher was first recorded in ROR as early as 1901, it was almost a century before it was re-discovered in ROR in 2000, and it has recently been reported as far south as the Sunshine Coast (Menkhorst *et al.* 2017; eBird 2020). The other two mangrove-specialised species, the Little Kingfisher and Mangrove Golden Whistler, were recorded in SWBTA during the CSIRO surveys of 1991-1992, about 20 years before their discovery in Corio Bay. That these two species were found in SWBTA before ROR is consistent with a gradual southward expansion of range, possibly due to rising temperatures in the region resulting from global climate change (Noske & Briggs, in press). Yet neither species has not been re-sighted in Corio Bay or elsewhere in ROR since 2012, and the nearest locality where they are regularly recorded is Mackay, 255 km NW of Corio Bay. Moreover, annual surveys of several mangrove sites along the coast between Mackay and the Capricorn Coast by BirdLife Capricornia volunteers over 15 years have failed to find these species.

One proximate explanation for the appearance of these two species in ROR is that they were blown southward by Tropical Cyclone Yasi, which brought gale force winds to Mackay and strong winds to Rockhampton in February 2011, only one year before they were recorded at Corio Bay. Significantly, the largest blocks of mangroves between Mackay and Rockhampton are situated on the sheltered western side of Torilla Peninsula, and the eastern shores of Shoalwater Bay, the latter only c. 30 km north of the mangrove-lined Water Park Creek that runs into Corio Bay. Given the frequency of cyclones in the past, these species may have already established populations on Torilla Peninsula and in SWBTA, conceivably before the first CSIRO survey in 1971.

The fourth species that has expanded its range southwards is the Buff-breasted Paradise-Kingfisher, a rainforest-specialised migrant that was first discovered in ROR in 1985, and soon afterwards (1992) in SWBTA. Its discovery in the Mackay region only four years beforehand suggests that its range has expanded in relatively recent times. On the other hand, the absence of records prior to 1985 may be due to the small number of birdwatchers and the species' restriction to small isolated patches of rainforest, many of which are located on private properties. Its apparent absence during the 1924 Campout may have been due to timing, as the species normally arrives in the first three weeks of November (Black 2005), whereas the Campout was held on 22-25 October. The fifth tropical species that has colonised ROR is the Bar-breasted Honeyeater, which was first recorded in ROR in 1975, yet by 1999 was present at five sites, and by 2014, in every month of the year.

ROR currently marks the southern distributional limits of the above five species, as well as the Orange-footed Scrubfowl *Megapodius reinwardt*, all of which have a wide distribution in the tropics. At least three of these species appear to have increasing populations in ROR. In contrast, only one native subtropical and temperate species (Superb Fairy-wren) appears to have reached the region, presumably from the south or west. It may not be coincidental that four (Powerful Owl, Speckled Warbler, Paradise Riflebird and Diamond Firetail) of the 22 species that are now regionally extinct or declining in ROR have a largely subtropical and/or temperate distribution, and are/were close to their northern limits in ROR (Noske & Briggs, in press). Whether the warming climate has contributed, directly or indirectly, to these range contractions and expansions, requires further study.

Comparison with surrounding areas

The fauna of neighbouring SWBTA was first assessed by Nix (1972), who based his review on known distribution patterns, supplemented by "incidental" observations made during a single survey in September 1991, apparently lasting three weeks (Richardson 1972). Thus, in many cases it is not clear whether a particular species was observed or merely expected to occur in the area. Nevertheless, we gauge that 204 species were recorded, excluding six species, four of which were honeyeaters that were possibly or probably misidentified (see Section 2 above). Two decades later, SWBTA was systematically surveyed between 7 August and 16 September 1991, and between 30 January and 27 February 1992, by Schodde *et al.* (1992) who censused birds at 61 fauna point sampling sites. Despite the much greater effort involved in their study, Schodde *et al.* (1992) recorded a total of 221 species (excluding Varied Honeyeater, see above), only 17 species more than Nix (1972) reported. However, no fewer than 73 species were recorded by one study, and not the other. Combining the two studies, the number of species that had been recorded in SWBTA until 1993 totals 249, which is considerably fewer species than the total for ROR (APPENDIX 1). This might be expected given that SWBTA is approximately one quarter (2,940 km²) of the size of ROR (10,500 km²), does not extend as far inland, and supports fewer habitats.

Only 100 km inland from the western edge of ROR lies the pastoral property of Coomooboolaroo, where Barnard (1925, 1934) chronicled the avifauna and its changes from 1873 to 1934. Catterall & Woinarski (2003) undertook bird surveys of the property in 1999, and combined with Barnard's records, listed 200 species of known status and an additional 42 species of uncertain status, due to few records. Of the total of 242 species recorded at Coomooboolaroo, 14 have never been recorded in ROR. Of these 14 species, eight were of unknown status, probably vagrant, while the remaining six had been recorded regularly during some period. Significantly, two of the latter group (Paradise Parrot *Psephotellus pulcherrimus* and Yellow-tufted Honeyeater *Lichenostomus melanops*) became extinct on the property before 1933, while three others declined between 1933 and 1999 (Swift Parrot *Lathamus discolor*, Musk Lorikeet *Glossopsitta concinna* and Red-browed Pardalote *Pardalotus rubricatus*). The sixth species (Western Gerygone) was one of nine that had either colonised the property since 1933, or had been overlooked or misidentified by Barnard (Catterall & Woinarski 2003). Tragically, 18 species had disappeared from the property, and a further 68 species had declined, before 1999 (Catterall & Woinarski 2003; Woinarski & Catterall 2004).

Conservation significance of region

Of the 308 confirmed species that Longmore (1978) listed, eleven resident species have been extirpated from the region, while another eleven species have declined (Noske & Briggs, in press). This number of regionally extinct species is one of the highest known in Australia (Noske & Briggs, in press). Habitat loss has undoubtedly played a major role in the demise of most of these species, as 16 are associated with either eucalypt woodland or rainforest, 63% and 70% of which have been cleared since Europeans settled in the region, respectively. In addition, livestock overgrazing probably played a role in the extirpation of four species of finches from the region (Franklin *et al.* 2005). Aware of the disastrous impact of habitat destruction on the birds of ROR, Longmore (1978) advocated the protection of large areas of woodland and forest for the preservation of many local bird species. His aspiration was realised with the gazettal of five national parks between 1988 and 1994.

The Rockhampton region is very important for the conservation of the Critically Endangered Capricorn Yellow Chat *Epthianura crocea macgregori*, which is known to breed at Pelican Creek Saltworks and Inkerman Creek Saltworks on the Fitzroy Delta between Bajool and Port Alma, as well as at Twelve Mile Creek (Houston *et al.* 2004, 2006; Jaensch *et al.* 2004c; R. Black, in litt.). Sites on Torilla Plain on the eastern side of Broad Sound account for two-thirds of the average

population of 250 birds, while the Fitzroy River delta area and Curtis Island account for 22% and 3.5%, respectively (Houston *et al.* 2018). Similarly the marine plain wetlands of ROR and adjacent areas must be regarded as nationally significant for the conservation of the Australian Painted-snipe, which is listed as Endangered under the EPBC Act 1999. Moreover, Corio Bay supports internationally significant numbers of Lesser Sand Plover and Eastern Curlew, and nationally significant numbers of Whimbrel and Terek Sandpiper, leading to its nomination as a Ramsar site, in conjunction with Shoalwater Bay (Houston & Mitchell 1997). The *Shoalwater and Corio Bays Area* was the second Ramsar site to be listed in Queensland, and comprising over 200,000 ha, represents the largest Ramsar site in the state (Ramsar 2021).

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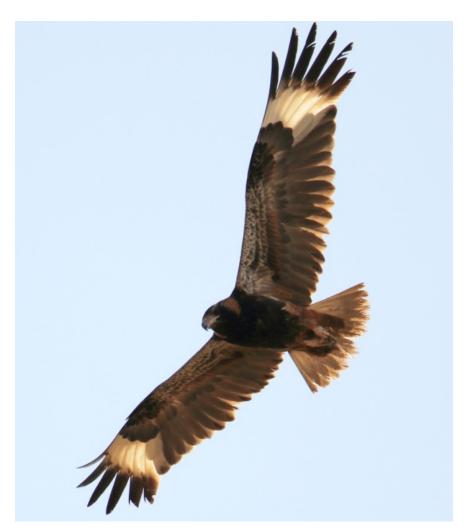


Plate 14. Black-breasted Buzzard, Bowra, southwest Qld (Paul Turner)



Appendix 1. Checklist of birds recorded in Rockhampton region and Shoalwater Bay Training Area, showing historical and current status.

This checklist summarises the status of all species that have been confirmed as occurring in the Rockhampton region (as defined above and shown in Fig. 1), as well as Shoalwater Bay Training Area (SWBTA). Unconfirmed species (see Results, section 2) are omitted. Names and taxonomic order follow the *BirdLife Australia Working List of Australian Birds v3* (BirdLife 2019). The known or inferred historical status of each species in the Rockhampton region is presented for three years, based on descriptions by Broadbent (1888), Wolstenholme (1925a, b) and Longmore (1978). Current status (2020) is based on records from BirdLife Capricornia and online databases (eBird 2020, Birdata 2020, ALA 2020 and WildNet 2020).

In the column labelled Longmore (1978), status abbreviations are shown in lower case if signifying personal records between 1970 and 1975, or upper case if referring to records by contemporaries or listed in published and unpublished reports, respectively; values in brackets refer to number of records. In the column labelled SWBTA, status abbreviations in upper case refer to the 1971 survey (Nix 1972), while those in lower case refer to the 1991-1992 surveys (Schodde *et al.* 1992). Species that are additional to those in Longmore's (1978) list (see Results, section 1 above) are shown in bold.

Status abbreviations: C, common; U, uncommon; R, rare (11-50 records); V, vagrant (\leq 10 records); L, localised; N, unknown; E, regionally extinct; D, declining.

English name	Scientific name	1888	1925	1978	2020	SWBTA
Emu	Dromaius novaehollandiae			U	U	Сс
Australian Brush Turkey	Alectura lathami	С	С	С	С	Сс
Orange-footed Scrub Fowl	Megapodius reinwardt		С	r	RL	Nr
Stubble Quail	Coturnix pectoralis			V(1)	V	
Brown Quail	Coturnix ypsilophora	С	С	С	С	Cu
King Quail	Coturnix chinensis			V(1)	D	Nr
Magpie Goose	Anseranas semipalmata		С	U	С	r
Plumed Whistling-Duck	Dendrocygna eytoni	N	С	С	С	Cr
Wandering Whistling-Duck	Dendrocygna arcuata		N	U	U	r
Musk Duck	Biziura lobata		R	V	V	
Pink-eared Duck	Malacorhynchus membranaceus			r	U	
Freckled Duck	Stictonetta naevosa			V(2)	R	
Black Swan	Cygnus atratus		N	С	С	С
Radjah Shelduck	Tadorna radjah		R	R	U	r
Cotton Pygmy-Goose	Nettapus coromandelianus			С	С	С
Green Pygmy-goose	Nettapus pulchellus			U	R	
Australian Wood Duck	Chenonetta jubata			С	С	Cu
Hardhead	Aythya australis		С	С	С	Cr
Australasian Shoveler	Spatula rhynchotis			r	R	
Pacific Black Duck	Anas superciliosa	N	С	С	С	Cu
Grey Teal	Anas gracilis		С	С	С	Cr
Chestnut Teal	Anas castanea			V(1)	U	
Australasian Grebe	Tachybaptus novaehollandiae		С	С	С	Cr
Hoary-headed Grebe	Poliocephalus poliocephalus		R	٧	V	

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Great Crested Grebe	Podiceps cristatus			U	U	
Red-tailed Tropicbird	Phaethon rubricauda				V	
Rock Dove	Columba livia			С	С	
White-headed Pigeon	Columba Leucomela	N	С	V(1)	U	Nr
Spotted Dove	Streptopelia chinensis			С	С	
Brown Cuckoo-Dove	Macropygia phasianella	N	С	С	U	Cc
Wonga Pigeon	Leucosarcia melanoleuca	R	R	V	D	С
Squatter Pigeon	Geophaps scripta	N		U	U	Cu
Common Bronzewing	Phaps chalcoptera	N		U	U	Nr
Crested Pigeon	Ocyphaps lophotes			С	С	Nr
Diamond Dove	Geopelia cuneata				V	r
Peaceful Dove	Geopelia placida	С	С	С	С	Cc
Bar-shouldered Dove	Geopelia humeralis		С	С	С	Cc
Brown-capped Emerald Dove	Chalcophaps longirostris	N	С	U	U	Nu
Wompoo Fruit-Dove	Ptilinopus magnificus	N	R	U	U	Nu
Superb Fruit-Dove	Ptilinopus superbus		R	V	V	
Rose-crowned Fruit-Dove	Ptilinopus regina	N	С	С	С	Cc
Topknot Pigeon	Lopholaimus antarcticus	N		С	С	Nr
Tawny Frogmouth	Podargus strigoides	N	N	С	С	Cc
Spotted Nightjar	Eurostopodus argus				V	
White-throated Nightjar	Eurostopodus mystacalis	N	R	R	RL	Cu
Large-tailed Nightjar	Caprimulgus macrurus			V	R	Cu
Australian Owlet-nightjar	Aegotheles cristatus	N	N	U	R	Cc
White-throated Needletail	Hirundapus caudacutus	С		U	U	u
Fork-tailed Swift	Apus pacificus			R(2)	R	u
Pheasant Coucal	Centropus phasianinus	С	С	С	С	Сс
Eastern Koel	Eudynamis orientalis	N	С	U	С	Nc
Channel-billed Cuckoo	Scythrops novaehollandiae		R	U	С	Cc
Horsfield's Bronze-Cuckoo	Chalcites basalis		N	С	U	Nr
Shining Bronze-Cuckoo	Chalcites lucidus			С	U	Nu
Little Bronze-Cuckoo	Chalcites minutillus		С	U	U	u
Fan-tailed Cuckoo	Cacomantis flabelliformis	N		С	С	Cu
Brush Cuckoo	Cacomantis variolosus		R	U	U	Cr
Pallid Cuckoo	Heteroscenes pallidus	N	С	U	U	Rr
Oriental Cuckoo	Cuculus saturatus				V	Cc
Buff-banded Rail	Hypotaenidia philippensis	С		С	С	Nu
Australian Spotted Crake	Porzana fluminea				V	
Baillon's Crake	Zapornia pusilla			V(1)	D	
Spotless Crake	Zapornia tabuensis			٧	V	
Pale-vented Bush-hen	Amaurornis moluccana			٧	R	С
Purple Swamphen	Porphyria porphyria		С	С	С	Cr
Dusky Moorhen	Gallinula tenebrosa		С	С	С	Cu
Black-tailed Native-hen	Tribonyx ventralis			٧	R	N
Eurasian Coot	Fulica atra		С	С	С	Cr
Brolga	Grus rubicundus		N	С	С	Cu

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Australian Bustard	Ardeotis australis			U	U	u
Wedge-tailed Shearwater	Ardenna pacificus		С	С	V	r
Short-tailed Shearwater	Ardenna tenuirostris				V	
Black-necked Stork	Ephippiorhynchus asiaticus		R	С	С	Cr
Yellow-billed Spoonbill	Platalea flavipes		N	U	U	r
Royal Spoonbill	Platalea regia		N	С	С	u
Straw-necked Ibis	Threskiornis spinicollis		С	С	С	u
Australian White Ibis	Threskiornis moluccus		С	С	С	u
Glossy Ibis	Plegadis falcinellus		R	R	U	
Australian Little Bittern	Ixobrychus dubius				٧	
Black Bittern	Ixobrychus flavicollis			U	RL	Nr
Nankeen Night-Heron	Nycticorax caledonicus		R	U	U	Cr
Striated Heron	Butorides striatus		R	С	С	Cu
Cattle Egret	Bubulcus ibis			R	С	Rr
White-necked Heron	Ardea pacifica		R	С	С	Cr
Great-billed Heron	Ardea sumatrana				٧	R
Great Egret	Ardea alba		С	С	С	Nu
Intermediate Egret	Ardea intermedia		С	С	С	N
White-faced Heron	Egretta novaehollandiae		С	С	С	Сс
Little Egret	Egretta garzetta		С	С	С	Nr
Eastern Reef Egret	Egretta sacra		N	С	С	Cu
Australian Pelican	Pelecanus conspicillatus		N	С	С	Cu
Lesser Frigatebird	Fregata ariel		R	V	V	r
Great Frigatebird	Fregata minor				٧	
Australasian Gannet	Morus serrator			U	R	r
Brown Booby	Sula leucogaster			С	U	
Masked Booby	Sula dactylatra			R	V	
Little Pied Cormorant	Microcarba melanoleucos	N	С	С	С	Cu
Great Cormorant	Phalacrocorax carbo			С	С	Nr
Little Black Cormorant	Phalacrocorax sulcirostris		С	С	С	Nu
Great Pied Cormorant	Phalacrocorax varius		С	С	С	Cu
Australasian Darter	Anhinga novaehollandiae	N	С	С	С	Nu
Bush Stone-curlew	Burhinus grallarius	С	С	С	С	Сс
Beach Stone-curlew	Esacus magnirostris		R	U	U	Nr
Australian Pied Oystercatcher	Haematopus longirostris		R	С	С	Сс
Sooty Oystercatcher	Haematopus fuliginosus		R	С	U	Rr
Red-necked Avocet	Recurvirostra novaehollandiae			V(1)	U	
Pied Stilt	Himantopus leucocephalus		R	U	С	С
Grey Plover	Pluvialus squatarola			V(1)	R	
Pacific Golden Plover	Pluvialus fulva		N	U	U	Nu
Common Ringed Plover	Charadrius hiaticula				V	
Little Ringed Plover	Charadrius dubius				٧	
Red-capped Plover	Charadrius rufiaapillus		С	С	С	Сс
Double-banded Plover	Charadrius bicinctus				R	
Lesser Sand Plover	Charadrius mongolus			С	С	u
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Greater Sand Plover	Charadrius lesahenaultii			U	U	u
Oriental Plover	Charadrius veredus				٧	
Black-fronted Dotterel	Elseyornis melanops	С	С	С	С	Cr
Banded Lapwing	Vanellus tricolor			٧	V	
Masked Lapwing	Vanellus miles		С	С	С	Cu
Red-kneed Dotterel	Erythrogonys cinctus			V(3)	U	
Australian Painted-snipe	Rostratula australis				R	
Comb-crested Jacana	Irediparra gallinacea	С	R	С	С	Cr
Whimbrel	Numenius phaeopus		R	U	С	Сс
Little Curlew	Numenius minutus				٧	
Far Eastern Curlew	Numenius madagascariensis		С	С	С	Сс
Bar-tailed Godwit	Limosa lapponica		R	С	С	Сс
Black-tailed Godwit	Limosa limosa				U	u
Ruddy Turnstone	Arenaria interpres			U	U	r
Great Knot	Calidris tenuirostris			U	U	С
Red Knot	Calidris canutus			С	U	
Broad-billed Sandpiper	Limicola falcinellus			V(1)	٧	
Sharp-tailed Sandpiper	Calidris acuminata		R	С	С	Cu
Curlew Sandpiper	Calidris ferruginea			С	U	
Long-toed Stint	Calidris subminuta				٧	
Red-necked Stint	Calidris ruficollis			С	С	u
Sanderling	Calidris alba			V(1)	R	
Pectoral Sandpiper	Calidris melanotos				٧	
Asian Dowitcher	Limnodromus semipalmatus				٧	
Latham's Snipe	Gallinago hardwickii			U	U	
Terek Sandpiper	Xenus cinereus			U	U	u
Common Sandpiper	Actitis hypoleucos			U	U	u
Grey-tailed Tattler	Tringa brevipes		R	С	С	u
Wandering Tattler	Tringa incana			V(1)	٧	r
Common Greenshank	Tringa nebularia			С	С	u
Wood Sandpiper	Tringa glareola				٧	
Marsh Sandpiper	Tringa stagnatilis			V(1)	С	
Red-backed Button-quail	Turnix maculosa	N		V	٧	u
Black-breasted Button-quail	Turnix melanogaster			r	R	
Painted Button-quail	Turnix varius		N	U	R	Cu
Red-chested Button-quail	Turnix pyrrhothorax			V	V	u
Little Button-quail	Turnix velox		N	V	V	С
Australian Pratincole	Stiltia isabella				R	
Oriental Pratincole	Glareola maldivarum				٧	
Brown Noddy	Anous stolidus				V	
Black Noddy	Anous minutus				٧	
Silver Gull	Larus novaehollandiae	С	С	С	С	Cu
Sooty Tern	Onychoprion fuscatus				V	
Little Tern	Sterna albifrons			С	С	
Australian Gull-billed Tern	Gelochelidon macrotarsa			С	С	r

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Caspian Tern	Hydroprogne caspia		R	С	С	Nu
Whiskered Tern	Chlidonias hybrida		С	С	С	С
White-winged Black Tern	Chlidonias leucoptera			V(2)	R	
Black-naped Tern	Sterna sumatrana				٧	
Common Tern	Sterna hirundo			V(1)	R	
Lesser Crested Tern	Thalasseus bengalensis			U	U	r
Greater Crested Tern	Thalasseus bergii		С	С	С	Nu
Eastern Grass Owl	Tyto longimembris				RL	
Greater Sooty Owl	Tyto tenebricosa	R		v	V	
Barn Owl	Tyto alba	С		R	R	Cr
Rufous Owl	Ninox rufa		R	V	V	
Powerful Owl	Ninox strenua	N		V	D	r
Barking Owl	Ninox connivens	N		S	R	u
Southern Boobook	Ninox boobook	С	R	U	U	Cu
Osprey	Pandion haliaetus	N	R	U	U	Cu
Black-shouldered Kite	Elanus axillaris			С	U	С
Black-breasted Buzzard	Hamirostra melanosternon				٧	
Square-tailed Kite	Lophoictinia isura	N		V(1)	R	r
Pacific Baza	Aviceda subcristata	R	R	Ü	U	Nu
Wedge-tailed Eagle	Aquila audax	С	R	С	С	Сс
Little Eagle	Hieraaetus morphnoides	R		U	U	r
Swamp Harrier	Circus approximans		R	С	U	Cr
Spotted Harrier	Circus assimilis			V(2)	R	r
Grey Goshawk	Accipiter novaehollandiae	R	С	U	R	Nr
Brown Goshawk	Accipiter fasciatus	С	R	С	U	Cu
Collared Sparrowhawk	Accipiter cirrhocephalus	С	R	U	R	Nu
Red Goshawk	Erythrotriorchis radiatus	_		r	E	N
White-bellied Sea-Eagle	Haliaeetus leucogaster	С	С	U	U	Nu
Whistling Kite	Haliastur sphenurus	N	С	С	С	Cu
Brahminy Kite	Haliastur indus	С	С	С	С	Nu
Black Kite	Milvus migrans	С		U	С	Cr
Rainbow Bee-eater	Merops ornatus	С	С	С	С	Cc
Oriental Dollarbird	Eurystomus orientalis		С	U	U	Сс
Little Kingfisher	Ceyx pusillus			J	V	r
Azure Kingfisher	Ceyx azureus	С	N	С	U	Cu
Forest Kingfisher	Todiramphus macleayii	С	С	С	С	Сс
Collared Kingfisher	Todiramphus chloris	N		U	R	Nr
Sacred Kingfisher	Todiramphus sanctus	C	С	С	C	Nu
Red-backed Kingfisher	Todiramphus pyrrhopygia			U	V	Nu
Buff-breasted Paradise				U		
Kingfisher	Tanysiptera sylvia				RL	r
Laughing Kookaburra	Dacelo novaeguineae	С	С	С	С	Сс
Blue-winged Kookaburra	Dacelo leachii	С	N	С	С	Сс
Nankeen Kestrel	Falco cenchroides	С	R	С	С	Cu
Australian Hobby	Falco longipennis	R		U	С	r
Brown Falcon	Falco berigora	N	R	С	С	Cu

English name	Scientific name	1888	1925	1978	2020	SWBTA
Black Falcon	Falco subniger	R	R	٧	R	
Peregrine Falcon	Falco peregrinus	С		U	R	Rr
Cockatiel	Nymphicus hollandicus			С	С	
Red-tailed Black-Cockatoo	Calyptorhynchus banksii			U	С	Сс
Glossy Black-Cockatoo	Calyptorhynchus Lathami		N	R	R	Nu
Yellow-tailed Black-Cockatoo	Calyptorhynchus funereus	N		V(1)	V	
Galah	Eolophus roseicapillus			U	С	
Little Corella	Cacatua sanguinea			U	С	
Long-billed Corella	Cacatua tenuirostris				U	
Sulphur-crested Cockatoo	Caaatua galerita	С	С	С	С	Сс
Crimson Rosella	Platycercus elegans				V	
Pale-headed Rosella	Platycercus adscitus		С	С	С	Сс
Little Lorikeet	Glossopsitta pusilla	N		С	U	Сс
Rainbow Lorikeet	Trichoglossus haematodus	N	С	С	С	Сс
Scaly-breasted Lorikeet	Trichoglossus chlorolepidotus	N	С	С	С	Сс
Budgerigar	Melopsitticus undulatus			U	V	
Australian King-Parrot	Alisterus scapularis	N	R	r	U	N
Red-winged Parrot	Aprosmictus erythropterus	С	N	С	С	Сс
Noisy Pitta	Pitta versicolor		R	U	U	u
Regent Bowerbird	Sericulus chrysocephalus		R	R	Е	
Satin Bowerbird	Ptilonorhynchus violaceus	N		V	V	r
Spotted Bowerbird	Ptilonorhynchus maculata	R		С	V	
White-throated Treecreeper	Cormobates leucophaea	N	С	С	R	Cr
Brown Treecreeper	Climacteris picumnus	С	R	С	D	Cr
Variegated Fairy-wren	Malurus lamberti	N		U	V	
Superb Fairy-wren	Malurus cyaneus				R	
Red-backed Fairy-wren	Malurus melanocephalus	N	С	С	С	Сс
White-cheeked Honeyeater	Phylidonyris nigra		R	U	RL	Cu
Brown Honeyeater	Lichmera indistincta	N	С	С	С	Сс
Blue-faced Honeyeater	Entomyzon cyanotis	С	С	С	С	Сс
White-naped Honeyeater	Melithreptus lunatus				R	С
White-throated Honeyeater	Melithreptus albogularis		С	С	С	Сс
Black-chinned Honeyeater	Melithreptus gularis	N		U	R	Ru
White-eared Honeyeater	Nesoptilotis leucotis			r	V	R
Striped Honeyeater	Plectorhyncha lanceolata	С		С	U	С
Little Friarbird	Philemon citreogularis	С	N	С	С	Сс
Noisy Friarbird	Philemon corniculatus	С	С	С	С	Сс
Dusky Honeyeater	Myzomela obscura		С	С	С	Сс
Scarlet Honeyeater	Myzomela sanguinolenta	N	С	С	С	Сс
Bar-breasted Honeyeater	Ramsayornis fasciatus			V	С	r
Rufous-throated Honeyeater	Conopophila rufogularis				٧	
Yellow Chat	Ephthianura crocea			٧	RL	
Lewin's Honeyeater	Meliphaga lewinii	С	С	С	С	Сс
Spiny-cheeked Honeyeater	Acanthagenys rufogularis			u	D	
Singing Honeyeater	Gavicalis virescens				٧	

Mangrove Honeyeater	English name	Scientific name	1888	1925	1978	2020	SWBTA
Yellow-faced Honeyeater Caligavis chrysops r V C Noisy Miner Manorina melanocephala C U C U C U C U C U C U D R C U C C C	Mangrove Honeyeater	Gavicalis fasciogularis			С	С	N
Noisy Miner	Fuscous Honeyeater	Ptilotula fusca			С	D	Ru
Yellow-throated Miner Spotted Pardalote Pardalotus punctotus C C C C Brown Gerygone Gerygone mouki Fairy Gerygone Gerygone palpebrosa R Fairy Gerygone Gerygone olivacea N R C U C White-throated Gerygone Gerygone levigaster N C C C C White-throated Gerygone Gerygone levigaster N C C C C White-throated Gerygone Gerygone levigaster N C C C C C White-throated Gerygone Gerygone levigaster N C C C C C White-throated Gerygone Gerygone levigaster N C C C C C White-throated Gerygone Gerygone levigaster N C C C C C C C C C C C C C C C C C C	Yellow-faced Honeyeater	Caligavis chrysops			r	V	С
Spotted Pardalote	Noisy Miner	Manorina melanocephala	С	С	С	С	Сс
Striated Pardalote Pardalotus striatus C C C C C C C Brown Gerygone Gerygone mouki Rairy Gerygone Gerygone polpebrosa R C U U C U White-throated Gerygone Gerygone polpebrosa R C U U C U Mangrove Gerygone Gerygone levigaster N C U U C U Mangrove Gerygone Gerygone levigaster N C U U D R U Weebill Smicromis brevirostris N C U U D R U White-browed Scrubwren Sericornis frontalis R C U U D N R U Willed Scrubwren Sericornis frontalis R C U U U N U Yellow-rumped Thornbill Acanthiza chrysorrhoa N R U U V R Wellow Thornbill Acanthiza nana R U V R R Wellow Thornbill Acanthiza nana R U V R R Wellow Thornbill Acanthiza pusillo R C U U C U V R R Willed Thornbill Acanthiza pusillo R C U U C U V R R Willed Thornbill Acanthiza pusillo R R U V R R Willed Thornbill Acanthiza pusillo R R U V R R Willed Thornbill Acanthiza pusillo R R U V R R Willed Thornbill Acanthiza pusillo R R U U U C U V V R R Willed Thornbill Acanthiza pusillo R R U U U C U V V R R Willed Thornbill Acanthiza pusillo R R U U U C U V V R R Willed Thornbill Acanthiza pusillo R R U U U C U V V R R Willed Thornbill Acanthiza reguloides R U U U C U V V R R Willed Thornbill Acanthiza reguloides R U U U C U V V V R R Willed Thornbill Acanthiza reguloides R U U U C U V V V R R Willed Thornbill Acanthiza reguloides R U U U C U V V V R R Willed Thornbill Acanthiza reguloides R U U U C U V V V V R R Willed Thornbill Acanthiza reguloides R U U U U C U V V V V R R Willed Thornbill Acanthiza reguloides R R U U U C U V V V V V R R Willed Thornbill Acanthiza reguloides R R U U U R R Willed Thornbill Acanthiza reguloides R R U U R R R R R U U R R R R R D R R R R	Yellow-throated Miner	Manorina flavigula			U	R	
Brown Gerygone Gerygone mouki R Fairy Gerygone Gerygone deperbosa R C White-throated Gerygone Gerygone olivacea N R C White-throated Gerygone Gerygone levigaster N C U Weebill Smicrornis brevirostris N C C W Webebill Smicrornis brevirostris N C White-browed Scrubwren Sericornis frontalis R C White-browed Scrubwren Sericornis magnirostris R C W Wellow-rumped Thornbill Acanthiza chrysorrhoa N R W C R W Wellow-rumped Thornbill Acanthiza chrysorrhoa R W W Wellow-rumped Thornbill Acanthiza chrysorrhoa R W W W W W W W W W W W W W W W W W W	Spotted Pardalote	Pardalotus punctatus	С		U	R	С
Fairy Gerygone Gerygone plapebrosa R C U C C White-throated Gerygone Gerygone olivocea N R U U U Cu Mangrove Gerygone Gerygone levigaster N C U Ru Weebill Smicronis brevirostris N C R C U Speckled Warbler Pyrrholoemus sagittatus C U U D Ru White-browed Scrubwren Sericornis frontalis R C U U Nu Yellow-rumped Thornbill Acanthiza chrysorhoa N R U V R Yellow Thornbill Acanthiza nana R U V Y R Surf-rumped Thornbill Acanthiza nana R U V Y R Surf-rumped Thornbill Acanthiza chrysorhoa N R U V R Surf-rumped Thornbill Acanthiza chrysorhoa R R U V Y R Surf-rumped Thornbill Acanthiza reguloides R U V Y R Surf-rumped Thornbill Acanthiza reguloides R U V Y R Surf-rumped Thornbill Acanthiza chrysoptera N R U U U Cu Australasian Figbird Daphoenositta chrysoptera N R U U U Cu Australasian Figbird Sphecotheres vieilloti C C C C C C C C C C C C C C C C C C C	Striated Pardalote	Pardalotus striatus	С	С	С	С	Сс
White-throated Gerygone Gerygone olivacea N R U C U Ru Weebill Smicrornis brevirostris N C R Cu Speckled Warbler Pyrrholaemus sagittatus C U D R White-browed Scrubwren Sericornis frontalis R C U Cu Large-billed Scrubwren Sericornis magnirostris R U U Nu Yellow Thornbill Acanthiza chrysorrhoa N R U V R Yellow Thornbill Acanthiza nena R U V R Yellow Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza pusilla R U V r Grey-crowned Babbler Pomatostomus temporalis N R C C C Grey-crowned Babbler Pomatostomus temporalis N R U C C C C C C C	Brown Gerygone	Gerygone mouki				R	
Mangrove Gerygone Gerygone levigaster N C U Ru Weebill Smicrornis brevirostris N C R Cu Speckled Warbler Pyrrholaemus sagittatus C U D D R White-browed Scrubwren Sericornis frontalis R C U U Nu Yellow-rumped Thornbill Acanthiza chrysorrhoa N R U V R Yellow-rumped Thornbill Acanthiza nana R U V R Brown Thornbill Acanthiza pusilla R U V R Brown Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza nana R U V R Brown Thornbill Acanthiza pusilla R U V R Brown Thornbill Acanthiza reguloides V V V R Buff-rumped Thornbill Acanthiza reguloides V V V R Buff-rumped Thornbill Acanthiza reguloides V V V R Buff-rumped Thornbill Acanthiza reguloides V V V C Qu'aried Sittlella Daphoenositta chrysoptera N R U U U Cu Australasian Figbird Sphecotheres vieilloti C C C C C C Qlive-backed Oriole Oriolus sagittatus N R C C C C Crested Bellbird Oreoica gutturalis N V E Esstern Shrike-tit Falcunculus frontatus R U E R Rufous Whistler Pachycephala rufiventris C C C C C C Golden Whistler Pachycephala pectoralis C U U R Mangrove Golden Whistler Pachycephala melanura Little Shrike-thrush Colluricincta megarhyncha C C C C C Grey Shrike-thrush Colluricincta megarhyncha C C C C C Grey Shrike-thrush Colluricincta megarhyncha C N C C C Grey Shrike-thrush Colluricincta megarhyncha R U U C Ground Cuckoo-shrike Coracina maxima R U C Ground Cuckoo-shrike Coracina maxima R U U N Black-faced Cuckoo-shrike Coracina maxima R U U N Black-faced Cuckoo-shrike Coracina maxima R U U Nr Black-faced Cuckoo-shrike Coracina tenuirostris N R U U Nr Varied Triller Lalage Ieucomela C R C C C C White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage tricolor R U U C C C C C Masked Woodswallow Artamus superciliosus N	Fairy Gerygone	Gerygone palpebrosa		R	С	U	С
Weebill Smicrornis brevirostris N C R Cu Speckled Warbler Pyrrholaemus sagittatus C U D R White-browed Scrubwren Sericornis frontalis R C U Cu Large-billed Scrubwren Sericornis frontalis R U V N Yellow-rumped Thornbill Acanthiza chrysorrhoa N R U V R Yellow Thornbill Acanthiza pusilla R U V R Brown Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza reguloides V V T Grey-crowned Babbler Pomatostate pusilia N R U V R Buff-rumped Thornbill Acanthiza reguloides V V T G C C C C C C C C C C C C C C C C C C <td>White-throated Gerygone</td> <td>Gerygone olivacea</td> <td>N</td> <td>R</td> <td>U</td> <td>U</td> <td>Cu</td>	White-throated Gerygone	Gerygone olivacea	N	R	U	U	Cu
Speckled Warbler Pyrrholaemus sagittatus C U D R White-browed Scrubwren Sericornis frontalis R C U Cu Large-billed Scrubwren Sericornis magnirostris R U U Nu Yellow-rumped Thornbill Acanthiza chrysorrhoa N R U V R Brown Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza reguloides V V R Buff-rumped Thornbill Acanthiza reguloides V V R G C C C Cu	Mangrove Gerygone	Gerygone levigaster		N	С	U	Ru
White-browed Scrubwren Sericornis frontalis R C U Cu Large-billed Scrubwren Sericornis magnirostris R U U Nu Yellow-rumped Thornbill Acanthiza chrysorrhoa N R U V R Yellow Thornbill Acanthiza nana R U V R Brown Thornbill Acanthiza pusilla R U V R Brown Thornbill Acanthiza pusilla R U V R Brown Thornbill Acanthiza pusilla R U V R Brown Thornbill Acanthiza reguloides V V r Grey-crowned Babbler Pomatostomus temporalis N R C C C C C U Varied Sittella Daphaenositta chrysoptera N R U U Cu Australasian Figbird Sphecotheres vieilloti C C C C C C C C Clive-backed Oriole Oriolus sagittatus N R C C C C C Crested Bellbird Oreoica gutturalis N V V E Eastern Shrike-tit Falcunculus frontatus R U E Rr Rufous Whistler Pachycephala rufiventris C C C C C C C Golden Whistler Pachycephala pectoralis C U U Ru Mangrove Golden Whistler Pachycephala pectoralis C U U U Ru Mangrove Golden Whistler Pachycephala melanura C C C C C Grey Shrike-thrush Colluricincta megarhyncha C C C C C Grey Shrike-thrush Colluricincta harmonica C N C C C Grey Shrike-thrush Colluricincta harmonica C N C C C Ground Cuckoo-shrike Coracina maxima R V Black-faced Cuckoo-shrike Coracina maxima R N D U U Cu Ground Cuckoo-shrike Coracina novaehollandiae C C C C C C C C White-bellied Cuckoo-shrike Coracina papuensis R N R U U N NC White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage tricolor R U U Nr Varied Triller Lalage tricolor R U U Nr Varied Triller Lalage tricolor R C C C C C Grey Butcherbird Cracticus ingrogularis C C C C C C Grey Butcherbird Cracticus ingrogularis C C C C C C Grey Butcherbird Cracticus torquatus C C C C C C Masked Woodswallow Artamus superciliosus N C U(1) V	Weebill	Smicrornis brevirostris	N		С	R	Cu
Large-billed Scrubwren Sericornis magnirostris R U V Nu Yellow-rumped Thornbill Acanthiza chrysorrhoa R U V R Prown Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza pusilla R Buff-rumped Thornbill Acanthiza pusilla R C C C C C C C C C C C C C C C C C C	Speckled Warbler	Pyrrholaemus sagittatus	С		U	D	R
Yellow-rumped Thornbill Acanthiza chrysorrhoa N R U V R Yellow Thornbill Acanthiza nana R U V S Brown Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza reguloides V V V r Grey-crowned Babbler Pomatostomus temporalis N R C C C CU Varied Sittella Daphoenosita chrysoptera N R U U CU Australasian Figbird Sphecotheres vieilloti C C C C C C C Olive-backed Oriole Oriolus sagittatus N R C C C CC Crested Bellbird Oreoica gutturalis N N R C C C C C Crested Bellbird Oreoica gutturalis N V V E Eastern Shrike-tit Falcunculus frontatus R U E R Rufous Whistler Pachycephala rufiventris C C C C C C C Golden Whistler Pachycephala nelanura RL Little Shrike-thrush Colluricincta megarhyncha C C C C C C Grey Shrike-thrush Colluricincta harmonica C N C C C C Ground Cuckoo-shrike Coracina maxima R V C C C C Ground Cuckoo-shrike Coracina maxima R V C C C C C C C C C C C C C C C C C C	White-browed Scrubwren	Sericornis frontalis		R	С	U	Cu
Yellow Thornbill Acanthiza pasilla R U V Brown Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza reguloides v V r Grey-crowned Babbler Pomatostomus temporalis N R C C Cu Varied Sittella Daphoenositta chrysoptera N R U U Cu Australasian Figbird Sphecotheres vieilloti C <td< td=""><td>Large-billed Scrubwren</td><td>Sericornis magnirostris</td><td></td><td>R</td><td>U</td><td>U</td><td>Nu</td></td<>	Large-billed Scrubwren	Sericornis magnirostris		R	U	U	Nu
Brown Thornbill Acanthiza pusilla R U V R Buff-rumped Thornbill Acanthiza reguloides V V V r Grey-crowned Babbler Pomatostomus temporalis N R C C C Varied Sittella Daphoenositta chrysoptera N R U U C Australasian Figbird Sphecotheres vieilloti C C C C C C Olive-backed Oriole Oriolus sagittatus N R C C C Crested Bellbird Oreoica gutturalis N V E Eastern Shrike-tit Falcunculus frontatus R U E Rr Rufous Whistler Pachycephala rufiventris C C C C C C Golden Whistler Pachycephala pectoralis C U U Ru Mangrove Golden Whistler Pachycephala melanura Little Shrike-thrush Colluricincta megarhyncha C C C C C Eastern Whipbird Psophodes olivaceus N R U U C C Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R R D N Black-faced Cuckoo-shrike Coracina papuensis R N C C C C C C C C C C C C C C C C C C C	Yellow-rumped Thornbill	Acanthiza chrysorrhoa	N	R	U	V	R
Buff-rumped Thornbill Acanthiza reguloides	Yellow Thornbill	Acanthiza nana		R	U	V	
Grey-crowned Babbler Pomatostomus temporalis N R C C C C C C C Varied Sittella Daphoenositta chrysoptera N R U U C C C C C C C C C C C C C C C C C	Brown Thornbill	Acanthiza pusilla		R	U	V	R
Varied Sittella Daphoenositta chrysoptera N R U U Cu Australasian Figbird Sphecotheres vieilloti C C C C C C C C C Olive-backed Oriole Oriolus sagittatus N R C C C Cc Crested Bellbird Oreoica gutturalis N V E Eastern Shrike-tit Falcunculus frontatus R U E Rr Rufous Whistler Pachycephala rufiventris C C C C C Golden Whistler Pachycephala pectoralis C U U U Ru Mangrove Golden Whistler Pachycephala melanura C C C C C Grey Shrike-thrush Colluricincta megarhyncha C C C C C Grey Shrike-thrush Colluricincta harmonica C N C C C Eastern Whipbird Psophodes olivaceus N R U U Cu Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C C CC White-bellied Cuckoo-shrike Coracina tenuirostris N R U U Nc White-winged Triller Lalage tricolor Varied Triller Lalage leucomela C C C C C Rc Australian Magpie Gymnorhina tibicen C C C C C Masked Woodswallow Artamus superciliosus N U(1) V U(1) V	Buff-rumped Thornbill	Acanthiza reguloides			V	V	r
Australasian Figbird Sphecotheres vieilloti C C C C C C Clow-backed Oriole Oriolus sagittatus N R C C C Ccc Crested Bellbird Oreoica gutturalis N V E Eastern Shrike-tit Falcunculus frontatus R U E Rr Rufous Whistler Pachycephala rufiventris C C C C C Golden Whistler Pachycephala pectoralis C U U U Ru Mangrove Golden Whistler Pachycephala melanura C C C C C Grey Shrike-thrush Colluricincta megarhyncha C C C C C Grey Shrike-thrush Colluricincta harmonica C N C C Cc Eastern Whipbird Psophodes olivaceus N R U U Cu Ground Cuckoo-shrike Coracina maxima R N C C C C Cc White-bellied Cuckoo-shrike Coracina novaehollandiae C C C C Cc White-bellied Cuckoo-shrike Coracina tenuirostris N R U U N Nc White-winged Triller Lalage leucomela C C C C Cc Pied Currawong Strepera graculina C C C C C Cc Masked Woodswallow Artamus personatus N U U Nr V VI(1) V	Grey-crowned Babbler	Pomatostomus temporalis	N	R	С	С	Cu
Olive-backed Oriole Oriolus sagittatus N R C C C Crested Bellbird Oreoica gutturalis N V E Eastern Shrike-tit Falcunculus frontatus R U E Rr Rufous Whistler Pachycephala rufiventris C C C C C C Golden Whistler Pachycephala pectoralis C U U U Ru Mangrove Golden Whistler Pachycephala melanura RL Little Shrike-thrush Colluricincta megarhyncha C C C C C Grey Shrike-thrush Colluricincta harmonica C N C C Eastern Whipbird Psophodes olivaceus N R U U Cu Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C C CWhite-bellied Cuckoo-shrike Coracina papuensis R N C C C COMmon Cicadabird Coracina tenuirostris N R U U N White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage leucomela C R C C C Que C Pied Currawong Strepera graculina C R C C C C Grey Butcherbird Cracticus nigrogularis C C C C C Masked Woodswallow Artamus supersoliosus N U(1) V	Varied Sittella	Daphoenositta chrysoptera	N	R	U	U	Cu
Crested Bellbird Oreoica gutturalis N v E Eastern Shrike-tit Falcunculus frontatus R U E Rr Rufous Whistler Pachycephala rufiventris C C C C C C Golden Whistler Pachycephala pectoralis C U U Ru Mangrove Golden Whistler Pachycephala melanura RL Little Shrike-thrush Colluricincta megarhyncha C C C C C Grey Shrike-thrush Colluricincta harmonica C N C C Eastern Whipbird Psophodes olivaceus N R U U C Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C C C White-bellied Cuckoo-shrike Coracina papuensis R N C C C C COMmon Cicadabird Coracina tenuirostris N R U U N White-winged Triller Lalage tricolor R U N Varied Triller Lalage leucomela C C C C C Pied Currawong Strepera graculina C R C C C C Grey Butcherbird Cracticus nigrogularis C C C C C Masked Woodswallow Artamus personatus N r R R White-browed Woodswallow Artamus superciliosus N U(1) V	Australasian Figbird	Sphecotheres vieilloti	С	С	С	С	Сс
Eastern Shrike-tit Falcunculus frontatus R U E Rr Rufous Whistler Pachycephala rufiventris C C C C C C Golden Whistler Pachycephala pectoralis C U U U Ru Mangrove Golden Whistler Pachycephala melanura RL Little Shrike-thrush Colluricincta megarhyncha C C C C C C Grey Shrike-thrush Colluricincta harmonica C N C C C Eastern Whipbird Psophodes olivaceus N R U U Cu Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C C White-bellied Cuckoo-shrike Coracina papuensis R N C C C Common Cicadabird Coracina tenuirostris N R U U N White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage leucomela C C C C C Pied Currawong Strepera graculina C R Australian Magpie Gymnorhina tibicen C C C C C Grey Butcherbird Cracticus nigrogularis C C C C C Masked Woodswallow Artamus superciliosus N U U(1) V	Olive-backed Oriole	Oriolus sagittatus	N	R	С	С	Сс
Rufous Whistler	Crested Bellbird	Oreoica gutturalis	N		V	Е	
Golden Whistler Pachycephala pectoralis C U U Ru Mangrove Golden Whistler Pachycephala melanura RL Little Shrike-thrush Colluricincta megarhyncha C	Eastern Shrike-tit	Falcunculus frontatus		R	U	Е	Rr
Mangrove Golden WhistlerPachycephala melanuraRLLittle Shrike-thrushColluricincta megarhynchaCCCCCGrey Shrike-thrushColluricincta harmonicaCNCCCCEastern WhipbirdPsophodes olivaceusNRUUCuGround Cuckoo-shrikeCoracina maximaRRVBarred Cuckoo-shrikeCoracina lineataRRDNBlack-faced Cuckoo-shrikeCoracina novaehollandiaeCCCCCWhite-bellied Cuckoo-shrikeCoracina papuensisRNCCCCCommon CicadabirdCoracina tenuirostrisNRUUNcWhite-winged TrillerLalage tricolorRUUNrVaried TrillerLalage leucomelaCCCCCPied CurrawongStrepera graculinaCRCCCCAustralian MagpieGymnorhina tibicenCCCCCCPied ButcherbirdCracticus nigrogularisCCCCCCGrey ButcherbirdCracticus torquatusCCCCCCMasked WoodswallowArtamus personatusNrRWhite-browed WoodswallowArtamus superciliosusNU(1)V	Rufous Whistler	Pachycephala rufiventris	С	С	С	С	Сс
Little Shrike-thrush Colluricincta megarhyncha C C C C Grey Shrike-thrush Colluricincta harmonica C N C C C Eastern Whipbird Psophodes olivaceus N R U U Cu Ground Cuckoo-shrike Coracina maxima R R N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C C C C White-bellied Cuckoo-shrike Coracina papuensis R N C C C C C C C C C C C C C C C C C	Golden Whistler	Pachycephala pectoralis	С		U	U	Ru
Grey Shrike-thrush Colluricincta harmonica C N C C Eastern Whipbird Psophodes olivaceus N R U U Cu Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C White-bellied Cuckoo-shrike Coracina papuensis R N C C C Common Cicadabird Coracina tenuirostris N R U U Nc White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage leucomela C C C C Pied Currawong Strepera graculina C R C C Australian Magpie Gymnorhina tibicen C C C C Grey Butcherbird Cracticus nigrogularis C C C C Ca Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V	Mangrove Golden Whistler	Pachycephala melanura				RL	
Eastern Whipbird Psophodes olivaceus N R U U Cu Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C C White-bellied Cuckoo-shrike Coracina papuensis R N C C Common Cicadabird Coracina tenuirostris N R U U Nr White-winged Triller Lalage tricolor R U N Varied Triller Lalage leucomela C C C C Pied Currawong Strepera graculina C R Australian Magpie Gymnorhina tibicen C C C C Grey Butcherbird Cracticus nigrogularis C C C C Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V	Little Shrike-thrush	Colluricincta megarhyncha	С	С	С	С	Сс
Ground Cuckoo-shrike Coracina maxima R V Barred Cuckoo-shrike Coracina lineata R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C White-bellied Cuckoo-shrike Coracina papuensis R N C C C C C C C C C C C C C C C C C	Grey Shrike-thrush	Colluricincta harmonica	С	N	С	С	Сс
Barred Cuckoo-shrike Coracina lineata R R D N Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C C CC White-bellied Cuckoo-shrike Coracina papuensis R N C C C Common Cicadabird Coracina tenuirostris N R U U Nc White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage leucomela C C C C C Pied Currawong Strepera graculina C R C C C Australian Magpie Gymnorhina tibicen C C C C Pied Butcherbird Cracticus nigrogularis C C C C Grey Butcherbird Cracticus torquatus C C C C Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V	Eastern Whipbird	Psophodes olivaceus	N	R	U	U	Cu
Black-faced Cuckoo-shrike Coracina novaehollandiae C C C C White-bellied Cuckoo-shrike Coracina papuensis R N C C C C C C C C C C C C C C C C C	Ground Cuckoo-shrike	Coracina maxima			R	V	
White-bellied Cuckoo-shrike Coracina papuensis R N C C C Common Cicadabird Coracina tenuirostris N R U U Nc White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage leucomela C C C C C Pied Currawong Strepera graculina C R C C C Australian Magpie Gymnorhina tibicen C C C C Pied Butcherbird Cracticus nigrogularis C C C C Grey Butcherbird Cracticus torquatus C C C C Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V	Barred Cuckoo-shrike	Coracina lineata		R	R	D	N
Common Cicadabird Coracina tenuirostris N R U U Nc White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage leucomela C C C C C Pied Currawong Strepera graculina C R C C R Australian Magpie Gymnorhina tibicen C C C C C Pied Butcherbird Cracticus nigrogularis C C C C Grey Butcherbird Cracticus torquatus C C C C Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V	Black-faced Cuckoo-shrike	Coracina novaehollandiae	С	С	С	С	Сс
White-winged Triller Lalage tricolor R U U Nr Varied Triller Lalage leucomela C C C C C Pied Currawong Strepera graculina C R C C R C R C R C C R C C C C C C C	White-bellied Cuckoo-shrike	Coracina papuensis	R	N	С	С	Сс
Varied TrillerLalage leucomelaCCCCCPied CurrawongStrepera graculinaCRCCRcAustralian MagpieGymnorhina tibicenCCCCCCPied ButcherbirdCracticus nigrogularisCCCCCCGrey ButcherbirdCracticus torquatusCCCCCCMasked WoodswallowArtamus personatusNrRWhite-browed WoodswallowArtamus superciliosusNU(1)V	Common Cicadabird	Coracina tenuirostris	N	R	U	U	Nc
Varied TrillerLalage leucomelaCCCCCPied CurrawongStrepera graculinaCRCCRcAustralian MagpieGymnorhina tibicenCCCCCCPied ButcherbirdCracticus nigrogularisCCCCCCGrey ButcherbirdCracticus torquatusCCCCCCMasked WoodswallowArtamus personatusNrRWhite-browed WoodswallowArtamus superciliosusNU(1)V	White-winged Triller	Lalage tricolor		R	U	U	Nr
Australian Magpie Gymnorhina tibicen C C C C C Pied Butcherbird Cracticus nigrogularis C C C C Grey Butcherbird Cracticus torquatus C C C C Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V		Lalage leucomela	С	С	С	С	Сс
Pied Butcherbird Cracticus nigrogularis C C C C C Grey Butcherbird Cracticus torquatus C C C C Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V	Pied Currawong	Strepera graculina	С	R	С	С	Rc
Pied ButcherbirdCracticus nigrogularisCCCCCCGrey ButcherbirdCracticus torquatusCCCCCMasked WoodswallowArtamus personatusNrRWhite-browed WoodswallowArtamus superciliosusNU(1)V	-	· -					
Grey Butcherbird Cracticus torquatus C C C C C Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V		•	С	С	С	С	Сс
Masked Woodswallow Artamus personatus N r R White-browed Woodswallow Artamus superciliosus N U(1) V	Grey Butcherbird						
White-browed Woodswallow Artamus superciliosus N U(1) V		·	N		r	R	
		•			U(1)		
DUSKY WOODDSWANDW ALLUMUS CYUNDPLETUS IN U(1) D	Dusky Woodswallow	Artamus cyanopterus	N		U(1)	D	

English name	Scientific name	1888	1925	1978	2020	SWBTA
Black-faced Woodswallow	Artamus cinereus		N	С	С	Cr
Little Woodswallow	Artamus minor	С	R	С	D	r
White-breasted Woodswallow	Artamus leucorhynchus	С	С	С	С	Сс
Willie Wagtail	Rhipidura Leucophrys	С	С	С	С	Cu
Rufous Fantail	Rhipidura rufifrons	С	R	U	U	Rc
Grey Fantail	Rhipidura fuliginosa	С		С	С	Сс
Spangled Drongo	Dicrurus bracteatus	С	R	С	С	Сс
Leaden Flycatcher	Myiagra rubecula		N	С	С	Сс
Broad-billed Flycatcher	Myiagra ruficollis				RL	Rr
Satin Flycatcher	Myiagra cyanoleuca			U	R	
Shining Flycatcher	Myiagra alecto				RL	u
Restless Flycatcher	Myiagra inquieta	С	R	С	U	Rr
Magpie-lark	Grallina cyanoleuca	С	С	С	С	Cu
Spectacled Monarch	Symposiarchus trivirgatus		N	С	С	Nc
White-eared Monarch	Carterornis leucotis		R	U	RL	Cu
Black-faced Monarch	Monarcha melanopsis	N	R	U	RL	Nu
Torresian Crow	Corvus orru	N	С	С	С	Сс
Australian Raven	Corvus coronoides			V(1)	U	
White-winged Chough	Corcorax melanorhamphos	N		U	U	
Apostlebird	Struthidea cinerea			С	С	
Paradise Riflebird	Lophorina paradiseus	R		V	Ε	
Rose Robin	Petroica rosea	N		u	V	Rr
Red-capped Robin	Petroica goodenovii			r	V	
Jacky Winter	Microeca fascinans	С	R	С	V	Cu
Eastern Yellow Robin	Eopsaltria australis	N	N	U	U	Cu
Hooded Robin	Melanodryas cucullata	N		r	Ε	
Horsfield's Bushlark	Mirafra javanica			U	С	Сс
Zitting Cisticola	Cisticola juncidis			V(1)	U	
Golden-headed Cisticola	Cisticola exilis		R	С	С	Сс
Australian Reed-Warbler	Acrocephalus australis			С	С	С
Brown Songlark	Cincloramphus cruralis				U	С
Rufous Songlark	Cinclorhamphus mathewsi			С	R	Cr
Tawny Grassbird	Megalurus timoriensis	С	N	U	U	Cu
Little Grassbird	Poodytes gramineus			V(1)	R	
Fairy Martin	Petrochelidon ariel	N	С	С	С	Cu
Tree Martin	Petrochelidon nigricans		С	С	С	Сс
Welcome Swallow	Hirundo neoxena		С	С	С	Сс
Barn Swallow	Hirundo rustica				V	
Silvereye	Zosterops lateralis	N	N	U	U	Сс
Common Starling	Sturnus vulgaris			С	R	
Common Myna	Acridotheres tristis				С	
Russet-tailed Thrush	Zoothera heini		R	٧	Е	N
Mistletoebird	Dicaeum hirundinaceum	N	С	С	С	Сс
Olive-backed Sunbird	Cinnyris jugularis		N	U	С	Cc
Scaly-breasted Munia	Lonchura punctulata			С	С	

English name	Scientific name	1888	1925	1978	2020	SWBTA
Chestnut-breasted Mannikin	Lonchura castaneothorax	N		U	С	Nu
Diamond Firetail	Stagonopleura guttata			r	E	
Red-browed Finch	Neochmia temporalis	С	С	С	R	Cr
Crimson Finch	Neochmia phaeton	С		r	E	
Star Finch	Neochmia ruficauda			r	Е	
Plum-headed Finch	Neochmia modesta	N		U	U	R
Black-throated Finch	Poephila cincta	N	R	U	Е	R
Zebra Finch	Taeniopygia castanotis		R	С	R	
Double-barred Finch	Taeniopygia bichenovii	N	С	С	С	Cu
House Sparrow	Passer domesticus			С	С	
Australasian Pipit	Anthus novaeseelandiae	С	С	С	С	Cu
Total number of species		135	180	307	350	249