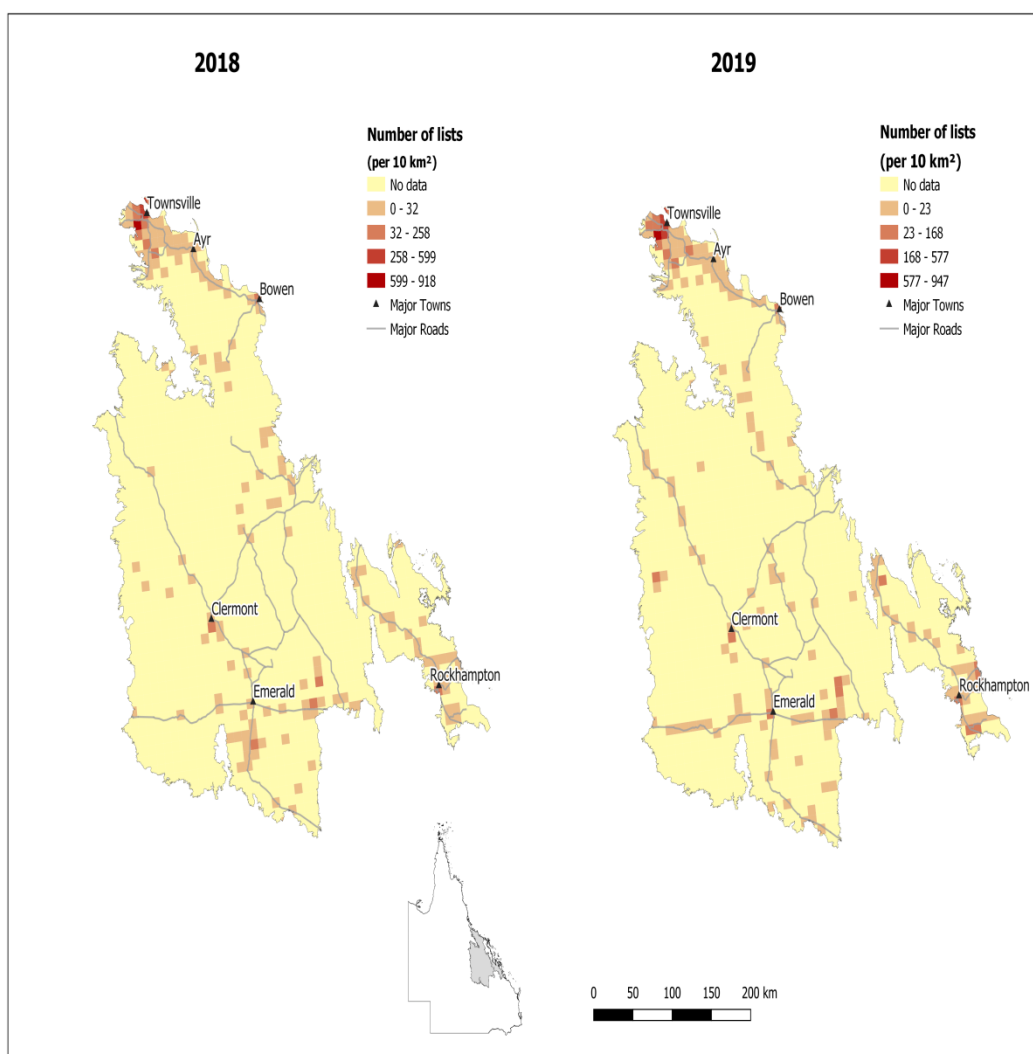


8. Brigalow Belt North

Allan Briggs



Map of BBN Bioregion showing eBird survey effort

Geography

Covering 8% of the State with a total area of 136,740 km², the Brigalow Belt North (BBN) lies largely north of the Tropic of Capricorn. The region stretches from Townsville to Natal Downs near Belyando Crossing in the north and then south to Alpha and just north of Gladstone. There are five catchment areas: Bohle, Lower Burdekin, Lower Fitzroy, Proserpine, and Ross (QG 2018). Rundle Range to the north of Gladstone is a range of hills around 280 m above sea level (asl) and is dominated by woodland and dry rainforest (Sattler & Williams 1999). The Berserker Range just east of Rockhampton is mainly open forest and woodland communities dominated by eucalypts. There is a large pocket of dry rainforest along Moores Creek and Mt Archer reaching 604 m asl. The Peak Range is a chain of prominent mountains between Moranbah, Clermont, and Dysart with Wolfgang Peak reaching 572 m asl.

Northwest of Mackay at Homevale there is a dramatic line of cliffs at the base of which there are open grassy woodlands, notophyll vine forests, dry softwood scrub, open eucalypt forests, and brigalow-belah communities (Sattler & Williams, 1999). Mt Abbot, southwest of Bowen, reaches 966 m asl and is home to a significant range of regional ecosystems. Mt Elliot, southwest of Townsville, reaches a height of 1,210

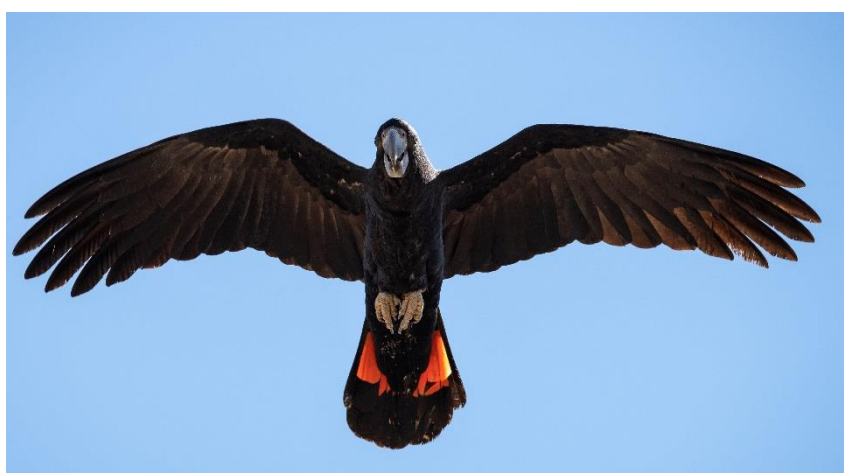
m asl, and nearby Saddle Mountain (1,183 m) supports rainforest above 600 m, semi-evergreen vine thickets, eucalypt forest, and grassy slopes interspersed with cycads and grass trees. Coastal areas have rich tidal mudflats, estuaries, beaches, mangroves, and patches of the beach scrub ecosystem. Much of the remainder of the BBN region is primarily acacia open forests and eucalypt woodlands with the main rural land use being beef cattle grazing on pastoral leases.

From north to south the major coastal population centres in BBN are Townsville, Ayr, Bowen, Rockhampton, and Yeppoon. Inland population centres include Clermont and Emerald. Major roads are the Bruce, Capricorn, Gregory, Peak Downs, and Flinders Highways.

The mean annual rainfall from 1890 to 2005 was 590 mm with most rain falling during the summer months, but annual rainfall is very variable. Temperatures are also highly variable with mean minima ranging from 9° to 22°C and mean maxima from 24° to 32°C. Humidity levels during the summer months can be very high.



Squatter Pigeon (Graham Donaldson)



Red-tailed Black Cockatoo (Jon Norling)

Birds of the bioregion and their conservation

The Queensland Government lists 526 native and nine introduced bird species in BBN from historic data, and 39 of those are currently listed as threatened or rare (DES 2013). Only two threatened species, Black-throated Finch (BFRT 2008) and Capricorn Yellow Chat (Houston et al., 2008), are currently subject to recovery plan actions. Protected lands in BBN include National Parks, Conservation Parks, and private Nature Refuges. National Parks (NP) wholly or partly in the region are Curtis Island, Rundle Range, Capricorn Coast, Mount Archer, Mt Etna Caves, Junee, Mazeppa, Nairana, Dipperu, Homevale, Mt Aberdeen, Mt Abbot, and Bowling Green Bay (DES 2013). There are also two internationally important Ramsar wetlands in Bowling Green Bay: Shoalwater and Corio Bay. There are 38 nationally important wetlands (QG 2018), and BirdLife Australia (2019) has identified three Key Biodiversity Areas in this bioregion: Fitzroy Floodplain and Delta, Shoalwater Bay, and Broadsound.

The Torresian Imperial Pigeon Watch and Count, organised by BirdLife Townsville, was held in 2018 and 2019. The annual Black-throated Finch Waterhole Count, organised by the Black-throated Finch Recovery Team, was held in October 2018 and 2019. Capricorn Yellow Chat population monitoring, organised by BirdLife Capricornia, was conducted at the Fitzroy Delta and Broadsound during the summer months of 2018 and 2019.

BirdLife Capricornia has been conducting a citizen science project through 2018 and 2019 with 40 participants in the southern part of the bioregion. Each participant records bird species on their property each month and enters the data into a spreadsheet. At the end of the year the spreadsheet data is entered into a database and analysed to determine the distribution of birds across the landscape. Over time this data will enable trends of population dynamics to be detected as well as many other factors that may change over time.

A study documenting the decline of bird species, including the loss of 11 species around the Rockhampton region over the past 130 years, was published (Noske & Briggs 2021).

Major events in 2018-2019

2018 was the fifth warmest year on record with the northern part of the region having floods early in the year followed by a prolonged period of drought with rainfall 15 per cent below the long-term average (BoM 2019). 2019 was the warmest and driest year on record which resulted in bushfires towards the end of the year (BoM 2020). In February 2019, Townsville had a major flood event that was one of the worst natural disasters to ever impact the region. The weather system went on to produce major flooding in the northern Central Queensland area of the bioregion. As many as 500,000 cattle were estimated to have perished in the floodwaters (White 2020). In November 2019, 6,000 ha of bush were lost to a severe fire at Cobraball west of Yeppoon (Livingston Shire Council 2019). The fire was deliberately lit but the extremely dry conditions meant that it spread quickly (myPolice 2019).

A total of 316 species were recorded during 2018/19. Some cause for concern was identified with respect to the Beach Stone-curlew, the Australian Painted Snipe, and the King Quail. Several species had fewer than 10 records including White-headed Pigeon (2), Brown Cuckoo-dove (5), Pacific Emerald Dove (7), Baillon's Crake (1), Pale-vented Bush-hen (5), Red-backed Button-quail (3), Australian King Parrot (2), Varied Lorikeet (7), Eastern Yellow Robin (2), and Little Grassbird (9). The following annotated list compiled from eBird data records provides details of notable species or records.

2018 Notable bird records

Australasian Grebe. Up to 1,200 reported at Duck World near Brandon through the year.

Australasian Swamphen. Up to 60 birds reported at Rockhampton Botanic Gardens through the year.

Australian Brushturkey. Up to 23 birds reported regularly through the year at Cape Pallarenda Conservation Park.

Australian King Parrot. Only two observations recorded including one in Townsville and one in Emerald. Very few recent records north of Gladstone may indicate a reduction of range.

Australian Pelican. A group of 230 recorded at the Rockhampton Botanic Gardens in September.

Australian White Ibis. A group of 200 recorded at Rockhampton Botanic Gardens in January.

Baillon's Crake. A single observation recorded at Bajool Weir in September.

Beach Stone-curlew. Near-threatened. Only 30 observations recorded with most records concentrated around Townsville and two at Bowen. This species is sensitive to human disturbance, and coastal development is impacting on required habitat. It is Critically Endangered in NSW with an estimated 13 adult birds left (NSW Government 2022). It is listed as Vulnerable in Queensland (Queensland Government 2022).

Black Swan. A flock of 2,500 reported at Wongaloo Conservation Park in June.

Black-fronted Dotterel. Up to 42 recorded at TTCCP through the year.

Brolga. A flock of 320 reported at Clermont in May where they are known to feed in cropping paddocks.

Brown Cuckoo-dove. Only five observations recorded for this rainforest species: four at Bowling Green Bay NP in July and one at Cape Pallarenda Conservation Park in August.

Brown Quail. Up to 12 birds reported regularly through the year at Goonderoo Reserve.

Budgerigar. A flock of 250 recorded near Ross River Dam in June.

Buff-breasted Paradise Kingfisher. Recorded in December at the Ross River Bush Gardens in Townsville. Also observed at Byfield which is the southernmost recorded breeding location.

Chestnut-breasted Mannikin. A flock of 250 recorded at Bushland Beach in November.

Cotton Pygmy Goose. A flock of 80 observed at Lake Elphinstone in October.

Dusky Moorhen. A group of 300 observed at Lake Elphinstone in October.

Eastern Yellow Robin. A single record from Taunton NP in May. Very few records north of Bundaberg may indicate a retraction of range to the south.

Emu. A group of 26 recorded near Homevale NP in July and a group of 21 observed at Reid River in August.

Eurasian Coot. A group of 4,500 reported at Lake Elphinstone in October.

Fairy Martin. A large flock of 1,000 recorded at the TTCCP in June.

Freckled Duck. A flock of 28 reported near Blackwater in October.

Great Cormorant. A group of 45 recorded at Ross River Dam in July.

Great Crested Grebe. A group of 200 reported at Ross River Dam in November.

Great Egret. A group of 150 recorded at the TTCCP in October.

Great Knot. Endangered. Flocks of up to 2,500 recorded between January and March as well as up to 800 between October and December at Bushland Beach which is an important roost location for this species.

Greater Crested Tern. A flock of 700 recorded at Bushland Beach in August.

Green Pygmy Goose. Most records of small numbers observed around the Townsville area which suggests this area is a stronghold for a small population of this species.

Grey Teal. Large flock observations include a flock of 4,500 at Wongaloo Conservation Park in June and 2,000 at Duck World near Brandon in October.

Hardhead. A flock of 2,100 reported at Lake Elphinstone in October.

Little Black Cormorant. A group of 500 recorded at Lake Elphinstone in September.

Little Egret. A group of 71 observed at the TTCCP in April.

Little Pied Cormorant. A group of 95 recorded at Lake Elphinstone in September 2018 and 80 near Ross River Dam in March.

Long-billed Corella. Introduced. This species has established feral populations from cage escapees and has expanded its range along the coast.

Magpie Goose. Multiple records of large flocks throughout the year including a flock of 4,000 at Wongaloo Conservation Park in June, 2,000 at Duck World near Brandon in January, and 2,000 at Reid River in October.

Maned Duck. A flock of up to 60 reported regularly at Rockhampton Botanic Gardens through the year.

Oriental Cuckoo. 27 of the 28 records for BBN region were concentrated around Townsville with one record at Blackwater. Although there were some records further south, this could be a migratory species that is having a range reduction and observations should be monitored in future years.

Pacific Black Duck. Large flock observations in January include a flock of 400 at Bushland Beach, 400 at Duck World near Brandon, and 400 at Wunjunga Wetlands.

Pacific Emerald Dove. Only seven observations concentrated around Townsville recorded for this species which uses rainforest as one of its habitats.

Pacific Swift. Although this migratory species is known to form large flocks ahead of storm fronts, the record of 1,500 at Mt Louisa in February is larger than generally observed.

Pale-vented Bush-hen. Only five observations recorded for this species, all from Ross River Bush Gardens near Townsville.

Pectoral Sandpiper. Accidental. Several records of the same bird at TTCCP in November.

Pied Stilt. A flock of 300 recorded at Wunjunga Wetlands in December.

Pink-eared Duck. A flock of 5,000 observed at Duck World near Brandon in October.

Plum-headed Finch. A flock of 500 recorded near Homevale NP in July.

Radjah Shelduck. A flock of 35 reported at St Lawrence Wetlands in August.

Rainbow Bee-eater. An unusually large assembly of 725 reported at the mouth of Ross River in Townsville by Nicholas Murray who made the following comment with the report: "They came in low in

flocks up to 30–40 individuals and end up around the mangroves and roadside up on Benwell Road, about 150 metres past the mudflat. We did a fly-in count while standing on the mudflat looking east and south. All birds were flying in over our heads, and we are confident of the count as they must cross the Ross River while flying in – we had a good view. An initial count the day before by one of us revealed at least 450 individuals flying into the roost, before deciding to do a better count together this afternoon”.

Red Knot. Near-threatened. 19 observations recorded with 16 being at Bushland Beach where up to 150 birds were reported.

Red-backed Buttonquail. Only three observations recorded around Townsville in January and October.

Red-capped Plover. Up to 220 recorded at Bushland Beach through the year.

Red-chested Buttonquail. Only three observations recorded comprising two at Townsville in January and November and one at Taunton NP in January.

Red-necked Avocet. A large flock of 1,200 recorded at Duck World near Brandon in November.

Red-necked Stint. Near-threatened. 600 observed at Ross River Spit in April.

Red-winged Parrot. A flock of 83 recorded at Clermont in July.

Royal Spoonbill. A group of 200 recorded at TTCCP in October.

Scaly-breasted Munia. Introduced. A flock of 200 recorded at the Ross River Dam in April.

Squatter Pigeon. 90 records across the bioregion with flocks of up to 20 birds observed. This is good news as the local southern sub-species (*Geophaps scripta scripta*) is listed as vulnerable under the Environmental Protection & Biodiversity Protection Act 1999.

Sulphur-crested Cockatoo. Severe cases of Psittacine Beak and Feather Disease have been recorded in Rockhampton.

Topknot Pigeon. A flock of 150 reported at Townsville Town Common Conservation Park (TTCCP) in May.

Torresian Imperial Pigeon. A flock of 100 reported at Bushland Beach in February.

Varied Lorikeet. Seven records of one to three birds in the Belgian Gardens area of Townsville. These records are well outside the documented range for this species so they may be cage escapees.

Wandering Whistling Duck. A flock of 294 reported at the Ross River Spit in October.

Whiskered Tern. A flock of 2,000 recorded at Duck World near Brandon in January.

White-breasted Woodswallow. A flock of 200 recorded at Greta Creek south of Bowen in August.

White-browed Woodswallow. A flock of 150 recorded at Burdekin Falls Dam in March.

White-headed Pigeon. Only two observations recorded for this rainforest species: one at Magnetic Island in January and one at Byfield in October.

2019 Notable bird records

Australasian Grebe. A group of 2,000 recorded at Duck World near Brandon in November.

Australasian Shoveler. A flock of 80 recorded at Rockhampton Botanic Gardens in July.

Australasian Swamphen. A group of 125 recorded at Rockhampton Botanic Gardens in July.

Australian Bustard. A flock of 26 recorded at Ross River Dam in March 2019. Photo captured males displaying which may indicate local breeding.

Australian King Parrot. No observations recorded of this species in the bioregion in 2019.

Australian Painted-snipe. Endangered. Ten records from Black River Road near Townsville of a single bird in December 2019, presumably a single individual. One recorded at Nome south of Townsville, and one recorded at Hay Point. These are the only three records north of Lake Samsonvale near Brisbane. There are only two other records in NSW for 2019 which makes the total recorded population of Australia only around 10 birds.

Australian Pelican. Large flock observations of note include a flock of 400 at the TTCCP in October, 260 at Wongaloo Conservation Park in September, and 275 at Woolwash Lagoon at Rockhampton in September.

Australian White Ibis. A flock of 498 recorded at Dump Lagoon in Rockhampton during November.

Baillon's Crake. Only one record of two birds observed at Wunjunga Wetlands in February.

Bar-tailed Godwit. Near-threatened. A flock of 350 recorded at the Burdekin River Delta

Beach Stone-curlew. Near-threatened. Of the 33 records for 2019, 23 were from Bushland Beach and presumably the same three birds reported on each occasion. At the other locations a total of 14 birds was reported giving a population of around 17 birds for the whole bioregion.

Brolga. A group of 121 recorded near Eungella Dam in May.

Brown Booby. A flock of 60 recorded at Bushland Beach in June.

Budgerigar. A flock of 45 observed at the Ross River Dam in January.

Bush Stone-curlew. A group of 45 recorded at Townsville in January.

Chestnut-breasted Mannikin. A flock of 140 recorded at Reid River in April.

Common Starling. Introduced. Although prior to 2,000 there were no records of this species north of the Hervey Bay region, there was a report in 2010 from the Biloela region, and in 2019 there was both a report from the Rockhampton area and five birds observed in the Mackay area. This invasive species appears to be expanding its range north.

Cotton Pygmy Goose. A flock of 50 recorded at St Lawrence Wetlands in June.

Dusky Moorhen. A group of 100 recorded at Lake Theresa near Clermont in March, and a group of 85 recorded at Woolwash Lagoon in Rockhampton during November.

Eastern Cattle Egret. A flock of 554 recorded at the Rockhampton Botanic Gardens in January.

Eurasian Coot. A group of 401 observed at Ross River Dam in July.

Eurasian Whimbrel. A flock of 350 recorded at Burdekin River Delta in November.

Galah. A flock of 250 observed at Townsville in April.

Glossy Ibis. A flock of 400 recorded at the Wunjunga Wetlands in January.

Great Cormorant. A flock of 100 recorded at Duck World near Brandon in November.

Great Crested Grebe. A group of 560 recorded at the Ross River Dam in January.

Great Egret. A flock of 300 recorded at the Townsville Town Common Conservation Park in October.

Great Knot. Endangered. A flock of 3,500 recorded at Bushland Beach in March, and 2,750 recorded at the Burdekin River Delta in November. The Bushland Beach record is close to the 1% population threshold.

Greater Crested Tern. A flock of 345 recorded at Bushland Beach in March.

Grey Plover. A flock of 130 recorded at Burdekin River Delta in November.

Grey Teal. A flock of 800 recorded at Wongaloo Conservation Park in September.

Hardhead. A flock of 600 recorded at Duck World near Brandon in January.

Intermediate Egret. A flock of 200 recorded at Reed Beds Road in September, and 200 recorded at Townsville Town Common Conservation Park in November.

King Quail. Only four records north of Cooloola including one at Townsville in 2019 and only five north of Cooloola with no observations in the bioregion in 2018 may be cause for concern. King Quail have declined in NSW and Victoria due to the draining or burning of habitat (O'Brien 2006) so more monitoring in Queensland may be necessary.

Lesser Sand Plover. A flock of 450 observed at Burdekin River Delta in November.

Little Corella. A flock of 577 recorded at the Rockhampton Botanic Gardens in April 2019, and 500 recorded at the Carlyle Gardens at Townsville in April.

Little Egret. A flock of 100 recorded at the TTCCP in October 2019.

Little Grassbird. No observations recorded of this species in 2019. Very few observations recorded north of the Sunshine Coast, and mostly concentrated around sewage ponds at Winton and Longreach. Future records should be monitored for a retraction of range for this species.

Little Ringed Plover. Five records of a single bird observed at Wunjunga Wetlands in January which was likely a single vagrant. This is the only record for Queensland and there are only three records for the whole of Australia.

Magpie Goose. A flock of 2,300 recorded at Wongaloo Conservation Park in September, and 2,000 recorded at Reid River in August.

Marsh Sandpiper. A flock of 350 recorded at Duck World near Brandon in November.

Oriental Cuckoo. As in 2018 all 18 observations from 2019 were recorded only from the Townsville area.

Pacific Black Duck. A flock of 250 recorded on Reed Beds Road near Bowling Green Bay Conservation Park in September, and a flock of 200 recorded at Duck World near Brandon in September.

Painted Buttonquail. Only three observations recorded: two near Dysart in February and one near Glenden in March.

Pied Oystercatcher. Up to 40 birds recorded at Bushland Beach throughout the year.

Pied Stilt. A group of 310 recorded at Wunjunga Wetlands in January and 400 at Duck World near Brandon in November.

Plumed Whistling Duck. A flock of 3,000 recorded at Mullers Lagoon in Bowen in July.

Plum-headed Finch. A flock of 150 recorded near Clermont in March.

- Radjah Shelduck.** A flock of 60 recorded at St Lawrence Wetlands in October
- Red-necked Avocet.** A group of 2,250 recorded at Duck World near Brandon in November.
- Red-necked Stint.** Near-threatened. A flock of 1,250 recorded at the Burdekin River Delta in November.
- Red-tailed Black Cockatoo.** A flock of 300 recorded at Majors Creek to the south of Townsville in January.
- Scaly-breasted Lorikeet.** A flock of 99 recorded at the Rockhampton Botanic Gardens in October.
- Sharp-tailed Sandpiper.** A flock of 1,500 recorded at the Burdekin River Delta in November.
- Spotless Crake.** Single record of two birds observed at St Lawrence Wetlands in May.
- Straw-necked Ibis.** A flock of 250 recorded at Reid River in July.
- Terek Sandpiper.** A flock of 600 recorded at the Burdekin River Delta in November.
- Torresian Imperial Pigeon.** A flock of 50 recorded at Rowes Bay near Townsville in February.
- Tree Martin.** A flock of 1,500 recorded at Ross River Dam in April, and 800 recorded at Reid River in July.
- Whiskered Tern.** A flock of 550 recorded at Duck-World near Brandon in January.
- White-throated Nightjar.** Very few observations recorded north of Cooloola and only one observation in the bioregion. Monitoring should continue to see if there is a range reduction.
- White-winged Tern.** A flock of 500 recorded at Duck World near Brandon in January.
- Yellow Chat (Capricorn sub-species).** Critically endangered. There were 25 records of this sub-species and all were from the known feeding and breeding location at the Cheetham Salt area south of Rockhampton.

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