

THE SUNBIRD



Journal of the
QUEENSLAND ORNITHOLOGICAL SOCIETY

Volume 30

Number 3

December 2000

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THE SUNBIRD

Volume 30 No. 3

December 2000

THE BIRDS OF CHARTERS TOWERS, NORTH QUEENLAND

P.L.BRITTON and H.A.BRITTON

INTRODUCTION

The city of Charters Towers is in Dalrymple Shire at 20°05' S, 146°15' E. This report, using 17 years of personal observations to June 2000, includes all places within 70 km of the city centre, which is an area in excess of 15000 km²; west to Toomba Station and Homestead, south to Wambiana, north-east to the Mingela Range, and encompassing much of the Basalt Wall in the north-west. The whole area is semi-arid woodland and wooded grassland at about 300m asl. Ironbarks and box-gums are dominant throughout, although areas within 15 – 20 km of the city, degraded during early mining operations, have an abundant growth of Chinese Apple *Ziziphus mauritiana*. Other exotics, especially Rubber Vine *Cryptostegia grandiflora*, cause significant problems throughout, especially along watercourses. Woodland clearance is not a serious problem in this cattle producing region and damage from recent mining operations is localized and minimal.

The Burdekin River is a major system in the heart of this region, and there are impressive wetlands on private land, distant from this river, known as Lake Powlathanga, Toomba Lake and Reeves Lake. The last two of these are part of the Basalt Wall, which is an impressive and ecologically significant formation abutting the Burdekin River near the mouth of Fletcher Creek. For most of this lengthy period the area has experienced an El Niño weather pattern, and each of these wetlands has dried two or three times during this period, once involving all three being dry simultaneously. The Burdekin River is the only perennial watercourse, although Fletcher Creek, fed by

springs on the Basalt Wall to the west, is almost so. The city obtains its drinking water from the nearby Burdekin Weir. The term 'major wetlands' is used repeatedly and refers to this weir and the three lakes detailed above.

As residents at All Souls' & St Gabriel's School, we have many records from this comparatively verdant site (ASSG), which is only 3km from the city centre. The city is about 95 km from the nearest coastline (at Townsville) and 330 km by river from tidal water, yet we have recorded a surprising variety of species that typically frequent the littoral zone. The coordinates of all localities mentioned are given in Appendix 1.

The Systematic List includes data for 252 species, and recorded date range is given for most that are not resident, sometimes involving typical or band extremes followed by exceptional or atypical dates. It is noteworthy that 185 species are listed for Powlathanga Station and 198 species are listed for Toomba Station, figures which are 73% and 79% of the total list, respectively. These high percentages reinforce the notion that this area of 15000 km² is remarkably homogeneous in terms of both vegetation and climate. It is sometimes instructive to compare these species accounts with those for neighbouring Townsville in Wieneke (1989).

SYSTEMATIC LIST

Emu. Widespread in small numbers in wooded country and associated grassland; scarce within 15 km of the city centre.

Australian Brush-turkey. Regular and sometimes common; Burdekin River and some other watercourses, often associated with introduced Rubber Vine; Toomba Station, Fletcher mouth and other Basalt Wall sites with vine thicket or suitable riparian vegetation; increasing generally, and established at ASSG in 1999; 12 together at Burdekin Weir on 11 Oct 87 was exceptional.

Stubble Quail. Powlathanga Station, one on 20 Jan 85 and 18 May 85, two on 16 Feb 90; Toomba Station, one on 30 July 85; ASSG, one on 10 Mar 90; grassland.

Brown Quail. Widespread and common; long grass and rank herbage.

King Quail. Mingela Pool, pair on 26 Feb 87 and 22 July 94, one on 23 Jan 85; long grass at swamp edges.

Helmeted Guinea Fowl. Not considered to be self-sustaining and viable in Australia so relegated to the Supplementary List in Christidis & Boles (1994). Feral birds at ASSG have roamed freely for decades, and successful breeding was noted in Apr 94, May 98, Jan 99 and Dec 99. There were only 17 birds in this population in Feb 2000 and regular road kills continue to perform a major regulatory control on numbers. An observation of an apparently discrete population 9 km to the north-east involved at least six roosting birds crossing the road on 4 Feb 95.

Magpie Goose. Common and apparently increasing at all major wetlands; at least 2000 at Lake Powlathanga on 19 Aug 84, but typically 600-1000 birds at this favoured site.

Plumed Whistling-Duck. Widespread and numerous at all major wetlands; often breeding; up to 350 at Lake Powlathanga on 1 Mar 87 and 220 at Reeves Lake on 28 May 88.

Wandering Whistling-Duck. Similar status to the previous species; usually in much smaller numbers but 400 at Reeves Lake on 7 Feb 85.

Freckled Duck. Small influx 1992-94; Lake Powlathanga, five on 24 July 94; Reeves Lake, 16 on 20 Apr 92; 78 at Toomba Lake on 16 May 93 increased to 95 there on 19 June 93.

Black Swan. Regular at major wetlands, usually in hundreds, often breeding; a leucistic bird with 140 others at Reeves Lake on 31 Mar 94.

Australian Wood Duck. Common in moderate numbers at all wetlands, some breeding; 350 at Toomba Lake on 17 Feb 85 and 320 at Lake Powlathanga on 24 July 94 were exceptional counts.

Cotton Pygmy-goose. Regular at all major wetlands, typically fewer than 30 birds; 350 at Lake Powlathanga on 29 Aug 90 was exceptional.

Green Pygmy-goose. Similar status to the previous species but usually in much smaller numbers; maximum of 25 at Reeves Lake on 31 Dec 83.

Pacific Black Duck. Common at all wetlands, usually in hundreds, often breeding.

- Australasian Shoveler.** Regular but uncommon at major wetlands; two-thirds of records are from Reeves Lake, maximum 36 on 27 July 92; largest counts elsewhere were 6 at Powlathanga on 3 July 99 and 16 at Toomba Lake on 30 July 85; two at Burdekin Weir on 31 July 84 and one at Wambiana on 26 July 86; recorded 24 Jan – 22 Sept, peaking in July in both frequency and number.
- Grey Teal.** The commonest anatid; up to 2300 at Lake Powlathanga, 900 at Reeves Lake and 700 at Toomba Lake; always in hundreds at major wetlands, and in small numbers elsewhere; some breeding.
- Chestnut Teal.** Recorded in 1992: ASSG, two adults 4-17 Aug; singles at Reeves Lake on 7 June and Toomba Lake on 11 Oct; exceptional north of Bowen (Storr 1984).
- Pink-eared Duck.** Erratic at major wetlands, often in large numbers; all months; up to 1300 at Reeves Lake, 450 at Toomba Lake and 110 at Lake Powlathanga; largest numbers in June-July; fluctuating markedly at Reeves Lake, where 55 on 11 Oct 92, 650 on 8 Nov 92, 520 on 8 Dec 92 and 110 on 28 Feb 93.
- Hardhead.** Common at all major wetlands; up to 2400 at Lake Powlathanga, 120 at Toomba Lake and 140 at Reeves Lake; all months, but no evidence of breeding.
- Australasian Grebe.** Widespread and common; all wetlands, all months, no evidence of breeding; often hundreds, maximum 1200 at Toomba Lake.
- Hoary-headed Grebe.** Erratic in small numbers at Reeves Lake, Toomba Lake and Lake Powlathanga; 13 Feb-30 July and 11 Sept 84, not annual; up to nine but mostly 1-3; one at Mingela Pool, 4-17 June 94.
- Great Crested Grebe.** Typically present at major wetlands but in highly variable numbers; pair with two small young at Powlathanga Station on 7 May 89; all months. Lake Powlathanga, 44 on 29 Sept 90; Reeves Lake, 47 on 9 May 99 and 72 on 17 April 98; Toomba Lake, 140 on 25 Jan 86, 37 on 27 June 91, 130 on 18 Sept 91 and 55 on 13 July 92. These exceptional concentrations exhibit no obvious pattern.
- Darter.** Widespread but not numerous; all wetlands, all months; some breeding.

- Little Pied Cormorant.** Widespread but seldom numerous; major wetlands, all months.
- Pied Cormorant.** Widespread at major wetlands, sometimes in hundreds; all months.
- Little Black Cormorant.** The commonest cormorant; all wetlands, all months; often in hundreds; 40 pairs nesting at Lake Powlathanga in Apr-May 91.
- Great Cormorant.** Regular at major wetlands in small numbers; all months.
- Australian Pelican.** Regular at major wetlands and along the Burdekin River, often in hundreds; all months.
- White-faced Heron.** Regular at all wetlands and seasonal inundations; all months but far more numerous Apr-Sept; 32 at Reeves Lake on 18 Aug 87 dropped to 24 on 5 Sept 87 and only two on 23 Sept 87.
- Little Egret.** Widespread but generally uncommon; all wetlands, all months; most frequent in riverine habitat.
- White-necked Heron.** Widespread in small numbers; all wetlands, all months; 40 together at Wambiana on 24 June 95, and certainly more numerous in winter.
- Pied Heron.** Adult at Reeves Lake, 9 Feb 86. The few inland and southern records detailed by Johnson & Eddie (2000) are of adults during this mid-summer to autumn period.
- Great Egret.** Widespread in small numbers at all wetlands; all months.
- Intermediate Egret.** Similar status to the previous species but more common; scattered birds in moist or inundated grassland at Lake Powlathanga sometimes total 80 or more; frequently in nuptial plumage, suggestive of local breeding.
- Cattle Egret.** Extending its range in North Queensland and first recorded at local wetlands on 3 June 84. Established at Toomba Station (up to 20 birds) and Lake Powlathanga (7 on 24 July 94, now up to 15 birds); ASSG, single adult 9 Sept 91- 31 Oct 92 and occasional in 1999.

- Striated Heron.** Adult at Burdekin Weir on 18 July 86, 18 May 87 and 15 Aug 87. Seasonal upstream movement of at least 335 km from Burdekin mouth now unlikely following completion of the Burdekin Dam late in 1987 (Britton & Britton 1996).
- Nankeen Night Heron.** Widespread but uncommon; all wetlands, all months; always fewer than 15 birds; mostly immature, possibly involving local breeding; small seasonal roosts along Burdekin River.
- Black Bittern.** An adult at White Falls, Toomba Station on 10 Sept 89.
- Glossy Ibis.** Moderately common at major wetlands, all months; up to 40 at Reeves Lake, 20 at Toomba Lake and 25 at Lake Powlathanga; regular sightings of birds in nuptial plumage suggest that there is some local breeding.
- Australian White Ibis.** Widespread and common; all wetlands, all months, but somewhat more numerous in winter when overflying skeins of 50 or more birds are a feature.
- Straw-necked Ibis.** Widespread and common in open and wooded grasslands, all months; adaptable, frequenting city gardens and once eating Cane Toad *Bufo marinus*.
- Royal Spoonbill.** Widespread and common; all wetlands, all months; counts of 85 or more were exceptional.
- Yellow-billed Spoonbill.** Similar status to the previous species; generally less numerous, for example 20 counted when 100 Royal Spoonbills present at Lake Powlathanga on 2 Oct 87; but 27 counted when only 16 Royal Spoonbills at Reeves Lake on 5 Apr 87, and 35 counted there on 23 Apr 87 when only 18 Royal Spoonbills.
- Black-necked Stork.** Widespread but uncommon at major wetlands; always 1-3 birds, all months, some breeding.
- Osprey.** A conspicuous pair at a prominent Burdekin Weir nest until the tree fell early in 1986; high pitched whistle indicative of breeding as late as June 86 although the old nest site had not been refurbished; last recorded on 22 Apr 87. A bird 20 km upstream at Big Bend from 12 May to 3 Sept 87 was perhaps displaced from the weir; one at Burdekin Weir on 3 June 95. Occasional individuals at all major wetlands and along the Burdekin River to beyond Fletcher Creek.

Pacific Baza. Basalt Wall records from Fletcher mouth west to Toomba Station in 1984, 1988, 1993, 1999 and 2000 suggest that it is resident there in very small numbers and overlooked; two at Burdekin Weir on 4 Nov 94 and one north of the city on 7 Feb 99; rich woodland.

Black-shouldered Kite. Widespread in very small numbers in wooded country, more plentiful in May-Aug. A trebling of numbers throughout in 1998 was apparently linked with exceptional numbers of the introduced House Mouse *Mus musculus* and a prolonged and substantial wet season which began in Nov 97.

Letter-winged Kite. In 1994 at Lake Powlathanga, two roosting on 24 July increased to nine on 6 Aug and 12 on 13 Aug, then decreasing to two on 22 Oct and 19 Nov (Britton *et al.* 1996); one west of the city on 24 July 98.

Square-tailed Kite. Resident in small numbers south of Wambiana, but only erratic single birds at 12 sites in our area apart from a displaying pair at Fletcher Creek on 11 Oct 98; tall woodland, all months.

Black-breasted Buzzard. Established and apparently resident south of Wambiana, but only six records of single birds in our area: Fletcher Creek, 31 Mar 84; Reeves Lake, 14 June 84; Wambiana, 25-28 Apr 85; Toomba Lake, 16 Mar 86; Gladstone Creek (near city), 7 Sept 90; woodland and associated open country.

Black Kite. Common throughout and probably mostly resident; soaring flocks of 20-40 birds in May-June are perhaps from the south.

Whistling Kite. Widespread and common breeding resident; woodland and associated open country, often near water.

White-bellied Sea-Eagle. Established breeding pairs at all major wetlands; one at a road kill on the Lynd Highway was no doubt from the Burdekin River, only 4 km to the north, and another at a road kill on the Basalt Wall was apparently from Reeves Lake; occasional birds along the Burdekin River to beyond Fletcher Creek.

Spotted Harrier. Regular but not annual in very small numbers, 2 Mar-26 Aug; two on 5 June 85, otherwise singles; open country.

Swamp Harrier. Established and presumably breeding at Lake Powlathanga and Reeves Lake, with a single pair at each site; two pairs at Powlathanga on 1 Mar 87; one at Toomba Station on 4 May 86 and one at ASSG on 28 Feb 87. A bird at Mingela Pool on 2 Oct 94 resembled the photographed albinistic bird in Klapste (1984).

Brown Goshawk. Widespread and resident in small numbers in wooded country including the city.

Collared Sparrowhawk. As above.

Wedge-tailed Eagle. Widespread and common in woodland and associated open country; Basalt Wall counts of ten on 13 July 85 and nine on 16 April 89 were exceptional; typically reliant on road-killed macropods and unlikely to be significantly affected by Calicivirus.

Little Eagle. Erratic single birds in woodland: Fletcher Creek, 7 Sept 84 and 29 Jan 89; Red Falls, 17 May 87; Reeves Lake, 10 Sept 88; ASSG, 30 Oct 95.

Brown Falcon. Common throughout and probably mostly resident; little evidence of occasional winter concentrations noted west and north of this area, but twelve together at Lake Powlathanga on 15 Apr 86.

Australian Hobby. Moderately common throughout and probably mostly resident; singly or in pairs, all months, woodland; regular in city.

Grey Falcon. One at Reeves Lake on 25 Jan 87.

Black Falcon. Occasional single birds: near Mt Cooper on 7 July 84; ASSG on 21 Sept 86; Lake Powlathanga on 27 Aug 94; woodland and associated open country.

Peregrine Falcon. Widespread but uncommon; two at Wambiana on 30 Mar 86 and two at Reeves Lake on 20 Jan 89, otherwise singles; all months.

Nankeen Kestrel. Widespread and common in all types of wooded country; all months and probably mostly sedentary.

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- Brolga.** Widespread and common; all wetlands; especially numerous at Lake Powlathanga where often 400-600, and counts of 1300 on 9 Dec 84 and 1400 on 19 Apr 85.
- Buff-banded Rail.** ASSG, singles on 27 Jan 87 and 2 Sept 88; Mingela Pool, one on 11 Sept 89.
- Bush-hen.** One at Mingela Pool on 17 Mar 96.
- Baillon's Crake.** Mingela Pool, up to 23, from 23 Jan-10 Feb 85, and single birds on five dates in 1996-97; ASSG, singles on five dates in 1985 and 1992, two from 2 Feb- 8 Feb 88; Lake Powlathanga, one on 20 Mar 93; Reeves Lake, singles on 20 Jan 88, 5 Mar 89, 22 Apr 89 and 24 Feb 90; absent mid-May to mid-Sept.
- Australian Spotted Crake.** Mingela Pool, four with Baillon's Crakes on 26 Jan 85, and singles on 23 Jan 85 and 11 Oct 97; Lake Powlathanga, three on 16 Feb 90; ASSG, singles on 30 Jan 85 and 28 Feb 88.
- White-browed Crake.** One at Mingela Pool on 23 Jan 85, associated with Baillon's Crakes.
- Purple Swamphen.** Widespread and common; all wetlands, all months.
- Dusky Moorhen.** Similar status to the previous species but generally in very small numbers; influx of immatures at Reeves Lake, where at least 40 on 24 Feb 90, reduced to only one on 11 Mar 90.
- Black-tailed Native-hen.** Recorded in 1983, 1985, 1986, 1988, 1991, 1992 and 1995; one or two records of up to six birds in five of these seven years. 1985: ASSG, one on 26 Apr, 5 May and 26 May, two from 25 Aug - 21 Sept; Reeves Lake, three on 25 May; Lake Powlathanga, five on 21 Jan. 1988: Lake Powlathanga, 31 on 20 Mar; Mingela Pool, eight on 13 Mar and 11 on 18 Mar; Reeves Lake, eight on 20 Mar and 24 on 26 Mar. The influx in Mar 88, at sites distant from one another, presumably involved hundreds or thousands of birds.
- Eurasian Coot.** Common or very common at all major wetlands; numbers fluctuate markedly, typically hundreds, sometimes more than a thousand. No evidence of breeding and patterns of occurrence are not at all clear; numerous in all months.
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Australian Bustard. Widespread and common in grassland; typically in pairs of sedentary breeders. A concentration of 64 adults feeding on grasshoppers in a 2 ha area at Lake Powlathanga on 24 Jan 88 was exceptional.

Red-backed Button-quail. Reeves Lake, two on 28 Dec 92 and one on 20 Jan 89; ASSG, singles on 4 Feb 86, 7 Sept 95 and 20 Nov 97; Toomba Station, one on 15 Feb 98; Fletcher Creek, one on 31 Jan 00; long grass and rank herbage.

Little Button-quail. Toomba Station on 6 July 85 and ASSG on 21 Apr 88; single birds in lightly wooded grassland.

Red-chested Button-quail. Mingela Pool on 23 Jan 85, 26 Jan 85 and 29 Nov 85; Reeves Lake on 7 Feb 88 and 5 June 88; Toomba Station on 27 Nov 98; single birds in open grassland.

Latham's Snipe. Annual migrant from Japan, 9 Aug-29 Mar; mostly singles, all wetlands; up to 13 at Reeves Lake and up to nine at Lake Powlathanga in Feb 90; 72 records.

Black-tailed Godwit. Almost annual Palaearctic migrant, 11 Sept-19 Apr; also 18 May 86 and 13 June 85; most records in Oct-Nov and Feb-Apr; flocks up to 24 but mostly 4-10; Reeves, Powlathanga and Toomba.

Little Curlew. Erratic in variable numbers, damp and dry grassland. Nine sites, 1985-88: at least seven, 8 Feb-18 May 85, four on 22 Dec 85; at least 260 and very conspicuous, 23 Mar-10 May 86; at least nine, 10 Oct -25 Nov 87; at least 38, 13 Mar-9 Apr 88. On 12 Apr 86, Dr J.Allingham (pers. comm.) referred to flocks in grassland at his Basalt Wall property, 'Fletchervale', where they had been conspicuous and numerous during a previous very dry period in 1931-32, although not noted there between 1932 and 1986.

Whimbrel. Lake Powlathanga, one on 24 Sept 87.

Marsh Sandpiper. Regular Palaearctic migrant, all wetlands, annual; 6 Aug -23 Apr; largest numbers and most records on passage, Aug-Nov and Feb-Mar, including Reeves Lake counts of 88 on 6 Nov 88 and 83 on 11 Mar 90.

- Common Greenshank.** Annual Palearctic migrant in small numbers, all wetlands; 29 Aug-20 Apr, also 22 July 84 and 18 May 86; mostly 1-3 but up to 12 at Lake Powlathanga and up to 14 at Toomba Lake.
- Wood Sandpiper.** Fairly regular Palearctic migrant, presumably from the west rather than Cape York, for there are no Cooktown records in McLean (1994). Lake Powlathanga, 3-6 from 20 Oct- 21 Nov 87, six on 20 Mar 88, and two from 2 Oct- 23 Oct 88; Mingela Pool, one on 8 Nov 86; Reeves Lake, one on 8 Nov 92 and two from 7 Feb- 5 Mar 88; ASSG, singles 25 Feb-7 Apr 95, 20 Nov-8 Dec 94 and 23 Oct-11 Nov 87.
- Terek Sandpiper.** Toomba Lake, one on 19 Oct 85.
- Common Sandpiper.** Annual at Burdekin Weir and occasional elsewhere, 15 Aug-11 May, mostly Sept-Oct. Two on 8 Feb 84, 10 Sept 84, 15 Oct 94 and 5 Oct 95, otherwise singly; 37 records.
- Grey-tailed Tattler.** Burdekin Weir, one on 8 Oct 85.
- Great Knot.** Toomba Lake, one on 6 Sept 86.
- Red Knot.** Toomba Lake, one on 9 Nov 85.
- Red-necked Stint.** Almost annual Palearctic migrant, 6 Sept-2 Nov, 23 Mar-19 Apr, 22 Dec; most records in Sept-Oct; flocks up to 28, but mostly 1-5; Reeves, Powlathanga and Toomba.
- Sharp-tailed Sandpiper.** The most regular and numerous Palearctic migrant, all wetlands; 18 Aug-18 May; largest numbers and most records on passage, Aug-Nov and Mar-Apr, including Lake Powlathanga counts of 690 on 1 Nov 87 and 340 on 19 Apr 85.
- Curlew Sandpiper.** Almost annual Palearctic migrant, 9 Aug-26 Oct, 20 Mar-19 Apr, 22 Dec; most records in Sept-Oct; flocks up to 38, but mostly 1-5; all major wetlands.
- Painted Snipe.** Lake Powlathanga, two on 8 Feb 85 and four from 12 Oct- 29 Oct 91; Reeves Lake, one on 9 Apr 88 and 20 Jan 89, two on 12 June 88; Wambiana, one on 29 Mar 86. An erratic visitor to long grass and herbage fringing wetlands.
- Comb-crested Jacana.** Widespread and common breeding resident; most wetlands.
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- Bush Stone-curlew.** Local and uncommon resident in open country associated with woodland; a dead runner on a Basalt Wall road on 5 Nov 89 is the only evidence of breeding.
- Black-winged Stilt.** Widespread and common, some breeding, all wetlands; 1650 at Lake Powlathanga on 8 Feb 85 but usually fewer than 200; up to 230 at Toomba Lake on 30 Nov 86 and up to 355 at Reeves Lake on 7 Feb 88.
- Red-necked Avocet.** Forty records in all months exhibit no seasonal pattern. Six counts above 20, maximum 33 at Lake Powlathanga on 25 Oct 87 and 36 at Reeves Lake on 13 June 86; Reeves, Powlathanga and Toomba.
- Pacific Golden Plover.** Single vagrants: Toomba Lake, 9 Nov 85, 16 Mar-3 May 86, when assuming nuptial dress; Lake Powlathanga, 22 Sept 87; Reeves Lake, 2-9 Oct 88; ASSG, 3-20 Nov 84.
- Red-capped Plover.** Irregular visitor to Reeves Lake and Toomba Lake, once at Lake Powlathanga on 13 June 85; pair with recently fledged youngster at Reeves Lake on 18 Sept 93, but mostly non-breeding groups of up to 28; 41 records, 25 Mar-30 Nov.
- Lesser Sand Plover.** Two at Toomba Lake on 22 Dec 85.
- Oriental Plover.** Nine at Lake Powlathanga on 12 Oct 91.
- Black-fronted Dotterel.** Widespread and common at all wetlands, some breeding; 215 at Lake Powlathanga on 8 July 85, 112 at Toomba Lake on 6 July 85, 62 at Reeves Lake on 31 May 87 and 18 at Mingela Pool on 26 Dec 95 were exceptional counts for each site; numbers fluctuate markedly with no obvious patterns.
- Red-kneed Dotterel.** Erratic but fairly common at major wetlands, all months; small young at Lake Powlathanga on 13 Mar 98; mostly 1-4 together, but up to 40 at Lake Powlathanga on 16 Sept 94, up to 32 at Toomba Lake on 5 Apr 86, up to 14 at Reeves Lake on 10 Oct 87 and up to 24 at Burdekin Weir on 13 Oct 85.
- Masked Lapwing.** Widespread and common breeding resident; up to 240 at Lake Powlathanga on 6 July 85 and up to 85 at Reeves Lake on 1 Dec 90; numbers fluctuate markedly with no obvious seasonality.
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- Oriental Pratincole.** Lake Powlathanga, single adults on 8 Feb 85 and 9-13 Mar 98.
- Australian Pratincole.** Erratic but fairly common at major wetlands, 6 Mar -19 Nov; mostly fewer than ten, but up to 23 at Reeves Lake on 19 Nov 88 and up to 32 at Lake Powlathanga on 19 Apr 85; no evidence of breeding; half of the 34 records are in Oct-Nov.
- Silver Gull.** Erratic in small numbers at major wetlands and ASSG: occasional single birds at Lake Powlathanga and Burdekin Weir; up to four at ASSG; up to 24 at Toomba Lake; up to 18 at Reeves Lake; 56 records, all months. Breeding in numbers south of Charters Towers at Lake Buchanan in 1990 and 1991 (Britton 1991,1992), but no evidence of breeding locally.
- Gull-billed Tern.** Regular in very small numbers at Burdekin Weir, Reeves Lake and Toomba Lake; established at Lake Powlathanga since May 87, perhaps breeding, maximum 21 on 12 Oct 91.
- Caspian Tern.** Regular and mostly resident at major wetlands; always fewer than ten birds at Burdekin Weir and Lake Powlathanga; up to 22 at Toomba Lake and up to 42 at Reeves Lake; two very young juveniles at Burdekin Weir on 3 Aug 84 and a single juvenile at Reeves Lake on 18 Aug 84 were suggestive of local breeding.
- Common Tern.** An adult at Reeves Lake on 14 Oct 90.
- Whiskered Tern.** Regular and to some extent resident at Toomba Lake, Reeves Lake and Lake Powlathanga; typically fewer than 15 birds, but up to 80 at Toomba and up to 200 at Powlathanga seasonally, with no obvious patterns; one at Mingela Pool on 13 Apr 96.
- White-winged Black Tern.** Single birds at Reeves Lake on 23 Apr 87 and ASSG on 26 May 85.
- Common Bronzewing.** Uncommon resident in woodland, typically near water.
- Flock Bronzewing.** Influx at Powlathanga Station in 1994: five on 14 Apr, 170 on 22 May, 220 on 24 July and 45 on 6 Aug; an extension of known range east from the Mitchell Grass plains of western Queensland (Storr 1984).
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Crested Pigeon. Common and resident in all wooded country including the city.

Squatter Pigeon. Similar status to the previous species; numbers are consistently smaller and it is always on the ground in associated grassland; absent from the city.

Diamond Dove. Sometimes conspicuous in flocks up to 40, typically absent; 6 Mar-5 Sept; not annual.

Peaceful Dove. Common and resident in all wooded country and city gardens.

Bar-shouldered Dove. Regular at Toomba Station and locally along the Burdekin River; once at Reeves Lake; vine thicket and riparian woodland.

Superb Fruit-Dove. Immature female found freshly dead early on 9 May 1995 below a window at ASSG chapel. Most North Queensland records involving lights and buildings at night are during Sept-Mar (Lavery & Grimes 1974).

Red-tailed Black-Cockatoo. Common and conspicuous in wooded country and extensive areas of Chinese Apple, all months; typically fewer than a dozen together, but 37 at ASSG on 22 June 86.

Galah. Common, typically in conspicuous flocks in open country; all months.

Long-billed Corella. At least eight corellas close to the Lynd Highway on the northern outskirts of the city on 8 Apr 00 were accompanied by at least three Sulphur-crested Cockatoos. This mixed group included at least three Long-billed Corellas, one of which was apparently paired with a Little Corella. Feral flocks of Long-billed Corellas range north to at least Brisbane (Pizzey & Knight 1997), although Storr (1984) includes no records for Queensland. The origin of these evidently feral birds is not at all clear.

Little Corella. At least two with Long-billed Corellas and Sulphur-crested Cockatoos on the northern outskirts of the city on 8 Apr 00. It is a conspicuous species west of Prairie (Storr 1984), and a flock of about 80 feral birds rambles up and down Ross River in Townsville (Wieneke 1989). The origin of these evidently feral birds is not at all clear.

Sulphur-crested Cockatoo. Common and conspicuous in small numbers in wooded country; all months.

Cockatiel. Like the Diamond Dove, it is conspicuous in flocks at times but typically absent; mostly Mar-Nov, not annual.

Rainbow Lorikeet. Common and resident in all wooded country; gardens in city, particularly when mangoes are fruiting.

Scaly-breasted Lorikeet. An adult drinking at ASSG swamp on 22 June 93; there is no reason to suspect from plumage or behaviour that it was an escaped bird; according to Storr (1984) it ranges inland to the Upper Burdekin and Balfes Creek.

Red-winged Parrot. Common and resident in all wooded country.

Pale-headed Rosella. Status similar to the previous species, although typically in associated grassland and regular at roadsides in early morning.

Budgerigar. Less frequent but similar status to Cockatiel; not in mixed groups though often recorded at the same sites on the same days; occasional breeding activity at Powlathanga Station.

Oriental Cuckoo. An uncommon Palearctic migrant; two at Toomba Station on 7 Feb 99; singles at Reeves Lake on 9 Oct 88 and Mingela Pool on 11 Oct 97; woodland.

Pallid Cuckoo. Erratic in woodland, 1-3 birds, 25 Aug-5 May; not annual.

Brush Cuckoo. Annual in woodland, 1-3 birds, 27 Sept-15 Feb.

Fan-tailed Cuckoo. Erratic, single birds; Toomba Station, 31 Dec 83; Wambiana, 26 July 86; ASSG, 23-25 May 91; city, 26 July 87 and 30 Aug 99.

Black-eared Cuckoo. A single bird in a mixed-species flock near the city on 26 May 86.

Horsfield's Bronze-Cuckoo. ASSG, three on 25 May 91, two on 29 May 91 and one from 14 June- 12 Aug 85; Sellheim, one on 13 Feb 99; Toomba Station, singles on 15 Feb 98 and 10 Oct 99.

Shining Bronze-Cuckoo. Singles in riparian woodland at the Fletcher mouth on 31 Mar 84 and Red Falls on 21 May 2000.

Common Koel. Moderately common in richer woodland; typically early Oct to early Apr; first arrivals on 21 Aug 89, 9 Sept 92, 17 Sept 91 and 23 Sept 96 were apparently exceptional.

Channel-billed Cuckoo. Common in all wooded country; typically early Sept to late Mar; 19-22 July 88, 25 Aug 86 and 28 Aug 85 are exceptional dates; immature bird apparently still dependent on Torresian Crows on 6 May 93; 20-40 birds roost together at Lissner Park in the city each Sept-Mar.

Pheasant Coucal. Regular in small numbers at ASSG and Toomba Station in 1998 and 1999, apparently linked with exceptional rainfall and rank herbage; previously erratic. A bird on 13 Aug 87 was our first record although it is extensively reported (including breeding) in Blakers *et al.* (1984) and said to range west to Homestead and Suttor Creek in Storr (1984).

Barking Owl. A conspicuous resident at Toomba Station; one at ASSG on 13 Aug 99; presumably overlooked.

Southern Boobook. Common resident in all wooded country including the city.

Barn Owl. Only three records but presumably overlooked: one dead on road, 12 km south of Mingela, on 22 Mar 98; one seen well at the ASSG workshop on 6 Nov 92; feathers were found at the airfield hangar on 4 Feb 84.

Grass Owl. Established at Toomba Station, where flushed from a well-used roost on 27 Sept 98 and noted elsewhere on 29 Sept 98; road-killed female at Mingela Pool on 3 Oct 97 (Britton & Rose 99).

Tawny Frogmouth. A common resident in woodland and city gardens.

Spotted Nightjar. Three at Mt Bohle, Powlathanga Station, on 18 June 95 and 27 May 99; one flushed at Reeves Lake on 18 Aug 84, and a road-killed bird 3 km to the east on 16 Mar 86.

Australian Owlet-nightjar. A road-killed bird north of Balfes Creek on 30 Aug 87 was our only record.

White-throated Needletail. This Palearctic migrant is regular on passage but not annual; all records are on days with heavy low cloud, suggesting that they are typically too high to be seen. Up to 12 moving south or south-east on 17 Oct 83, 7 Oct 84, 13 Oct 91, 31 Oct 93 and 24 Oct 99; three on 22 Mar 85; 70 feeding over Toomba Lake on 1 Dec 90.

Fork-tailed Swift. Similar status to the previous species; up to 60 moving south or south-east on 24 Oct 85, 23-24 Oct 94, 19 Nov 95 and 24 Oct 99; 14 at Mingela Pool on 13 Mar 88.

Azure Kingfisher. Regular at Burdekin Weir and other flowing water; always singly; all months.

Laughing Kookaburra. Thinly distributed in woodland throughout; apparently coexisting with the far more numerous Blue-winged Kookaburra.

Blue-winged Kookaburra. Common resident in all wooded country, including the city.

Forest Kingfisher. Moderately common in wooded country near water, including the city.

Red-backed Kingfisher. Occasional in wooded country even when very open and degraded; most months but more numerous in May-Aug; present in 3% of winter mixed-species flocks (Britton 1997).

Sacred Kingfisher. Moderately common in all wooded country; all months.

Rainbow Bee-eater. Widespread and common in open country with trees, especially near water; some breeding noted.

Dollarbird. Moderately common in woodland, late Oct-late Mar, usually singly or in pairs; seven circling on 14 Feb 85 and 14 circling on 22 Mar 89 were presumably on northward passage, but recorded as late as 31 Mar 86.

Brown Treecreeper. Regular in small numbers in richer woodland; not recorded within 15 km of the city centre; all months.

- Variiegated Fairy-wren.** Occasional at ASSG swamp prior to serious degradation in 1988; Wambiana on 25 Apr 87; Mingela Pool on 24 Apr 88. Records away from ASSG involved a single male rather than a possibly viable social group; waterside thicket, status uncertain.
- Red-backed Fairy-wren.** Widespread and common in long grass and rank herbage in lightly wooded country; resident and breeding.
- Red-browed Pardalote.** ASSG swamp, singles on 4 Sept 83 and 18 July 84; one near Mt Windsor on 15 Jan 84.
- Striated Pardalote.** Widespread and common breeding resident; somewhat more numerous in winter; open woodland, especially near water; up to 13 in 85% of winter mixed-species flocks (Britton 1997).
- Weebill.** Similar status to the previous species and up to 12 in 75% of winter mixed-species flocks (Britton 1997).
- Western Gerygone.** Uncommon and erratic winter visitor; eight records, 12 May-15 July; open woodland and waterside thicket.
- Fairy Gerygone.** At least four in a family party at Fletcher mouth on 25 Oct 86; occasional in vine thicket at Toomba Station.
- White-throated Gerygone.** Moderately common; all months, but significant winter arrival and present in 20% of winter mixed-species flocks (Britton 1997); woodland and waterside thicket.
- Buff-rumped Thornbill.** A breeding resident at Mt Bohle, Powlathanga Station. Vegetation on this exposed sandstone plateau at 400 m asl includes Inland Yellowjacket *Eucalyptus similis*, Narrow-leafed White Mahogany *E.tenuipes*, Lancewood *Acacia shirleyi*, Bushman's Clothes Peg *Grevillea glauca*, the acacia-like *Bossiaea armitti*, and numerous Common Blackboys *Xanthorrhoea preissii* and *Grevillea decora*.
- Yellow-rumped Thornbill.** Moderately common in open woodland and associated grassland; typically on the ground in small groups where cover is not too rank; all months but significantly more in winter and present in 71% of winter mixed-species flocks (Britton 1997). Less common in recent years when there has been good grass cover.
- Spiny-cheeked Honeyeater.** Occasional in riparian woodland; 2-7 birds together, several sites in several years, 5 June-27 July.
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- Striped Honeyeater.** Regular winter visitor in very small numbers; light woodland, 17 Feb-22 Sept, mostly May-July, not annual; present in 6% of winter mixed-species flocks (Britton 1997).
- Noisy Friarbird.** Widespread and common in woodland, especially near water; hundreds in flowering trees at Fletcher mouth in late Aug 84 but not repeated in similar conditions in Aug 86.
- Little Friarbird.** Similar status to the previous species but usually in smaller numbers; 44 in flowering trees at Toomba Station on 22 Sept 96 when there were only two Noisy Friarbirds involved.
- Blue-faced Honeyeater.** Widespread and common in woodland; sedentary social groups and never in winter mixed-species flocks (Britton 1997). It has adapted well to human habitation, making use of swimming pools and night lights for water and insects.
- Yellow-throated Miner.** Similar status to the previous species; common in the city but less evidence of adaptable behaviour.
- Lewin's Honeyeater.** A moderately common resident in vine thicket and riparian woodland at Basalt Wall sites from Toomba Station to Fletcher mouth.
- Singing Honeyeater.** Common in May-Aug but seldom recorded at other times; wooded habitats, including the city, and present in 58% of winter mixed-species flocks (Britton 1997).
- Yellow Honeyeater.** Uncommon but apparently resident in riparian woodlands throughout; never in winter mixed-species flocks (Britton 1997).
- Grey-fronted Honeyeater.** Three records: one in full song at Toomba Station on 2 Nov 86; ASSG, one on 3 Sept 92; Reeves Lake, five on 19 June 93; status uncertain.
- Fuscous Honeyeater.** Four records on Basalt Wall, 16-28 July 84; status uncertain.
- White-throated Honeyeater.** Widespread and common in woodland, especially near water; usually more than two birds together; present in 7% of winter mixed-species flocks (Britton 1997).
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- Brown Honeyeater.** A widespread and moderately common resident in wooded country; common in riparian vegetation along the Burdekin River; present in 2% of winter mixed-species flocks (Britton 1997).
- Rufous-throated Honeyeater.** Similar status to the previous species but far less conspicuous and generally near water; erratic.
- Banded Honeyeater.** A pair in eucalypt woodland at Toomba Station on 22 Sept 96 and 10 Oct 99.
- Scarlet Honeyeater.** A pair in riparian woodland at Fletcher mouth on 24 Aug 85; male near Homestead on 20 July 86; status uncertain.
- Crimson Chat.** Significant influx in 1985, when up to 55 together at 11 sites, 16 May-7 Aug; at two sites in 1994, when four on 2 June and three on 21 July; sparsely covered or bare ground.
- Orange Chat.** Three at Toomba Lake on 21 Apr 85 and three at Lake Powlathanga on 2 Aug 85; bare ground at water's edge; coincident with a significant influx of Crimson Chats locally and 21 Orange Chats at Townsville (Niland 1986).
- Jacky Winter.** Widespread and moderately common, mostly Apr-Aug, infrequent at other times; present in 40% of winter mixed-species flocks (Britton 1997).
- Red-capped Robin.** Significant influx in 1985 coincident with both chats: ASSG swamp, four on 14 July; Reeves Lake, three on 4 Aug; single birds at four other sites on 15 May, 29 May, 30 May and 11 Aug. Erratic in winter in other years when single males on 11 July 84 and 15 May 93.
- Hooded Robin.** Infrequent in woodland: pair near Homestead on 5 Aug 84; one in mixed-species flock on Basalt Wall on 31 Dec 83; one at Toomba Station on 22 Sept 96; status uncertain.
- Grey-crowned Babbler.** Widespread and common in wooded country; apparently sedentary.
- Varied Sitella.** Moderately common in woodland throughout; present in 35% of winter mixed-species flocks in groups of 2-7 (Britton 1997).
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- Rufous Whistler.** Common in woodland and city gardens, especially in winter when 1-9 are present in 77% of mixed-species flocks (Britton 1997).
- Grey Shrike-thrush.** Resident and breeding in richer woodland, mostly near water but also on Mt Bohle at Powlathanga Station; occasional wanderers in woodland elsewhere, 25 Apr-15 Aug, and once in a winter mixed-species flock (Britton 1997).
- Black-faced Monarch.** Single female in riparian woodland at Fletcher mouth on 31 Mar 84.
- Leaden Flycatcher.** Infrequent but regular in wooded habitats, 31 Mar-10 Sept; only once in a winter mixed-species flock (Britton 1997); annual in small numbers.
- Shining Flycatcher.** Single female in riparian woodland at Fletcher mouth on 24 Aug 84.
- Restless Flycatcher.** Regular in very small numbers in woodland, especially near water; 29 Mar-4 Sept; one or two in 7% of winter mixed-species flocks, sometimes 4 km or more from water (Britton 1997); not annual.
- Magpie-lark.** Numerous and perhaps the most conspicuous bird in this region; roosting groups of 50 or more in recent years indicate that it is increasing in numbers; resident and breeding in all wooded country; absent from winter mixed-species flocks (Britton 1997).
- Grey Fantail.** Winter visitor to woodland throughout, 10 Apr-6 Sept, often near water; present in 37% of winter mixed-species flocks (Britton 1997); at least 20 on a Burdekin River walk on 31 May 86 when fewer than ten Willie Wagtails were noted.
- Willie Wagtail.** Widespread and common in wooded country; all months and some summer breeding, but only numerous in Apr-Aug; up to 60 at ASSG cattle yards in May-July 85 and 50 at Lake Powlathanga on 24 Apr 87; 1-7 in 87% of winter mixed-species flocks (Britton 1997).
- Spangled Drongo.** Infrequent in small numbers in richer woodland at Toomba Station, Fletcher mouth, Burdekin Weir and ASSG; all months and perhaps mostly resident.
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- Black-faced Cuckoo-shrike.** A widespread and common resident in wooded country, but 105 at Toomba Station on 20 July 97 and lesser aggregations at various other sites in some years, 16 Mar-12 Apr, suggest that substantial movements and /or passage are also important; up to eight in 30% of winter mixed-species flocks (Britton 1997).
- White-bellied Cuckoo-shrike.** Regular in small numbers at Toomba Station, Red Falls and Fletcher mouth; all months and probably mostly resident; occasional at ASSG; not recorded in winter mixed-species flocks (Britton 1997); riparian woodland.
- Cicadabird.** Single male at ASSG on 21 Oct 99.
- Ground Cuckoo-shrike.** An uncommon wanderer to sparsely covered or bare ground in lightly wooded country; up to five together, all months; 40 records, mostly Apr-July, not annual; a singing bird at Flat Rock on 23 July 85 was at the top of a low tree, with wings and tail raised, perhaps indicative of local nesting.
- White-winged Triller.** Widespread and common in wooded country; all months but more conspicuous Apr-Aug; a follower rather than a leader in winter mixed-species flocks, but up to 35 in 46% of flocks (Britton 1997). An exceptional influx in 1988 when flocks of 15-65 were frequent, 10 May-9 Aug; a far smaller influx involving groups of 5-15 at several sites, 29 Nov-8 Dec 92.
- Varied Triller.** Resident in small numbers at Basalt Wall sites from Toomba Station to Fletcher mouth; richer woodland and vine thicket.
- Olive-backed Oriole.** Uncommon in richer woodland: Toomba Station, Burdekin River, Wambiana; status uncertain but most records are in May-July.
- Figbird.** Widespread and common in wooded country; probably mostly resident although concentrating seasonally at fruiting trees.
- White-breasted Woodswallow.** Regular at major wetlands and occasional at ASSG; up to 30 together; status uncertain.
- Masked Woodswallow.** Nomadic, in association with the next species; up to three, 6 Feb-2 Mar 83, 23 May 84 and 17-20 Feb 85; 140 at Toomba Lake on 6 Mar 83 was exceptional; lightly wooded country and associated grassland.
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White-browed Woodswallow. Nomadic, often with the previous species but usually more numerous; up to three, 6 Feb-6 Mar 83; 400 at Reeves Lake on 17 Feb 85, 120 near city on 24 Feb 85; up to 40 at various sites, 15 Feb-2 June 85, and two on 9 Nov 85; up to 120 at various sites, 17 Mar-10 May 86, and 25 on 6 Sept 86.

Black-faced Woodswallow. The only regular woodswallow. Widespread and common in all wooded country, all months; 2-18 in 66% of winter mixed-species flocks (Britton 1997).

Dusky Woodswallow. Two at Reeves Lake on 13 Oct 83.

Little Woodswallow. Occasional in woodland at various sites: six on 12 Feb 83; up to 12, 18 June-6 July 85; 20 on 30 Mar 86; up to six, 15-19 July 87; seven on 20 July 97, two on 15 Feb 98, five on 18 Apr 98 and ten on 7 Feb 99.

Grey Butcherbird. Resident and breeding at ASSG, Gladstone Creek and Toomba Station; richer woodland.

Pied Butcherbird. Widespread and common in wooded country.

Australian Magpie. Similar status to the previous species.

Pied Currawong. Annual in small numbers, 7 May-7 Oct; 1-3 birds, most frequent in June; perhaps resident and breeding at Mt Bohle, Powlathanga Station, where noted and vocal in summer.

Australian Raven. Widespread and common throughout.

Torresian Crow. Widespread and common; especially concentrated in the city and along major highways, where most telegraph poles support a corvid nest.

White-winged Chough. Nomadic, typically in groups of up to 12, but 30 on 7 July 84, 18 on 23 Mar 85 and 15 on 28 Mar 86; most frequent in Feb- Mar and July. These various localities north to Toomba Station, are at its northernmost limit; the only birds at occupied nests were 40 km south of the city on 19 Oct 86 and still further south at Wambiana on 6 Mar 88.

Apostlebird. A widespread and common breeding resident in wooded country; 85 together at the city railway yards on 24 July 94 was exceptional.

Spotted Bowerbird. Moderately common at Wambiana and north to about 40 km south of the city; one at ASSG, 18 July-6 Oct 93, and one at Toomba Station on 27 Sept 98 were at the northern limit of the species' range (north of 20°S at Toomba); wooded country.

Great Bowerbird. Common and widespread, though less so in the south; markedly seasonal at fruiting trees and shrubs. This species and the Spotted Bowerbird are essentially allopatric, although Frith *et al.* (1995) detailed an area of overlap in this region, with both species at the same bower 100 km south of the city but only Great Bowerbirds and their bowers up to 43 km south-east of the city.

Singing Bushlark. Widespread and moderately common in open or lightly wooded grassland; all months.

Richard's Pipit. Widespread and common resident in sparsely vegetated grassland.

House Sparrow. Widespread, common and increasing; human dwellings.

Zebra Finch. The commonest and most widespread finch; fluctuations occur but it is mostly resident; lightly wooded short grassland, usually near water.

Double-barred Finch. A widespread and common breeding resident; grass or rank herbage close to woodland or dense cover; 2-32 present in 50% of winter mixed-species flocks (Britton 1997).

Black-throated Finch. A widespread, uncommon resident in woodland and associated grassland; sometimes in flocks of 50 or 60 birds on the Basalt Wall; the single record within 15 km of the city involved only three birds; no records of more than ten together in recent years.

Plum-headed Finch. Sometimes numerous but typically absent; all months; usually feeding in open wooded country; roosting in hundreds at ASSG swamp, 13 May-11 Oct 86, when 218 birds were banded; no large numbers in recent years.

Nutmeg Mannikin. ASSG, Mar-June 84, 18 Apr-24 Aug 86, 11 May 87, 20 Sept 95 and 7 Nov 99; up to 20 together, sometimes roosting with Plum-headed Finch; status uncertain but possibly increasing.

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- Chestnut-breasted Mannikin.** Erratic in flocks up to 30; ASSG, Burdekin River, Mingela Pool and Toomba Station; status uncertain.
- Mistletoebird.** Widespread in small numbers in woodland with mistletoe and in city gardens.
- White-backed Swallow.** ASSG swamp, 12 on 22 June 86 and one on 5 Sept 87; an extension of known range east from Hughenden (Storr 1984).
- Welcome Swallow.** Markedly seasonal, mostly in groups of less than forty at wetlands ; 5 Apr-2 July, and four on 11 Oct 92; a loose aggregation of 200 or more at Toomba Lake on 2 July 86 was exceptional.
- Tree Martin.** Markedly seasonal at wetlands, 23 Apr-22 Sept; usually fewer than 40 together but up to 250 at Reeves Lake, 31 May-7 June 87.
- Fairy Martin.** A widespread and numerous breeding resident, especially near water.
- Clamorous Reed-Warbler.** Regular in small numbers at all wetlands with substantial edge vegetation such as *Typha*; movements associated with the seasonal drying of many of these sites are perhaps substantial; some breeding.
- Tawny Grassbird.** Uncommon in long grass and rank herbage close to water; most records are from Mingela Pool, including at least eight on 18 Mar 89; occasional at Toomba Station and at Sellheim; established and breeding at ASSG in 2000.
- Little Grassbird.** ASSG swamp, singles on 25 Apr 85 and 22 Feb 89; Mingela Pool, three on 25 Dec 85 and two on 13 Feb 89; Toomba Station, one on 5 Apr 86; Lake Powlathanga, one on 19 Oct 90; rank growth near water.
- Rufous Songlark.** Widespread and moderately common in lightly wooded grassland; all months, but more frequent in May-Aug; 1-3 present in 11% of winter mixed-species flocks (Britton 1997).
- Brown Songlark.** Occasional in small numbers in grassland; Mingela Pool, one on 22 May 85 and three on 5 June 85; Toomba Lake, one on 13
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July 85; Lake Powlathanga, three on 8 Feb 98; status uncertain but presumably nomadic from western Mitchell Grass plains rather than coastal grasslands such as Bowling Green Bay.

Golden-headed Cisticola. Uncommon and erratic in long grass and rank herbage near water; mostly absent from sites that are perennially verdant, but regular and probably resident at basalt springs on Toomba Station.

Silvereye. Uncommon and rather transient in wooded habitats generally, but regular and perhaps a breeding resident in some city gardens and Lissner Park; up to 20 recorded together.

Common Starling. An adult at Mingela Pool on 22 July 94 had perhaps arrived via the nearby railway.

ACKNOWLEDGEMENTS

The following property owners have allowed us to enjoy free access to their working cattle stations over a lengthy period and we are grateful for this continuing hospitality: Bruce and Marg Rae, Powlathanga; Ernest and Robin Bassingthwaighte, Toomba; Tom and Eve Mann, Lochwall and Reeves Lake; John and Rhonda Lyons, Wambiana. Peter O'Reagain has assisted with vegetation identification and description. Dr Ian Gynther made helpful comments as referee, including the addition of the gazetteer details in Appendix 1.

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APPENDIX 1. Coordinates (to the nearest minute) of all Charters Towers localities mentioned. The home site is used for each of the large properties involved.

ASSG	20°04'S, 146°17'E	Mt Bohle	20°16'S, 146°00'E
Balfes Creek	20°13'S, 145°55'E	Mt Cooper	20°30'S, 146°48'E
Big Bend	19°57'S, 146°08'E	Mt Windsor	20°20'S, 146°09'E
Burdekin Weir	19°58'S, 146°18'E	Powlathanga Station	20°10'S, 146°00'E
Flat Rock	20°07'S, 146°29'E	Red Falls	19°56'S, 145°44'E
Fletcher Creek	19°49'S, 146°03'E	Reeves Lake	19°53'S, 145°50'E
Fletcher mouth	19°49'S, 146°06'E	Sellheim	20°00'S, 146°26'E
Fletchervale Station	19°48'S, 145°52'E	Suttor Creek	20°36'S, 147°03'E
Gladstone Creek	20°04'S, 146°18'E	Toomba Lake	20°00'S, 145°35'E
Homestead	20°22'S, 145°40'E	Toomba Station	19°58'S, 145°35'E
Lake Powlathanga	20°13'S, 145°58'E	Wambiana Station	20°32'S, 146°07'E
Mingela Pool	19°53'S, 146°38'E	White Falls	19°56'S, 145°39'E

LARGE-TAILED NIGHTJARS *CAPRIMULGUS MACRURUS* APPARENTLY TAKING ANTS FROM THE GROUND.

DAVID JAMES

This note reports on an observation of Large-tailed Nightjar *Caprimulgus macrurus* apparently preying on terrestrial ants. This appears to be the first observation of its type for Large-tailed Nightjar, although the observation was not conclusive. This observation was summarised in the Food section of Higgins (1999, p. 1027), but is substantiated here.

Broadwater State Forest Park is located 45 km west of Ingham (18°19'S, 146°09'E) in the Herbert Valley (the foothills of the Rockingham Bay Range) at an altitude of less than 50 m. The Park's camp-ground is in tall eucalypt woodland with a mowed parkland understorey, and is surrounded by a mosaic of mixed woodlands, riparian gallery forest, remnant lowland rainforest patches and exotic pine plantations (Wieneke 1992).

Shortly after nightfall on 4 May 1996 I was spotlighting in the camp-ground, using a 12 volt, 30 watt halogen beam and 10x40 binoculars. A Large-tailed Nightjar was seen about 40 m away walking on and pecking at the ground. The spotlight caused the bird to flush after a few seconds, and it was followed with the beam for a short while before it disappeared amongst the trees. Almost immediately, a second nightjar was seen behaving in a similar way about 20 m from the first, but it too was quickly flushed by the light. The first bird soon circled back to the exact spot it had been flushed from and continued to peck at the ground. The second bird also quickly returned to the vicinity of its original spot. Over a 10 minute period I flushed the birds several times with the light, and each time they quickly returned to their respective spots and resumed their behaviour. Illuminating the birds slightly with the edge of the light I observed them in silhouette through binoculars. Both birds were walking capably on the ground and regularly pecking it. Their horizontal carriage, large head, and awkward walking gait were, in silhouette, remarkably reminiscent of a foraging rosella *Platyercus* sp.

I drew the birds to the attention of Jo Wieneke and Graham Harrington, and we agreed that they appeared to be foraging on the ground. GH and I inspected the spots and found numerous (but not swarming) small to medium-sized brown worker ants (about 2-3 mm) on the ground. The ants were not identified beyond family level (Formicidae) and no specimens were collected. A quick search of the surrounding area failed to find ants in spots other than the two that the Nightjars were

frequenting, suggesting a correlation between the location of the Nightjars and the ants. We retreated, and a short time later, one of the Nightjars returned and resumed the apparent ground-foraging.

All Australian species of nightjar (Caprimulgidae) feed primarily on beetles, moths and other flying insects taken on the wing (Barnard 1935, Schodde & Mason 1980, Barker & Vestjens 1989, Schodde & Tidemann 1986, Hollands 1991, Strahan 1994, Higgins 1999). The literature does not apparently contain reference to any nightjar species in Australia feeding on worker ants. Flying ants have been reported in the diet of both White-throated Nightjar *Eurostopodus mystacalis* and Spotted Nightjar *E. argus*, but the implication is that they are taken on the wing (Schodde & Mason 1980, Barker & Vestjens 1989). There is one brief reference to a pair of Spotted Nightjars in the Big Desert, Victoria, alighting on the ground to catch moths that were feeding on low bushes (Tarr 1964). Otherwise, I found no specific example in the literature of food being taken from surfaces or by any means other than aerial hunting, for any Australian species of nightjar.

In 1997 I examined museum specimens of 55 Large-tailed Nightjars, 66 White-throated Nightjars and 75 Spotted Nightjars from the Australian Museum (AM), Museum of Victoria (MV), Queensland Museum (QM) and South Australian Museum (SAM). Few specimens had data on food. The only remarkable record was an adult Spotted Nightjar from Nowingi in north-western Victoria, October 1915, with ants as well as moths (Lepidoptera), beetles (Coleoptera: Scarabidae), bugs ('Homoptera') and spiders in its stomach. The label does not state whether the ants were winged or wingless. How the spiders were caught is a mystery, but snatching prey from surfaces and webs while on the wing, and in particular while hovering, has been recorded in nightjars overseas (del Hoyo *et al.* 1999).

Throughout their nearly cosmopolitan range, the approximately 80 species of nightjars are primarily aerial insectivores, foraging mostly by hawking, sallying and apparently trawling. Of 78 species recognised by del Hoyo *et al.* (1999), nine are known or suspected to feed on the ground occasionally. This includes seven species of *Caprimulgus* from North America, Europe, Africa and Asia, *Phaenoptilus nuttallii* from North America, and *Eurostopodus argus*. *C. asiaticus* is known to take mice on the ground and *C. carolinensis* takes small birds.

I did not directly observe the Large-tailed Nightjars at Broadwater feeding on nor even pecking at ants. However, it seems almost certain that they were feeding on ants from the ground. This appears to be the first report of ground feeding by Large-tailed Nightjar and only the second report of feeding by means other than aerial insectivory in any Australian species of nightjar. Ground foraging behaviour is

probably not common in Large-tailed Nightjar, but may be more frequent than is realised, as a response to reduced abundance of flying insects at various times.

ACKNOWLEDGEMENTS

Thanks to R. O'Brien (MV), W. Boles (AM), G. Ingram (QM) and P. Horton (SAM) for access to specimens in their care. P. Woodall refereed the manuscript and made significant improvements. J. Wieneke and S. Burnett made helpful suggestions on early drafts.

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