

THE SUNBIRD

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ANNUAL BIRD COUNT, 1972

QUEENSLAND ORNITHOLOGICAL SOCIETY

The first Bird Count organised by the Queensland Ornithological Society was held in January, 1972 (Sunbird 3(2): 28-33). The weather was hot and wet, and the count was not as successful as had been expected. For this reason, it was decided to hold subsequent counts in October.

The rules adopted for the count held on 15 October, 1972 are summarized below:

(i) The area surveyed was contained within a circle of 80km (50 miles) radius, centred approximately on Brisbane (the centre actually chosen was near Darra, a south-western suburb of the city). See Figure 1.

(ii) Individual teams worked smaller areas within this circle; these areas were determined, in part, according to convenience, but, as a guide, each team worked within a circle of about 25km (15 miles) radius, or an area roughly equal in size to this. There was no overlap of areas surveyed by individual teams.

(iii) Each team consisted of no fewer than three individuals and (nominally) no more than five. Individual teams were expected to work as units, with members maintaining contact throughout the survey.

(iv) Sight records were confirmed by at least two members of a team; identifications based on call were confirmed by at least three members.

Seven teams participated in the count. The total survey area and the areas covered by the individual teams are shown in Figure 1. The weather on the day of the count was fine and warm, with only light winds. Little rain had fallen for some time prior to the count, and many areas were very dry; all of the Spicer's Gap area had been burned out by bushfires, and fires were burning in many other areas.

A total of 241 species was recorded for the count, although a number of species which are not uncommon in the area were not seen. Some notable omissions were Great Knot, Green-winged Pigeon, Wonga Pigeon, and Noisy Pitta. Observations of a number of other species such as Grass Whistling Duck, Swamp Harrier, Banded Plover, Black-tailed Godwit, Red-crowned Pigeon, White-headed Pigeon, Rose Robin, and Brown Treecreeper could reasonably have been expected.

Of the 241 species noted, only 45 were recorded in all seven areas. About one third of these 45 species were birds normally associated with swamps or lagoons, and most others were birds which are fairly conspicuous (eg. Laughing Kookaburra, Welcome Swallow, Magpie Lark, Black-backed Magpie), or which have distinctive calls (eg. Rainbow Bee-eater, White-throated Warbler, Rufous Whistler, Black-headed Pardalote). There were 46 species which were noted by one team only.

A broad range of habitats was included in the count; freshwater (swamps, lagoons, creeks), grassland, and open forest were covered by all teams. Coastal habitats were included in Areas 1, 2, 3 and 5, whilst Areas 4, 6 and 7 (and part of 5) covered the drier regions to the west. Although rain forest occurs in several of the areas, it was only at Mt. Tamborine and Cunningham's Gap that this habitat was adequately surveyed.

The teams which participated are detailed below:

Area 1: G. Harris, G. Leach, M. Sanker

Total species recorded: 110

Species recorded only in Area 1: Brolga, Wandering Tattler

Area 2: B. Morgan, K. & K. Taylor, D. Watson

Total species recorded: 141

Species recorded only in Area 2: Marsh Crake, Pied Oystercatcher, Large Sand Dotterel, Knot, Broad-billed Sandpiper, Common Tern, Oriental Cuckoo

Area 3: T. Devaney, M. Hawken, N. Hopkins, E. McCulloch

Total species recorded: 96

Area 4: R. Brown, C. Corben, G. Ingram, D. Miller

Total species recorded: 139

Species recorded only in Area 4: Pink-eared Duck, Collared Sparrowhawk, Glossy Black Cockatoo, Singing Bushlark, Ground Cuckoo-shrike, Cicada-bird, Brown Songlark, Little Thornbill, Plum-headed Finch.

Area 5: H. Briggs, P. & D. Dawson, J. Ebbelinghaus, I. Reynolds

Total species recorded: 147

Species recorded only in Area 5: Osprey, Brush Turkey, Little Quail, Spectacled Flycatcher, White-eared Flycatcher

Area 6: G. Czechura, G. Roberts

Total species recorded: 140

Species recorded only in Area 6: Hoary-headed Grebe, Great Crested Grebe, Grey Goshawk, Peregrine Falcon, King Quail, Yellow-tailed Black Cockatoo, White-cheeked Honeyeater

Area 7: D. Perkins, R. & T. Sothman, R. F. & M. Thornton

Total species recorded: 148

Species recorded only in Area 7: Crested Hawk, Musk Lorikeet, King Parrot, Red-rumped Parrot, Little Cuckoo-shrike, Australian Ground-thrush, Spotted Quail-thrush, Yellow-throated Scrub-wren, Rufous Fantail, Red-browed Treecreeper, White-eared Honeyeater, Yellow-tufted Honeyeater, White-naped Honeyeater, Bell Miner, Red Wattlebird, Paradise Riflebird.

The only aspect of the data presented which warrants detailed comment is the large number of White-browed and Masked Wood-swallows recorded. These species are comparatively rare in south-east Queensland, but there was a large influx around the time of the count. On 26 August 1972, P. Slater noted a flock of approximately 2000 White-browed Wood-swallows at Moggill, a south-western suburb of Brisbane. A week later, on 2 September, a flock of at least 600 of these birds was observed in the Cooloola area (about 160km north of Brisbane), feeding on the nectar from flowering grass-trees, *Xanthorrhoea hostile*, (Ingram, G. 1972. Sunbird 3(3): 64-65).

On 8 October 1972, D. Perkins noted several hundred White-browed and about ten Masked Wood-swallows in the area east of Spicer's Gap. These birds had not been present a week earlier when R. Sothman had carried out a detailed survey of the same area. During the count, on 15 October, large numbers of both White-browed and Masked Wood-swallows were again seen east of Spicer's Gap and Cunningham's Gap and also in the Logan Reserve area. At Logan Reserve, the numbers of the two species were approximately equal, but around Spicer's Gap, Masked Wood-swallows greatly outnumbered White-browed. A later report from E.L. Greenup indicates that large numbers of White-browed and Masked Wood-swallows were noted on the Granite Belt (about 140km south-west of Brisbane) on 17 October 1972.

From these records it appears that the abnormally large numbers of these wood-swallows recorded during the count may have been due to nomadic movements associated with their usual southward migration, around September.

The following list gives details of the sightings made in each of the seven survey areas. Names follow CSIRO, 1969 (An index of Australian Bird Names. Divn of Wildlife Res. Tech. Paper No. 20). Where nesting activity was noted an asterisk has been placed beside the name of the species. The small numbers of many species reflect the difficulty of covering an area of this size with so few people. Undoubtedly, more people will be available to participate in future years, which should result in a more adequate survey. It is also hoped that it will prove possible to include the off-shore islands in future surveys, thus adding several species of sea-birds.

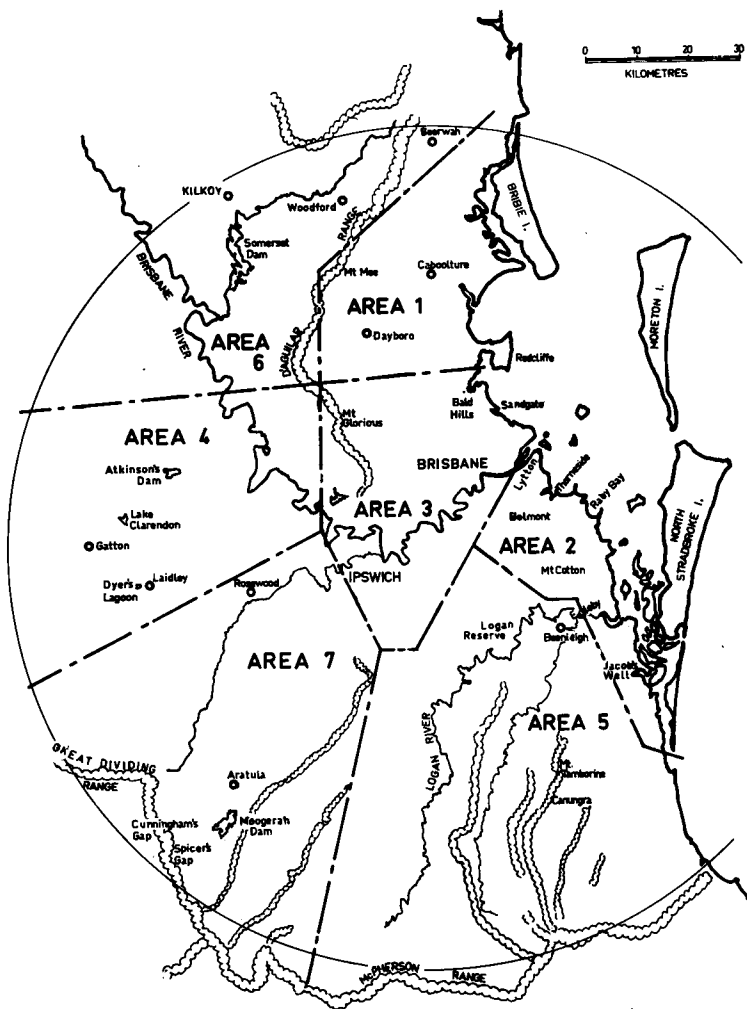


Figure 1. Total survey area and areas covered by individual teams during 1972 Bird Count

LIST OF SPECIES

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
*Little Grebe	14	7	10	44	23	59	105	262
Hoary-headed Grebe	0	0	0	0	0	3	0	3
Great Crested Grebe	0	0	0	0	0	3	0	3
Australian Pelican	0	1	1	76	1	21	15	115
Black Cormorant	0	0	1	5	0	11	3	20
Little Black Cormorant	0	11	7	2	30	14	314	378
Pied Cormorant	2	20	2	0	0	2	6	32
Little Pied Cormorant	19	11	10	3	14	20	13	90
*Darter	1	1	0	6	3	11	9	31
White-necked Heron	3	2	0	4	15	3	4	31
White-faced Heron	19	20	6	13	25	12	20	115
Mangrove Heron	11	1	0	0	0	0	0	12
Cattle Egret	3	43	31	0	22	0	5	104
White Egret	18	3	10	3	25	6	4	69
Little Egret	9	6	1	2	1	2	2	23
Plumed Egret	3	50	24	42	29	18	6	172
Nankeen Night Heron	0	9	0	1	0	2	0	12
Little Bittern	0	3	0	1	0	0	0	4
Jabiru	0	0	2	0	1	0	0	3
White Ibis	24	50	40	33	22	23	1	193
Straw-necked Ibis	8	13	8	107	100	68	2	306
Glossy Ibis	0	4	4	36	11	5	0	60
Royal Spoonbill	5	24	6	64	11	7	16	133
Yellow-billed Spoonbill	3	0	0	21	3	3	1	31
*Black Swan	17	8	9	41	17	130	90	312
Black Duck	13	22	108	300	231	95	37	806
Grey Teal	3	105	25	521	18	83	15	770
Chestnut Teal	0	25	23	80	0	0	0	128
Pink-eared Duck	0	0	0	8	0	0	0	8
White-eyed Duck	0	0	8	70	18	15	0	111
Wood Duck	0	0	0	50	10	25	168	253
Black-shouldered Kite	3	7	2	47	7	5	18	89
Crested Hawk	0	0	0	0	0	0	2	2
Red-backed Sea Eagle	3	2	3	0	4	0	0	12
*Whistling Eagle	2	5	2	10	2	5	2	29

LIST OF SPECIES (CONTINUED)

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Grey Goshawk	0	0	0	0	0	1	0	1
Australian Goshawk	0	0	0	0	0	1	2	3
Collared Sparrowhawk	0	0	0	1	0	0	0	1
Wedge-tailed Eagle	0	0	0	1	1	1	3	6
White-breasted Sea Eagle	0	0	0	1	0	0	2	3
Osprey	0	0	0	0	2	0	0	2
Peregrine Falcon	0	0	0	0	0	1	0	1
Little Falcon	0	0	0	2	0	1	0	3
Nankeen Kestrel	1	5	1	98	28	11	20	164
Brown Hawk	0	0	0	5	0	1	0	6
Brush Turkey	0	0	0	0	1	0	0	1
Stubble Quail	0	0	0	2	0	2	0	4
Brown Quail	0	5	0	13	0	5	11	34
King Quail	0	0	0	0	0	1	0	1
Painted Quail	1	0	0	0	4	0	0	5
Little Quail	0	0	0	0	1	0	0	1
Brolga	6	0	0	0	0	0	0	6
Banded Landrail	1	0	0	0	1	2	0	4
Marsh Crake	0	2	0	0	0	0	0	2
Dusky Moorhen	16	9	69	198	50	46	3	391
*Eastern Swamphen	14	197	154	33	470	106	52	1026
Coot	0	3	52	92	176	209	5	537
Lotus Bird	0	4	2	2	14	0	0	22
Pied Oystercatcher	0	13	0	0	0	0	0	13
Spur-winged Plover	18	8	10	38	29	34	15	152
Red-kneed Dotterel	0	5	3	16	9	1	0	34
Red-capped Dotterel	0	5	3	16	9	1	0	34
Mongolian Sand Dotterel	60	10	9	0	0	0	0	79
Large Sand Dotterel	0	80	0	0	0	0	0	80
Black-fronted Dotterel	0	0	2	22	0	9	4	37
Eastern Golden Plover	3	23	13	11	7	0	0	57
Turnstone	3	12	0	0	0	0	0	15
Japanese Snipe	1	5	3	3	15	1	0	28
Whimbrel	8	40	13	0	0	0	0	61
Eastern Curlew	30	30	6	0	11	0	0	77

LIST OF SPECIES (CONTINUED)

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Little Greenshank	0	8	50	4	0	0	0	62
Greenshank	1	0	2	0	2	0	0	5
Grey-tailed Tattler	6	50	0	0	0	0	0	56
Wandering Tattler	2	0	0	0	0	0	0	2
Terek Sandpiper	40	10	0	0	27	0	0	77
Knot	0	18	0	0	0	0	0	18
Sharp-tailed Sandpiper	60	38	106	1537	12	7	0	1760
Red-necked Stint	8	15	54	1	0	0	0	78
Curlew Sandpiper	6	2	8	8	0	0	0	24
Broad-billed Sandpiper	0	1	0	0	0	0	0	1
Bar-tailed Godwit	410	45	82	0	0	0	0	537
White-headed Stilt	145	70	27	189	48	15	12	506
Avocet	3	12	0	0	0	0	0	15
Southern Stone Curlew	0	0	0	2	0	4	0	6
Silver Gull	66	34	131	0	3	0	0	234
Whiskered Tern	0	3	0	43	10	11	2	69
Caspian Tern	0	2	1	0	0	0	0	3
Gull-billed Tern	2	10	0	0	17	0	3	32
Common Tern	0	150	0	0	0	0	0	150
Little Tern	0	15	0	0	3	0	0	18
Crested Tern	3	6	52	0	0	0	0	61
Wompoo Pigeon	0	0	0	0	17	0	1	18
Topknot Pigeon	0	0	0	0	12	1	0	13
Domestic Pigeon	3	2	7	27	2	7	2	50
Brown Pigeon	0	0	0	0	17	1	0	18
Spotted Turtledove	3	9	5	0	3	0	0	20
Bar-shouldered Dove	0	0	1	14	12	11	1	39
Peaceful Dove	0	12	1	7	8	16	13	57
Common Bronzewing	0	0	0	16	1	1	5	23
Crested Pigeon	14	0	1	61	20	28	22	146
Rainbow Lorikeet	37	9	0	15	10	11	9	91
Scaly-breasted Lorikeet	12	3	4	121	93	14	8	255
*Musk Lorikeet	0	0	0	0	0	0	17	17
Little Lorikeet	0	0	0	21	3	3	25	52
Yellow-tailed Black Cockatoo	0	0	0	0	0	2	0	2

LIST OF SPECIES (CONTINUED)

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Glossy Black Cockatoo	0	0	0	5	0	0	0	5
Sulphur-crested Cockatoo	0	0	0	31	1	0	3	35
Galah	0	0	2	2	0	0	11	15
Cockatiel	0	8	0	86	0	8	12	114
King Parrot	0	0	0	0	0	0	14	14
Crimson Rosella	0	0	0	0	18	0	13	31
Eastern Rosella	0	1	0	0	0	0	20	21
Pale-headed Rosella	11	6	2	17	55	21	37	149
Red-rumped Parrot	0	0	0	0	0	0	2	2
Oriental Cuckoo	0	1	0	0	0	0	0	1
Pallid Cuckoo	0	3	4	0	10	2	3	22
Brush Cuckoo	1	2	0	0	0	0	7	10
Fantailed Cuckoo	0	1	0	0	6	0	0	7
Horsfield Bronze Cuckoo	0	3	1	0	0	1	0	5
Golden Bronze Cuckoo	0	2	0	0	8	1	2	13
Rufous-breasted Bronze Cuckoo	0	1	0	1	0	0	0	2
Koel	6	5	0	11	8	7	1	38
Channel-billed Cuckoo	0	0	0	33	0	0	10	43
Pheasant Coucal	2	6	1	17	5	10	0	41
Boobook Owl	0	0	0	1	0	7	2	10
Barn Owl	0	0	0	2	1	1	0	4
*Tawny Frogmouth	0	1	0	1	1	0	3	6
Owlet-Nightjar	0	0	0	1	0	4	0	5
White-throated Nightjar	0	0	0	5	0	3	0	8
Spine-tailed Swift	16	0	0	3	0	0	0	19
Azure Kingfisher	1	2	0	1	0	0	0	4
Laughing Kookaburra	13	10	4	13	37	23	32	132
Forest Kingfisher	0	2	1	0	5	2	0	10
*Sacred Kingfisher	11	10	4	9	27	20	10	91
Mangrove Kingfisher	3	4	1	0	2	0	0	10
Rainbow Bee-eater	3	3	3	62	25	15	18	129
Dollar-bird	4	13	4	92	24	16	5	158
Albert Lyrebird	0	0	0	0	1	0	1	2
Singing Bushlark	0	0	0	20	0	0	0	20
White-backed Swallow	0	0	0	3	5	0	0	8

LIST OF SPECIES (CONTINUED)

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Welcome Swallow	28	153	20	130	82	68	20	501
Tree Martin	0	30	22	300	114	48	31	545
*Fairy Martin	26	26	0	267	183	110	170	782
Australian Pipit	10	7	3	13	6	11	9	59
Ground Cuckoo-shrike	0	0	0	2	0	0	0	2
Black-faced Cuckoo-shrike	8	8	10	60	22	11	15	134
Little Cuckoo-shrike	0	0	0	0	0	0	1	1
Cicada-bird	0	0	0	1	0	0	0	1
White-winged Triller	0	0	0	1	0	5	4	10
Varied Triller	0	1	0	0	1	0	0	2
Australian Ground-thrush	0	0	0	0	0	0	1	1
Southern Chowchilla	0	0	0	0	15	0	1	16
Spotted Quail-thrush	0	0	0	0	0	0	1	1
Grey-crowned Babbler	1	0	2	13	10	7	1	34
Golden-headed Fantail-warbler	7	15	5	80	8	35	0	150
Tawny Grassbird	0	1	0	1	0	4	3	9
Reed Warbler	1	4	0	1	2	2	0	10
Brown Songlark	0	0	0	4	0	0	0	4
Rufous Songlark	0	0	0	0	0	1	2	3
Superb Blue Wren	0	0	0	5	13	0	10	28
Variegated Wren	5	9	0	1	5	13	2	35
Red-backed Wren	2	3	3	5	3	36	9	61
White-throated Warbler	3	5	1	7	3	16	6	41
Brown Warbler	0	0	0	0	5	8	5	18
Buff-breasted warbler	21	51	22	0	6	0	0	100
Brown Weebill	0	1	0	16	3	2	6	28
*Striated Thornbill	0	0	0	0	3	4	20	27
Little Thornbill	0	0	0	1	0	0	0	1
Brown Thornbill	11	4	0	0	25	9	35	84
Buff-tailed Thornbill	0	0	0	13	0	0	7	20
*Yellow-tailed Thornbill	0	0	0	13	0	0	7	20
White-browed Scrub Wren	10	4	0	0	7	5	13	39
*Yellow-throated Scrub Wren	0	0	0	0	0	0	11	11
Large-billed Scrub Wren	3	0	0	0	1	0	20	24
Speckled Warbler	0	3	0	0	0	1	0	4

LIST OF SPECIES (CONTINUED)

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
Jacky Winter	0	0	0	12	0	1	9	22
Northern Yellow Robin	1	3	0	1	0	2	12	19
*Pale-yellow Robin	0	0	0	0	7	0	2	9
Grey Fantail	3	1	1	0	1	2	21	29
Rufous Fantail	0	0	0	0	0	0	12	12
*Willie Wagtail	4	6	7	19	31	14	22	103
Leaden Flycatcher	1	2	1	0	0	8	3	15
Restless Flycatcher	0	1	0	4	2	3	4	14
Black-faced Flycatcher	0	1	0	0	3	4	6	14
Spectacled Flycatcher	0	0	0	0	2	0	0	2
White-eared Flycatcher	0	0	0	0	1	0	0	1
Golden Whistler	1	0	0	0	0	1	4	6
Rufous Whistler	3	6	9	12	7	5	7	49
*Grey Shrike-thrush	8	2	1	3	2	7	8	31
Rufous Shrike-thrush	0	1	0	0	2	2	0	5
Eastern Whipbird	1	1	0	6	21	2	12	43
White-headed Sitella	0	4	0	4	0	0	15	23
White-throated Treecreeper	0	3	0	3	0	2	6	14
Red-browed Treecreeper	0	0	0	0	0	0	5	5
Mistletoe Bird	4	1	1	20	6	0	1	33
*Spotted Pardalote	1	1	0	1	3	0	22	28
Black-headed Pardalote	5	7	2	14	16	12	6	62
Grey-breasted Silvereye	0	19	6	30	3	28	29	115
Brown Honeyeater	6	13	1	30	7	6	11	74
Scarlet Honeyeater	1	10	0	18	8	16	1	54
Lewin Honeyeater	15	3	0	0	29	10	21	78
Mangrove Honeyeater	1	5	2	0	3	0	0	11
Fuscous Honeyeater	0	0	0	0	0	1	4	5
Yellow-faced Honeyeater	1	2	0	7	0	0	45	55
*White-eared Honeyeater	0	0	0	0	0	0	2	2
Yellow-tufted Honeyeater	0	0	0	0	0	0	6	6
White-naped Honeyeater	0	0	0	0	0	0	14	14
*White-throated Honeyeater	3	3	0	13	7	5	16	47
Blue-faced Honeyeater	2	0	0	9	20	0	5	36
Little Friarbird	0	0	1	2	6	11	2	22

LIST OF SPECIES (CONTINUED)

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Total
*Noisy Friarbird	26	2	0	27	36	24	51	166
White-cheeked Honeyeater	0	0	0	0	0	3	0	3
Eastern Spinebill	0	0	0	0	6	0	5	11
Bell Miner	0	0	0	0	0	0	60	60
*Noisy Miner	9	3	7	53	53	36	43	204
Little Wattlebird	2	0	0	0	4	8	0	14
Red Wattlebird	0	0	0	0	0	0	5	5
Red-browed Finch	0	0	0	0	0	19	21	40
Banded Finch	8	13	1	6	6	12	86	132
Zebra Finch	0	0	0	55	2	0	0	57
Plum-headed Finch	0	0	0	15	0	0	0	15
Spice Finch	5	5	0	0	0	0	0	10
Chestnut-breasted Finch	0	1	0	0	0	0	180	181
House Sparrow	30	46	137	120	25	34	5	397
Starling	15	21	32	2065	48	21	28	2230
Olive-backed Oriole	1	0	2	3	7	4	2	19
Southern Figbird	5	3	5	18	4	8	0	43
Spangled Drongo	0	0	0	0	5	3	1	9
*Magpie Lark	19	26	28	103	33	30	33	272
*White-breasted Woodswallow	3	1	2	1	2	4	0	13
Masked Woodswallow	0	0	0	0	160	0	585	745
White-browed Woodswallow	0	0	0	0	166	0	176	342
Dusky Woodswallow	0	0	0	1	1	1	3	6
*Pied Currawong	3	0	0	3	21	12	19	58
*Pied Butcherbird	10	6	3	25	19	10	9	82
Grey Butcherbird	2	1	0	5	10	7	5	30
*Black-backed Magpie	16	7	9	54	71	30	40	227
Green Catbird	0	0	0	0	8	1	6	15
*Satin Bowerbird	0	0	0	0	4	1	13	18
Paradise Riflebird	0	0	0	0	0	0	1	1
*Australian Crow	7	12	7	50	56	83	34	249

Compiled by P.D.DAWSON and D.L.PERKINS for The Queensland Ornithological Society.

THE STATUS OF SILVEREYES *ZOSTEROPS* ON THE ISLANDS OF THE GREAT BARRIER REEF

JIRO KIKKAWA

SUMMARY

The literature on the taxonomy of the genus *Zosterops* in Queensland appears confused largely because of the difficulty of identifying the status of island populations from various parts of the Great Barrier Reef. I put forward an hypothesis that the variation of *Zosterops* inhabiting wooded islands of the Great Barrier Reef shows a cline with greater dimensions and grey back in the southernmost range (represented by *Zosterops lateralis chlorocephala*) and smaller dimensions and green back in the northernmost range (represented by *Zosterops citrinella albiventris*). I suggest further that this cline, if it exists, is derived from a stock or stocks of birds which have undergone changes in isolation from the mainland forms. The mainland forms with their clinal differences in size and plumage colour should then be separated from the island forms in systematic treatment.

INTRODUCTION

The taxonomy of the genus *Zosterops* has been considered a challenge to students of avian systematics because of the confusing patterns of their morphological variation and geographical distribution. Among the African species, Moreau (1957) found a close correlation of the dimensions of *Zosterops* with altitude and temperature, and a correlation between colour of plumage and type of climate. Such general rules as larger birds in colder and darker birds in wetter regions apply to wide-ranging species, but correlations are not constant for localized populations which exist in both continental and insular situations. Thus clinal changes in size or colour of widely distributed species may be interrupted by localized populations which diverge from the expected ranges in their characters. For example, island birds tend to be larger and have stronger bills and legs than corresponding races or species on the continent.

In the Indo-Australian taxa, multiple colonization of islands in the western Pacific produced an intricate pattern of distribution offering an additional difficulty in establishing affinities of races and closely related species (Stresemann 1931, Mayr 1967). This is, however, no excuse for the present state of our knowledge of *Zosterops* on the islands of the Great Barrier Reef, Queensland. In this article I attempt to sort out much confusion which has appeared in the literature and

present an hypothesis, based on personal observations, to account for the known distribution of races in this region.

HISTORICAL

In the most comprehensive monograph of the Indo-Australian Zosteropidae, Mees (1961, 1969) recognized three subspecies of two species from the Great Barrier Reef region: *Zosterops citrinella albiventris* Reichenbach (Mees 1961 p.18 and 1969 p.276); *Z. lateralis chlorocephala* Campbell & White (Mees 1969 p. 86) and *Z. l. ramsayi* Masters (Mees 1969 p.80).

The Pale Silvereye *Z. citrinella albiventris* is distributed to Zuid Wester and Tenimber Islands, which lie to the north of north-western Australia, and far north Great Barrier Reef south to Palfrey Island and Eagle Islet. In Peters Check-List Mayr (1967) followed the nomenclature of earlier work of Mees (1961) who at that time grouped *citrinella* with *chloris* and called this subspecies *Z. chloris albiventris*. Storr's (1973) list follows the later version of Mees (1969). In the account of distribution of this subspecies Mayr (1967 p.304) includes "islands in Torres Straits and along Great Barrier Reef of Queensland". Apart from having a green back this species differs from the *lateralis* group of the continent in having slightly larger body size and stronger bill. Among the races of *citrinella, albiventris* is the largest and the dullest subspecies (Mees 1961), which approaches the typical island form of *lateralis* in northeast Queensland.

South of Cooktown the island populations are considered to belong to a race of the Grey-breasted Silvereye *Zosterops lateralis ramsayi* which along the coast ranges from Iron Range (Cape York Peninsula) to about Mackay (Mayr 1967 p. 317, Mees 1969 p.83) and inland as far as Charters Towers (Mayr 1967 p.317), or even Burketown (Gill 1970). However, the island birds appear to be generally larger and to have a stronger bill than the mainland birds. This is most pronounced on islands of the Capricorn Group where a separate race (originally described as a full species) *Z. l. chlorocephala* has been recognized. As pointed out in an earlier communication (Kikkawa 1970) there are striking differences in measurements between the last mentioned subspecies and a migratory mainland race whose range overlaps with that of *chlorocephala* in winter. Unfortunately the relations of this subspecies with populations of other islands of the Great Barrier Reef have not been studied and its recognized distribution is limited to the Capricorn and Bunker Groups (Campbell & White 1910, Mayr 1967 p.317, Mees 1969 p.323, Storr 1973 p.115).

The type locality of *ramsayi* (Masters 1876) is Palm Island, Halifax Bay; not in Torres Strait as interpreted by MacGillivray (1918) and listed in the RAOU Checklist (1926). This locality was corrected by Mack (1932) and Campbell (1932) but

both authors grouped the island forms and the mainland form under one species *Z. tephropleura* which had originally been described for the Lord Howe Island population. This treatment differed radically from one given by Ashby (1925) and modified in the official checklist (RAOU 1926) which treated *tephropleura* as a synonym of *lateralis*. Although the Checklist Committee accepted the view of Mack (1932) with regard to the status of *Z. halmaturina* (considered originally to be a full species for the southernmost populations including those in Victoria, South Australia, Tasmania and New Zealand, but suppressed as a full species and placed in the synonymy of *Z. lateralis* in Supplement No.5 (Whittell 1947)), the proposal to give *tephropleura* the status of a full species was not accepted. Thus the recognized subspecies of *Zosterops lateralis* consist locally of:

<i>gouldi</i>	Western Australia
<i>halmaturina</i>	South Australia and western Victoria
<i>lateralis</i>	Tasmania with wintering areas in eastern Australia, New Zealand
<i>familiaris</i>	Eastern Australia north to the Rockhampton District. Nomenclature by Mees (1969 p.70). Indicated by Mayr (1967 p.316) as 'subsp.' and possibly not separable from the Tasmanian population. Storr (1973 p.115) used <i>westernensis</i> (Quoy & Gaimard)
<i>ramsayi</i>	Northeastern Australia including Cape York Peninsula and Atherton Tableland (<i>vegata</i>), Rockingham Bay (<i>coeruleascens</i>), central Queensland (<i>cornwalli</i>) and islands off the coast between Mackay and Cooktown
<i>chlorocephala</i>	Capricorn and Bunker Groups
<i>tephropleura</i>	Lord Howe Island.

There are several other isolated races in New Caledonia, Loyalty Islands, New Hebrides and Fiji (Mayr 1967, Mees 1969). The nominate race described by Latham in 1801 was taken in New South Wales but later diagnosed as a migratory race from Tasmania. Keast's (1958) prediction of the migratory nature of the Tasmanian population has been confirmed by recoveries of banded birds across Bass Strait and interesting patterns of movement by the southeastern race are still being revealed by a banding project (Lane 1972). The movements of silvereyes in Queensland are not well known and Keast (1958, 1961 p.387) favours the view that morphologically differentiating isolates of *lateralis* races occur in Queensland. It is interesting to note that where a gap of distribution is indicated by Keast (1958) it is shown as a zone of overlap between races by Mees (1969 p.83). Mees (1969 p.32) describes the specimens of *cornwalli* taken from this zone as intermediate between *Z. l. ramsayi* and the subspecies from south-eastern Australia.

There is an old record (Le Souëf 1891) of another species from one of North Barnard Islands (17°40'S, 146°11'E). This is the Yellow Silvereye *Z. lutea* which is widely distributed to the

mangrove habitat of northwestern (*Z. l. balstoni*) and northern Australia (*Z. l. lutea*) (Mayr 1967). Mees (1961 p.120) recognized a third race in the intermediate zone (*Z. l. hecla*). Le Souëf's observation has not been confirmed and hence not recognized by Mack (1932) or Mees (1961). However, Galbraith (1967) makes a passing reference to his own observation of "an undoubtedly Yellow Silvereye, *Zosterops lutea*", in the mangroves near Ayr during March 1964. He also refers to an unconfirmed report of this species from Edge Hill (Seaton 1956). Since another mangrove bird of the Gulf region, the Mangrove Golden Whistler *Pachycephala melanura* occurs near Bowen (Galbraith 1967) and an isolated population of a Gulf area species, the White-gaped Honeyeater *Meliphaga unicolor*, is found in the Townsville-Inkerman District, it is not altogether unlikely to have the Yellow Silvereye distributed to the mangroves of the east coast in pockets and adjacent continental islands.

PARALLEL CLINES

Apart from the question of the Yellow Silvereye the northern part of the Great Barrier Reef is inhabited by silvereyes with green and yellow backs and the southern part by those with a grey upper-back. The southern birds have a larger body size and thicker bill than the northern birds, but both northern and southern birds are larger than the continental race at corresponding latitudes. Although MacGillivray (1926) failed to recognize such differences between the Capricorn and the mainland races, Cooper (1948) observed that "the island birds were larger and generally heavier than the birds of the Queensland mainland or New South Wales" and that "the eye-ring was larger and the bill very thick-set, totally unlike the short, slender bill of the familiar species". This is the impression one receives by observing island birds even as far north as Green Island. Measurements of a Russell Island bird given by Mees (1969 p.85) are consistent with this observation.

The large dimensions of island birds were not considered important in separating the island form from the mainland one as Campbell (1932), Mayr (1967) and Mees (1969) all treated both forms as one, at least for the region between Rockhampton and Cooktown (on the continent extending to Iron Range). This is because the plumage was considered to be uniform in this region.

Having handled a large number of the island and mainland birds I have come to think that the dimensional differences are more constant than variation in plumage colour. It is true that the flank colour of the island form does not approach that of the mainland form in brightness at least in the southern part of the Great Barrier Reef (no discernible difference between sexes), but the amount of yellow on the throat and undertail coverts varies in its intensity and area of coverage. Some individuals on Heron Island, for example, have a longitudinal line of the

same colour on the abdomen connecting the yellow patches of the throat and undertail coverts while others may lack yellow pigmentation on undertail coverts. On Green Island the flank colour appears to vary as much as the northern mainland form, but the area of grey on the back is much reduced giving an appearance of green back with yellowish uppertail coverts. This approaches the description of the Pale Silvereye *Z. citrinella albiventris*.

According to Mees (1969 p.85), *albiventris* was believed to occur on Low Isles and Green Island off Cairns by Whittell (1954) and Immelmann (1960) respectively, but White (1946), McKean (Mees 1969) and Wheeler (1967) identified Green Island birds as *lateralis*.

Since the bright yellow-green colours of *Zosterops* are said to be produced by balanced "apposition" of melanins and yellow carotenoids (Auber 1957) and the production of grey, fawn or brown plumage depends on the distribution of melanins which could vary conspecifically (Harrison 1963), it may be dangerous to place too much emphasis on the differences in the "typical" plumage colours of different populations.

CONCLUSION

Continental islands and wooded islands of coral cays both support dense populations of silvereyes. The island populations enjoy a monopoly of resources and their niches are expanded. Practically all observers who wrote accounts of silvereyes on islands noted their great abundance. Silvereyes have a defined breeding season, at least in the southern part of the Great Barrier Reef where it seems to be triggered by the summer rain. After the wet summer some of them may succeed in rearing young in as late as May. In the third week of May 1973 there were at least four pairs with dependent fledglings on Green Island and two such pairs on Heron Island.

Since they often live in crowded conditions the selection pressure on island birds may be quite different from those exerted on mainland populations. If larger, thick-billed and strong-legged birds are favoured under crowded conditions and have established a population genetically different from those of the mainland, then they would eliminate odd individuals arriving from the mainland as it seems to happen frequently today (Kikkawa 1970).

Such a tendency and the discreteness of island distribution may obscure any clinal change which might occur in dimensions along a latitudinal gradient. I suggest that the latitudinal clines exist along the Great Barrier Reef independently of the continental race. Both on the continent and on the islands southern forms are characterized by large body size and proportionately

large dimensions of wing, tail, tarsus and culmen (Mees 1969). However, the island birds are heavier and greater in all dimensions (most pronounced in bill size) than the continental race of the corresponding latitudes.

In the continental form the flank colour of southern Queensland birds is comparatively dark and the sexes may be separable on this character, but in the north fawn and grey flanks are much lighter and sexing on this character becomes impossible. The yellow on throat and undertail coverts varies greatly but in northern forms only a very small proportion of the population has dusky yellow throats and grey to creamy undertail coverts. The brightness and amount of yellow on the throat may be a reliable character for sexing in northern forms as males tend to have brighter yellow than females. All continental forms have the grey back and the area of grey is not reduced in birds examined at Iron Range and McIllwraith Range on Cape York Peninsula.

The island forms vary in the area of grey on the back. This area is reduced from south to north. If this change is clinal then *albiventris* of the northern part of the Great Barrier Reef becomes conspecific to the island form of *lateralis*. It does not negate the possibility of introgression of the two forms which had different origins. On the other hand, if the change of this character is abrupt with a narrow zone of overlap and hybridization, then recent breakdown of the past barrier as a result of expansion by either one or both species would be suggested.

It would seem that the island race of the *lateralis* group has evolved on an island away from the recurrent influences of the continental forms and subsequently invaded the wooded islands of the Great Barrier Reef where they out-competed the mainland form and established themselves. As they spread over a wide latitudinal range clinal differences appeared in their dimensions.

If the latitudinal clines occur in both the continental forms and the island forms as postulated above, then these parallel clines would be considered to have different origins. In this view the island races and the continental races belong to separate evolutionary groups. Otherwise one would have to assume a large number of parallel changes in colonizing continental birds of different latitudes to explain the consistently different dimensions of the island birds. Moreover, the reduced amount of grey on the back of the northern form cannot be explained without accepting the possibility of hybridization with *albiventris*.

A large series of specimens collected over the entire range would be required before settling this problem, but handling

and measuring of live specimens in the course of banding at selected localities should throw sufficient light on the subject to permit testing of some implications of the above hypothesis. For example, it is important to study the affinities of populations found on different islands and this could be achieved by having an extensive banding programme in the region.

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NESTING PERIOD OF THE WESTERN GRASS-WREN *AMYTORNIS TEXTILIS BALLARAE*

GLORIA J. GLASS

The nesting period of the Western Grass-Wren has been given as July to September or October (Carruthers *et al.* 1970). On 11 March 1973 at Brown's Rockhole on Sybella Creek near Mount Isa, in the same area as the nest they describe, I observed three adult birds and found a nest with two unfeathered young. On 18 March the nest was empty and the adults were not sighted.

The nest was about six metres from the top of a rocky ridge, sparsely vegetated with Spinifex and Snappy Gum. It was about forty-five centimetres from ground level on top of a clump of Spinifex and received slight shade from three stunted Snappy Gums. The nest entrance faced approximately north-west.

From 15-26 February, over five inches of rain fell. This was the first appreciable rain for ten months and may have provided the breeding stimulus for this species.

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THE FIRST QUEENSLAND RECORD OF THE WHITE TERN *GYGIS ALBA*

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The White Tern *Gygis alba* has a wide distribution around oceanic islands of the South Atlantic, Indian and Pacific Oceans. It has been recorded three times from New Zealand (OSNZ, 1970) and only once from mainland Australia. This specimen taken near Grafton, New South Wales in June 1951 (McGill, 1960) was the only onshore specimen known. According to Serventy *et al.* (1971, p.237) two other records "one shot in 1878 between Port Jackson and Lord Howe Island and one seen 120 miles north-east of Port Macquarrie" are important records from seas near eastern Australia.

An immature specimen, the first Queensland record, was alive, although very weak, on arrival at the Queensland Museum at 1600 hours on 30 April 1973. It was immediately photographed and the bird died an hour later. The specimen was found at Meeandah near the mouth of the Brisbane River and donated to the Queensland Museum by Mr J. Liddy. It has been prepared as a study skin with one wing partly spread.

Details of the specimen are as follows: Q.M.014281, female, ovary very small (4 x 2.5mm), oviduct fine and straight; skull not fully ossified, two elliptical partly-ossified areas of the cranium close to the median line. The condition of ovary, oviduct and skull indicates immaturity. Measurements in millimetres are as follows - total length 285, culmen 35, wing 247, wing-span 715, tail 108, tarsus 13.5, middle toe and claw 30. The weight of the specimen was 71.2 grams.

Notes on the soft parts from the live bird were made using plates from Ridgway (1912) as a guide. Bill black, posterior half of both mandibles deep orient blue, Pl XXXIV; tarsus and toes dark orient blue, Pl XXXIV; webs of feet pale ochraceous salmon, Pl XV; iris blackish brown, Pl XLV, and although very dark, not black as stated in some texts.

General description of plumage as follows: Entire ventral surface of both body and wings white. On the dorsal side, plumage white, but body feathers of head, nape, mantle and back smudged grey. This smudgy grey appearance is due to the fact that the base of many of the feathers is grey or dark grey. On the wings, the greater, primary, median and lesser coverts are smudged grey, while shafts of the tail feathers and primary quills are dark umber to black. The skin at feather base and

the eyelids are black and anterior and contiguous to the eyelid there is a small black spot which contrasts with the otherwise all white face. According to Alexander (1928, p.196) immatures have "a black spot behind the eye". This criterion is also mentioned by Slater (1970, p.339). However, a figured specimen (Mathews, 1912-13, Pl 119) shows clearly the black spot anterior and contiguous to the eyelid and this compares closely to specimen Q.M.014281.

The specimen described is probably a first year bird of the sub-species *G. a. royana* which breeds on Norfolk and Kermadec Islands in the south-west Pacific Ocean (Mathews, 1912-13, p. 433). As breeding takes place from November to January on these islands, it is probable that this immature specimen was only four to six months old at death.

R. Cushman Murphy (1936, p.1165) described the Atlantic form of this species in a delightful way which is worth quoting:

"...Most ethereal of sea birds are the delicate and gentle Fairy Terns. Their plumage is white, but with subtle ivory or creamy tones with a barely perceptible reddish gleam visible in certain lights on the feathers of the belly. The last is all but illusory, and yet I find that most persons can see it if they are asked whether the ventral surfaces of the specimens show a bloom of any sort. In the air these terns are ghostly creatures, their exceptionally large black-brimmed eyes sometimes seeming like empty sockets. Moreover, when they fly overhead against the brilliant tropical sky, only the bones and flesh of their filmy wings fully obstructs the light. At such times the Fairy Terns resemble tiny flying skeletons, except that their lightness and grace are more suggestive of disembodied spirits than of dry bones. It is curious that under their rather thin and loose white plumage they have a skin which is black and shiny, like that of a newly hatched naked cormorant. No doubt the dermal melanin of the Fairy Tern bears the same relation to the absorption of the sun's rays, or to the retention of bodily heat, as does the dark plumage pigment of its neighbor, the noddy, which has a white skin. ...They have a way of fluttering just in front of one's face in a manner that soon becomes disagreeable - not attacking, but merely staring, hovering like overgrown mosquitoes, and wheezing in a way to suggest the buzz of some noxious insect."

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SOME OBSERVATIONS FROM FRASER ISLAND

DAVID PERKINS

During the middle of May, 1973, a period of about two weeks was spent on Fraser Island. Bird observations were made over the southern two-thirds of the island, from the Bowarrady area to the southern tip.

A comprehensive list of birds so far known to occur on Fraser Island has been compiled by D.P. Vernon and D.H. Barry (Vernon and Barry 1972, *Mem. Qd Mus.* 16(2): 223-232). Brief details are given below of species noted which are not included in their list; these are marked with an asterisk. Some other notes are also included, most of which relate to species previously recorded by only one of the observers referred to by Vernon and Barry.

Australian Pelican *Pelicanus conspicillatus*

One bird observed in flight at Snout Point.

Mangrove Heron *Butorides striatus*

A single bird noted on two consecutive days, feeding at the mouth of Woralie Creek, about six kilometres north of the closest mangroves.

* Little Egret *Egretta garzetta*

One bird noted foraging on mud flats at Snout Point.

Musk Duck *Biziura lobata*

Single birds noted at Lake Garawongera and Lake Birrabeen.

Grey-tailed Tattler *Tringa brevipes*

Two birds observed at Snout Point. There were very few migratory waders present, as was to be expected at this time of the year.

* Common Tern *Sterna hirundo*

Approximately two hundred birds were observed at rest on the eastern beach, just north of First Creek, in company with about one hundred and thirty Crested Tern *Sterna bergii* and eighty Little Tern *Sterna albifrons*. About sixteen of the Little Tern were in breeding plumage and the rest were in eclipse. All the Common Tern were in eclipse plumage except for two birds which had complete black caps, including forehead; the legs and bills of all birds, including these two were black.

Top-knot Pigeon *Lopholaimus antarcticus*

A large flock was present at Snout Point (over one hundred birds) feeding on the fruit of the Cabbage Tree Palm *Livistona australis*, which were very common at this place.

Scaly-breasted Lorikeet *Trichoglossus chlorolepidotus*

Fairly common but greatly outnumbered by Rainbow Lorikeets.

Little Lorikeet *Glossopsitta pusilla*

Small flocks were noted on several occasions.

Golden Bronze Cuckoo *Chrysococcyx plagiatus*

Very common; calling frequently in the wetter open forests.

Noisy Pitta *Pitta versicolor*

Heard calling at dusk near Leading Hill and Lake Benaroon.

* Brown Warbler *Gerygone mouki*

Noted only along Wabby Road. In this area it was common in scrub dominated by *Tristania conferta* and *Syncarpa hillii*. This type of habitat is very common on Fraser Island and although the bird was not seen elsewhere it probably occurs in other areas.

Brown Thornbill *Acanthisa pusilla*

Very common; frequently seen in shrub woodlands dominated by *Banksia aemula* as well as in more typical scrubby habitats.

White-throated Trecreeper *Climacteris leucophaea*

Several birds were seen and heard along Wabby Road. These appeared to be foraging mainly on the rough bark of *Tristania conferta*.

* Pied Currawong *Strepera graculina*

One bird was seen to the south of Lake Wabby; two birds were seen on several occasions over a period of three days at Snout Point.

BIRD OBSERVATIONS AT JERONA FAUNA RESERVE, AYR, NORTH QUEENSLAND

A. EWART

The Jerona Fauna Reserve is part of Pioneer Estates and is situated approximately twenty-one kilometres west of Ayr (or fifty-six kilometres south of Townsville). The Reserve contains numerous freshwater lagoons although, at the time of my three visits (18 Dec. 72, 8 Jan. 73, 9 Jan. 73), these were rapidly decreasing in number because of the exceptionally dry weather.

I was fortunate to be shown around the Reserve by Mr Athol Compton, the Fauna Officer at Jerona, who stated that any serious ornithologists are welcome to visit the Reserve. He can be contacted at 88 Beach Road, Ayr, Queensland 4807.

The following is a list of birds seen during my three visits. Common names only are given and these follow the list by CSIRO (CSIRO 1969, Divn of Wildlife Res. Tech. Paper No.20, 93 pp). Numbers are given where practicable. Two of the rarer waders perhaps deserve comment. The three Little Greenshank were seen on one day only (8 Jan.), feeding at the water's edge of one of the lagoons. Each bird fed individually and apparently occupied a particular stretch of water. When adjacent birds approached each other too closely, confrontation occurred until the birds retreated. They showed a very active feeding habit. The solitary Wood Sandpiper was seen feeding at the edge of a lagoon on 9 January. It showed an almost continuous bobbing action whilst feeding.

Australian Pelican	6	Brolga	8
Darter	3	Swamphen	2
Little Black Cormorant	5	Lotusbird	common
Little Pied Cormorant	common	Masked Plover	common
Little Grebe	6	Red-kneed Dotterel	2
White-faced Hern	2	Red-capped Dotterel	10
Cattle Egret	common	Little Greenshank	3
White Egret	common	Greenshank	3
Little Egret	common	Wood Sandpiper	1
Plumed Egret	common	Sharp-tailed Sandpiper	30
Reef Heron	common	Red-necked Stint	1
White Ibis	common	Black-tailed Godwit	10
Straw-necked Ibis	common	White-headed Stilt	common
Glossy Ibis	30	Southern Stone Curlew	12
Royal Spoonbill	20	White-winged Black Tern	10
Yellow-billed Spoonbill	3	Cockatiel	common
Maggie Goose	ca 1500	Laughing Kookaburra	1
Water Whistling Duck	20	Blue-winged Kookaburra	1
Black Swan	10	Australian Pipit	local

Black Duck	common	Spangled Drongo	nesting pair
Grey Teal	common	Magpie Lark	common
Wood Duck	30	Grey Butcher-bird	1
Whistling Eagle	4	Black-backed Magpie	1
Swamp Harrier	1	Australian Crow	1

Andre Griffin (Griffin 1972, Sunbird 3(2):36-37) has reported the following additional species from the Reserve.

Eastern Curlew	21 birds	-	17 October 1971
Curlew Sandpiper	6 birds	-	17 October 1971
Broad-billed Sandpiper	1 bird	-	17 October 1971
Avocet	1 bird	-	14 October 1971

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REVIEWS

LIST OF QUEENSLAND BIRDS by G.M. Storr, 1973. Perth, W.A.: Western Australian Museum, Special Publication No.5. 177 pages. \$8.00 plus 80 cents postage.

A systematic arrangement by subspecies, where species are polytypic. Information is provided under headings 'Range', 'Status, etc', sometimes 'Taxonomy' and rarely 'Field-guide'. Printing, paper and binding (in boards) are excellent.

The practice of using subspecies as the systematic unit belonged to the earlier part of this century in European ornithology and has now mostly gone out of favour. Nowadays subspecies are given less prominence and usually relegated to named variants under species heads. Reduction of emphasis on subspecies has the important value, among others, of being less confusing to non-taxonomists, who may be expected to be the major users of the list. Lack of species details can even puzzle taxonomists; it has taken the reviewer some time to discover, from sources not readily available to most people interested in birds, that Storr has linked the Golden Whistlers conspecifically with a similar form in New Caledonia, hence the unusual names *Pachycephala caledonica melanura* and *P.c. pectoralis*. People whose greatest pleasure is to find birds and to find names for them do not want to be involved in research of this kind, or to have their enthusiasm damped by uncertainty as to which subspecies they have in view, as if it really mattered.

Other aspects of taxonomy and nomenclature used in the list are difficult to comment on. In Australia at the present time they

are largely matters of personal opinion, and Dr Glen Storr's views, based as they mostly are on annotated research, are probably as reasonable as any. One of the difficult problems facing taxonomists engaged in the study of Australian birds is to know where to place on the avian tree many of the numerous endemic and often unique species, about sixty percent of those breeding. This applies in particular to the large flycatcher/warbler group which is usually placed, in general check-lists, in the family Muscicapidae. Storr (Emu 58:277) gave reasons for restricting the meaning of this family and for putting into the Turdidae those species in Australia usually regarded as muscicapids. He makes twelve families out of 150 species generally allocated to seven muscicapid subfamilies. This may be rather severe 'splitting' at family level, especially as it is often accepted that families are not always natural units but polyphyletic groups. However, this is not the place to discuss Storr's conclusions in detail. It can be accepted that he is a very able taxonomist and that his opinions, based on long experience, deserve close attention. Perhaps it is more important to refer to the need for his views to be integrated with those of other taxonomists in a modern official Australian check-list, reasonably stable in systematic arrangement and nomenclature (both scientific and common) to be a useful guide in all aspects of ornithological literature.

In the present context 'lists' or 'hand-lists' or 'check-lists' have a wide variety of forms, from a bare string of names in systematic order to the same list with a lot of information added; Storr's belongs to the latter. Under the heading 'Status, etc' he gives in good measure information on occurrence, abundance, habitat, breeding and movements. Distribution in particular is meticulously detailed, and for the reader not well acquainted with Queensland geography there is a 'Gazetteer' of nineteen pages. Perhaps the space occupied by distribution data and gazetteer could have been more usefully taken up by distribution maps, a simple method of conveying a lot of information visually; also it might have made the final product rather less expensive.

The biological data is so generous in coverage that with the addition of short descriptions (there are only a few under 'Field-guide') an excellent book on Queensland birds would have been the outcome. But as descriptions, apparently, are about the only information not included in check-lists the question arises if those filled out with so much data are not usurping the function of books, hand-books or field-guides. Lists at best, as in this case, are not complete sources of information and the user, unless well acquainted with the identity of Queensland sub-species, will first have to relate many names to those used in other books where birds are identified.