IV BIRDS OF KODJ KODJIN AND DUROKOPPIN RESERVES

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INTRODUCTION

The biological survey of the Western Australian wheatbelt is recording data on habitat and status of birds on several reserves. So far, no data have been published on birds of the central wheatbelt. Kodj Kodjin and Durokoppin Reserves were chosen as representative of the central wheatbelt (for location and reserve details see Muir, this report).

This paper presents data on Kodj Kodjin Reserve (KKR) and Durokoppin Reserve (DR). The information was obtained by me during 26-27 January 1977, 8-14 April 1976 and 14-17 October 1975, and by G. Harold during 8-17 October 1975. Vegetation locations mentioned are from Muir (this report).

ANNOTATED LIST

White-faced Heron (Ardea novaehollandiae)

Scarce; KKR. One flew over woodland loc. 1.5 in October.

White-necked Heron (Ardea pacifica)

Scarce; farmland. One at dam near KKR in October.

Wood Duck (Chenonetta jubata)

Scarce; farmland. One on dam on south side of DR in October.

Black-shouldered Kite (Elanus notatus)

Scarce; KKR and DR. Farmland and heath. One over paddock in April; one over paddock and one over KKR loc. 4.2 in October.

Collared Sparrowhawk (Accipiter cirrocephalus)

Scarce; DR. Woodland. Pair with nest in Wandoo (Eucalyptus wandoo) tree in DR loc. 1.5 in October.

Brown Goshawk (Accipiter fasciatus)

Scarce; KKR and DR. One flying over shrubland at DR and one flying over mallee at KKR in October.

Wedge-tailed Eagle (Aquila audax)

Uncommon; KKR and DR. Woodland and farmland. One over DR loc. 1.16 in January; one in DR loc. 1.19 and two old nests in Wandoo trees in April; pair with large white chick in nest in Salmon Gum (*E. salmonophloia*) in DR loc. 1.5, old nest in KKR loc. 1.5, and pair on telephone pole 1 km south of DR in October.

Spotted Harrier (Circus assimilis)

Scarce: KKR. Woodland. Two in KKR loc. 1.5 in October.

Nankeen Kestrel (Falco cenchroides)

Uncommon; KKR and DR. Woodland, heath and paddocks. Only recorded in October. Pair with 3 eggs richly spotted with brown in hollow in Wandoo tree in DR loc. 1.8 on 14 October; two single birds in paddocks adjacent to DR; one in paddock adjacent to KKR and one over KKR loc. 4.3.

Brown Falcon (Falco berigora)

Uncommon; KKR and DR. Woodland, shrubland and heath. One in KKR loc. 1.5 and one in DR loc. 4.3 in January; one in KKR loc. 1.5 and one in DR loc. 3.23 in April; one in KKR loc. 3.2, one in DR loc. 1.3 and one in DR loc. 3.23 in October.

Mallee Fowl (Leipoa ocellata)

Uncommon; KKR and DR. Woodland, mallee and shrubland. Chick in DR loc. 1.10 in January; one on road adjacent to KKR loc. 2.1, active mound in DR loc. 3.31 in April; one in KKR loc. 1.5 and one in DR loc. 1.8 in October.

Painted Quail (Turnix varia)

Scarce; DR. Shrubland and lithic complex. Two in DR loc. 3.30 in April; characteristic feeding scratchings at base of granite in DR loc. 5.1 in October.

Banded Plover (Vanellus tricolor)

Uncommon; paddocks. Heard calling at night in April; thirty feeding in paddock adjacent to DR in October.

Common Bronzewing (Phaps chalcoptera)

Uncommon; KKR and DR. Woodland and mallee. One in KKR loc. 2.9 and KKR loc. 2.7, one in DR loc. 1.19 in April; three sightings of up to six birds in KKR loc. 1.5 in October.

Crested Pigeon (Ocyphaps lophotes)

Uncommon; DR. Woodland, road-verges and farmland. Pair in DR loc. 1.5 in October. One in road-verges in January, three in April and five in October.

Purple-crowned Lorikeet (Glossopsitta porphyrocephala)

Scarce; DR. A single bird and a pair flew over in October.

Port Lincoln Parrot (Platycercus zonarius)

Common; KKR and DR. Woodland and paddocks. In all woodland locations in January, April and October. Most sightings in woodland were pairs or flocks of up to six birds, in paddocks groups were between eight and thirty birds. Birds entering nest spouts in DR loc. 1.20 and 1.19 in April. Pairs at nest spouts in KKR loc. 1.5 in October. One pair was dragged from a hollow by a pair of Galahs on 16 October. The mean of 24 sightings in April was 2.9 birds per flock; the mean of 36 sightings in October was 6.9.

Mulga Parrot (Platycercus varius)

Uncommon; DR. Woodland, road-verges and paddocks; also visits farm dams. All sightings were single birds or up to three. Recorded in DR loc. 1.3, 1.4, 1.10 and 1.22 in January; in paddocks, dams and road-verges in October.

Elegant Parrot (Neophema elegans)

Moderately common; KKR and DR. Woodland and paddocks. Only recorded in October. Most sightings were pairs or up to four. Recorded in KKR loc. 1.5 and DR loc. 1.3, 1.5, 1.12 and 1.19 and in grassland adjacent to DR loc. 3.1. Entering nest hollows in KKR loc. 1.5.

Cockatiel (Nymphicus hollandicus)

Scarce; KKR. Woodland. Two in KKR loc. 1.7 in October.

$\textbf{White-tailed Black Cockatoo} \ (\textit{Calyptorhynchus baudinii})$

Uncommon; DR. Woodland, visits farm dams to drink. Seven sightings, singly or up to fifteen birds in October. Recorded in DR loc. 1.5, 1.22 and 1.23. Bird flew from hollow in Wandoo on 14 October.

Galah (Cacatua roseicapilla)

Moderately common; KKR and DR. Woodland and paddocks. Most sightings were pairs or up to twenty birds. One flock of ca 130 flying over DR in April. Recorded in DR loc. 1.16 and 1.22 in January; KKR loc. 1.5,

DR loc. 1.7, 1.12 and 1.19 in April; KKR loc. 1.5, 1.7 and DR loc. 1.5, 1.6, 1.7, 1.8, 1.12, 1.17, 1.22 in October. Birds entering nesting hollows in April. Pair removed Port Lincoln Parrot from nest hollow on 16 October.

Golden Bronze Cuckoo (Chrysococcyx lucidus)

Scarce; DR. Woodland. One calling in DR loc. 1.5 in October.

Barn Owl (Tyto alba)

Scarce; farmland. One sighted at night in April.

Boobook Owl (Ninox novaeseelandiae)

Scarce; KKR. Woodland. One calling in KKR loc. 1.5 in April and October.

Tawny Frogmouth (Podargus strigoides)

Scarce; DR. Woodland and shrubland. One in DR loc. 1.19 and 3.24 in April. Dead birds in DR loc. 3.24 in October.

Crested Owlet-nightjar (Aegotheles cristatus)

Scarce; KKR. Woodland. Calling at night in KKR loc. 1.5 in October.

Fork-tailed Swift (Apus pacificus)

Uncommon; DR. Aerial nomad. Flocks of up to twenty birds hawking and moving north on 11 April.

Sacred Kingfisher (Halycon sancta)

Scarce; KKR. Woodland. Single bird recorded twice in KKR loc. 1.5 in October.

Black-tailed Bee-eater (Merops ornatus)

Moderately common; KKR and DR. Woodland, mallee, lithic complex and paddocks. Single birds or flocks of up to fourteen. Recorded in DR loc. 1.5, 1.16 and 1.22 in January; in KKR loc. 1.5, 2.7, 2.9 and DR loc. 1.5 and 5.1 in October.

Tree Martin (Hirundo nigricans)

Moderately common; KKR, DR and farmland. Woodland and mallee. In groups of between three and twenty birds. Recorded in KKR loc. 1.5, DR loc. 1.5, 1.6 and 1.19 in April; in KKR loc. 1.5 and 2.9 in October. At least twenty birds in KKR loc. 1.5 were breeding in Wandoo trees in October.

White-backed Swallow (Cheramoeca leucosterna)

Scarce; road cuttings in sand. Pair 1 km south of KKR in October.

Richard's Pipit (Anthus novaeseelandiae)

Moderately common; DR and farmland. Several in grassy areas of DR loc. 1.3 in October. Recorded in paddocks in January, April and October.

Black-faced Cuckoo-shrike (Coracina novaehollandiae)

Moderately common; KKR and DR. Woodland, mallee and road-verges. Most sightings were single birds or pairs; group of ten in October. Recorded in KKR loc. 2.9 and DR loc. 1.8 and 1.22 in January; KKR loc. 1.5 in April; KKR loc. 1.5, 2.4, 4.2 and DR loc. 1.5 and 1.12 in October. Twelve times as many recorded in October as in April.

White-winged Triller (Lalage sueurii)

Uncommon; KKR and DR. Woodland, mallee, shrubland and paddocks. Single birds or groups of up to ten; only recorded in October. Recorded in KKR loc. 1.5, 2.5 and 2.7 and DR loc. 3.1.

Brown Flycatcher (Microeca leucophaea)

Moderately common; KKR and DR. Woodland and mallee. Most sightings were single birds or pairs, occasionally three. Recorded in DR loc. 1.22 in January; in KKR loc. 1.5, 2.7 and DR loc. 1.5, 1.22 in April; in KKR loc. 1.2, 1.5, 1.7, 2.7 and DR loc. 1.5, 1.20 in October. Empty nest in Wandoo sapling in DR loc. 1.5 in January.

Red-capped Robin (Petroica goodenovii)

Moderately common; KKR and DR. Woodland, mallee, shrubland, heath and lithic complex. Most sightings pairs or single birds. Recorded in DR loc. 1.7, 1.8, 1.19, 1.22, 3.13, 3.22, 3.24 in January; in KKR loc. 1.5, 2.7, 2.9 and DR loc. 1.5, 1.6, 2.6, 3.12, 3.13, 3.26, 3.34, 4.9, 5.1 in April; in KKR loc. 1.7, 2.7, 2.9 and DR loc. 1.5 in October. Total of 29 seen in April and eleven in October. A female with three young in KKR loc. 2.9 in October.

Yellow Robin (Eopsaltria australis)

Uncommon; KKR and DR. Woodland and woodland ecotones. Singly or pairs, three sightings in April and four in October. Recorded in DR loc. 1.6 and ecotones of mallee and shrubland between KKR loc. 1.5 and 2.2 and DR loc. 1.20 and 4.11 in April; and ecotones between KKR loc. 1.5 and 2.2 and DR loc. 1.5 and 3.10 in October. Nest with two young in

Hakea on edge of thicket in ecotone between KKR loc. 1.5 and 2.2 on 12 October.

Golden Whistler (Pachycephala pectoralis)

Scarce; DR. Woodland. One in DR loc. 1.16 in April, one in DR loc. 1.5 in October.

Rufous Whistler (Pachycephala rufiventris)

Uncommon; KKR and DR. Woodland, mallee and shrubland. Most sightings were single birds, occasionally pairs. Recorded in DR loc. 1.10, 1.18, 1.22 in January; in KKR loc. 2.9 and DR loc. 1.6, 1.4 in April; in KKR loc. 1.5, and DR loc. 1.5, 3.16 in October.

Grey Shrike-thrush (Colluricincla harmonica)

Moderately common; KKR and DR. Woodland, mallee and shrubland. Pairs or single birds. Recorded in DR loc. 3.2 in January; in KKR loc. 1.5, 2.7 in April; in KKR loc. 1.5, 1.7, 2.9 and DR loc. 1.12, 2.5, 3.10, 5.2 in April.

Shrike-tit (Falcunculus frontatus)

Scarce; KKR. Woodland. One in mallee tree in KKR loc. 1.5 in October.

Crested Bellbird (Oreoica gutturalis)

Moderately common; KKR and DR. Mallee, shrubland, heath, lithic complex, occasionally woodland. Mainly recorded calling. Recorded in DR loc. 3.27 in January; in KKR loc. 3.2 and DR loc. 3.26 in April; in KKR loc. 1.5, 1.6, 2.7 and DR loc. 3.10, 4.6, 5.3 in October.

Grey Fantail (Rhipidura fuliginosa)

Uncommon; DR. Woodland and lithic complex. None were seen 9-10 April, but eleven were seen subsequently. Most sightings were single birds, occasionally pairs. Recorded in DR loc. 1.5, 1.12, 1.19, 1.20 in April; and in DR loc. 5.1 in October.

Willie Wagtail (Rhipidura leucophrys)

Uncommon; KKR, DR and road-verges. Woodland and shrubland. Eight sightings of single birds. Recorded in DR loc. 3.2 in January; in KKR loc. 1.5, 1.10 and DR loc. 1.5 in April; in KKR loc. 1.5 and in road-verges in October.

Magpie-lark (Grallina cyanoleuca)

Scarce; paddocks. Two near farm dam in October.

Southern Scrub-robin (Drymodes brunneopygius)

Locally common. DR. Shrubland. Recorded in DR loc. 3.7, 3.9, 3.16 in October.

White-browed Babbler (Pomatostomus superciliosus)

Moderately common; KKR and DR. Woodland, mallee, shrubland. Recorded in DR loc. 1.8 in January; in KKR loc. 2.5 and DR loc. 3.26 in April; in KKR loc. 2.1, 3.3 and DR loc. 3.10, 3.28 in October. Old nests in KKR loc. 2.5, 3.2 and DR loc. 3.12, 3.13, 3.22, 3.24, 3.26. Nests were in Hakea coriacea (11), H. lissocarpha (3), Casuarina acutivalvis (5), Xylomelum angustifolium (10), Callitris canescens (2), Eucalyptus redunca dwarf form (5), and E. burracoppinensis (1).

Western Warbler (Gerygone fusca)

Uncommon; KKR and DR. Woodland and mallee. Single birds except one group of six in April. Recorded in DR loc. 1.5 in April; in KKR loc. 1.7, 2.4, 2.7 in October.

Weebill (Gerygone brevirostris)

Common; KKR and DR. Woodland and mallee, occasionally in shrubland with odd mallee clumps. Most sightings of four to six birds, occasionally less. Recorded in all woodland and mallee associations each time they were visited.

Yellow-rumped Thornbill (Acanthiza chrysorrhoa)

Moderately common; KKR and DR. Woodland and mallee, occasionally in heath. All sightings were between two and eight birds. Recorded in KKR loc. 1.8, 2.2, 2.9 and DR loc. 1.5, 1.22, 4.2 in January; in KKR loc. 1.5, 2.7, 2.11 and DR loc. 1.4, 1.5, 1.19 in April; in KKR loc. 1.5, 2.9 and DR loc. 1.5, 1.8 in October.

Broad-tailed Thornbill (Acanthiza apicalis)

Moderately common; KKR and DR. Woodland, mallee, shrubland and heath. Most sightings were pairs, occasionally singly. Recorded in DR loc. 3.17 and 4.2 in January; in DR loc. 1.4, 3.12, 3.13, 3.30, 4.9, 4.10, 4.11 in April; in KKR loc. 1.6, 1.8, 2.2, 3.3 and DR loc. 1.5 in October. The apparent difference in seasonal occurrence between KKR and DR is considered due to sampling error.

Chestnut-rumped Thornbill (Acanthiza uropygialis)

Moderately common; KKR and DR. Woodland, mallee, shrubland and

lithic complex. Most sightings were between three and six birds. Recorded in KKR loc. 2.2, 2.9 and DR loc. 1.3, 1.6, 1.7, 1.8, 1.17, 1.22 in January; in KKR loc. 1.10, 2.7, 3.2, 3.3 and DR loc. 1.5, 1.6, 1.12, 1.16, 1.19, 3.30 in April; in KKR loc. 1.5, 1.7, 2.2 and DR loc. 1.5, 1.8, 1.12, 5.1 in October.

Redthroat (Pyrrholaemus brunneus)

Scarce; KKR and DR. Woodland and shrubland. Three single birds seen in October. Recorded in KKR loc. 1.7 and DR loc. 3.22, 3.24.

Shy Ground-wren (Hylacola cauta)

Scarce; DR. Heath. Two in heath between DR loc. 4.9 and 4.10 in April.

Field Wren (Calamanthus fuliginosus)

Scarce; DR. Heath. One calling in regenerating heath in DR loc. 4.3 in October.

Blue-breasted Wren (Malurus pulcherrimus)

Uncommon; DR. Shrubland. Groups of three to four birds in DR loc. 3.10 and 3.33 in April and October.

Australian Sittella (Neositta chrysoptera)

Uncommon; KKR and DR. Woodland. Groups of between four and seven birds in KKR loc. 1.5 and DR loc. 1.5 in October.

Mistletoe-bird (Dicaeum hirundinaceum)

Scarce; KKR and DR. Transient or in woodland. One seen in January and April.

Spotted Pardalote (Pardalotus punctatus)

Scarce; DR. Mallee and shrubland. One feeding in mallee in DR loc. 2.5, one feeding in flowering *Grevillea excelsior* and three in *Eucalyptus burracoppinensis* in DR loc. 3.24 in October.

Striated Pardalote (Pardalotus striatus)

Moderately common; KKR and DR. Woodland and mallee. Most sightings were four to six birds. Mean of 14 sightings in April was 4.3; of 11 sightings in October was 2.2. Recorded in KKR loc. 1.5, 2.7, 2.9 and DR loc. 1.4, 1.5, 1.6, 1.12, 1.16, 1.19, 1.20 in April; in KKR locs 1.5, 2.9 and DR loc. 1.5, 1.12 in October. Transient birds recorded in January and April.

Grey-breasted Silvereye (Zosterops lateralis)

Uncommon; KKR and DR. Transient or in woodland. Three sightings of between two and six birds in April. Feeding in flowering Wandoo in DR loc. 1.5.

Brown Honeyeater (Lichmera indistincta)

Seasonal, sometimes common; KKR, DR and road-verges. Woodland, mallee, shrubland and heath. Not recorded in January. Two pairs in April feeding in flowering Wandoo in DR loc. 1.19 and 1.20. Common in October in most associations, particularly shrublands and heaths where *Grevillea excelsior*, G. paradoxa and Hakea were flowering. Recorded in KKR loc. 1.5, 1.7, 1.8, 2.5, 2.9, 4.2 and DR loc. 1.5, 1.12, 2.5, 3.7, 3.9, 3.10, 3.16, 3.22, 3.24, 4.2, 4.3, 4.6 in October.

Singing Honeyeater (Meliphaga virescens)

Generally uncommon; KKR, DR and road-verges. Shrubland and heath. Most sightings were single birds or pairs, locally common in road-verges with flowering *Grevillea excelsior* and *G. paradoxa* in October. Recorded in KKR loc. 4.2 and DR loc. 3.17, 3.23 in January; in KKR loc. 4.2 and DR loc. 3.26, 3.29 in April; in KKR loc. 3.3 and DR loc. 3.7, 3.9, 3.24 in October.

Yellow-plumed Honeyeater (Meliphaga ornata)

Uncommon; KKR. Woodland. At least thirty birds in KKR loc. 1.5 in April and October.

White-eared Honeyeater (Meliphaga leucotis)

Common; KKR and DR. Woodland, mallee and shrubland. Most sightings were single birds or pairs. Recorded in DR loc. 1.3, 1.5, 1.8, 1.16, 1.17, 1.18, 1.22, 3.17 in January; in KKR loc. 1.5, 1.10, 2.6, 2.7, 2.9 and DR loc. 1.4, 1.5, 1.6, 1.12, 1.16, 1.19, 1.22 in April; in KKR loc. 1.5, 3.2, 3.3 and DR loc. 1.12, 3.7, 3.9, 4.1, 5.2 in October.

Brown-headed Honeyeater (Melithreptus brevirostris)

Uncommon; KKR and DR. Woodland and mallee. Two in DR loc. 1.22 and three in DR loc. 1.5 in January. Flocks of between four and sixteen in KKR loc. 1.5, 1.10, 2.2 and DR loc. 1.5, 1.16, 1.19 in April. Pair in road verge with flowering *Grevillea excelsior* and *G. paradoxa* in October.

White-fronted Honeyeater (Phylidonyris albifrons)

Scarce; DR. Woodland. Two feeding from foliage of Wandoo in DR loc.

1.5 and two feeding from foliage of Salmon Gum and mallee in DR loc. 1.19 in April.

Tawny-crowned Honeyeater (Phylidonyris melanops)

Scarce; DR. Heath. Five in DR loc. 4.3 in October.

Yellow-throated Miner (Manorina flavigula)

Uncommon; DR and road-verges. Woodland and shrubland. Six sightings of between one and eight birds. Recorded in DR loc. 1.5 in January; in DR loc. 1.19 in April; in DR loc. 1.8 in October; and in verges in January, April and October.

Spiny-cheeked Honeyeater (Acanthagenys rufogularis)

Scarce; DR. Woodland and lithic complex. Two in DR loc. 1.3 in January; one singing in DR loc. 5.1 in October.

Red Wattle-bird (Anthochaera carunculata)

Uncommon; KKR and DR. Woodland and road-verges (particularly with flowering *Grevillea excelsior*). Most sightings were pairs. Recorded in flowering Wandoo in DR loc. 1.16, 1.22 in January; in flowering Wandoo in DR loc. 1.16 in April; in DR loc. 1.5, 1.8 and road-verges in October.

White-fronted Chat (Epthianura albifrons)

Uncommon; KKR and DR. Shrubland, heath and paddocks. Mostly two to five, occasionally eighteen birds. Recorded in KKR loc. 3.3 and DR loc. 4.6 in April; in DR loc. 4.3 in October; in paddocks in April and October. Empty nest in DR loc. 4.3 in October.

Black-faced Wood-swallow (Artamus cinereus)

Uncommon; KKR and DR. Woodland, shrubland, heath and paddocks. All sightings two to five birds. Recorded in DR loc. 1.17, 3.13 in January; in DR loc. 1.8, 4.2 in April; in KKR loc. 1.5, 4.2 and DR loc. 1.3, 1.5 and in paddocks in October.

Dusky Wood-swallow (Artamus cyanopterus)

Scarce; DR. Aerial, Three over DR loc. 3.22 in October.

Pied Butcherbird (Cracticus nigrogularis)

Scarce; DR and paddocks. One in DR loc. 1.19 in April; two in DR loc. 1.5 and one in paddock in October.

Grey Butcherbird (Cracticus torquatus)

Uncommon; KKR and DR. Woodland, mallee and mallee road-verges. Most sightings single birds, occasionally pairs. Recorded in KKR loc. 1.5, 2.9 and DR loc. 1.5, 1.20, 1.22 in April; in KKR loc. 1.3, 1.5, DR loc. 1.5 and road-verge in October.

Magpie (Cracticus tibicen)

Moderately common; KKR and DR. Woodland, edges of paddocks and road-verges. All sightings between one and five birds. Recorded in DR loc. 1.8 in January; in KKR loc. 1.7 and DR loc. 1.16, 1.22 in April; in KKR loc. 1.5, 1.7 in October; in road-verges and paddocks in January and October. Old nest in DR loc. 1.16 in April.

Grey Currawong (Strepera versicolor)

Uncommon; KKR and DR. Woodland, mallee, shrubland and lithic complex. Most sightings single birds, occasionally pairs. Recorded in KKR loc. 1.8 and DR loc. 1.3, 3.33 in January; in KKR loc. 1.10 and DR loc. 1.16, 1.22 in April; in KKR loc. 1.1, 2.9 and DR loc. 1.5, 1.18, 3.1, 3.7, 3.9, 3.10, 5.2 in October.

Little Crow (Corvus bennetti)

Uncommon; KKR and DR. Transient or in woodland. Flocks of up to nine birds flying over KKR and DR in April and October. Pairs in KKR loc. 1.5 in October. Pair building half-completed nest in Wandoo tree in KKR loc. 1.5 on 14 October.

Australian Raven (Corvus coronoides)

Moderately common; KKR and DR. Woodland and paddocks. Most sightings single birds or pairs, occasionally six especially in April. Recorded in all woodland locations each time they were visited.

DISCUSSION

Eighty-one species of birds were recorded on the Durokoppin and Kodj Kodjin Nature Reserves. This is comparable to the 88 species recorded at the Tarin Rock Reserves (Dell & Johnstone 1976), the 85 species at the Bendering Reserves (Dell 1977), and the 82 species at Dongolocking Reserve (Dell 1978). All species are within their known range; however the Western Shrike-tit (Falcunculus frontatus) is rarely recorded in the wheatbelt (Dell 1978).

Twenty-two species were recorded only at Durokoppin Reserve, 7 species only at Kodj Kodjin Reserve and 5 species only in farmland. This means that of the 76 species recorded on the Reserves, 44 species (or 58%) were common to both. This is in contrast to plants where Durokoppin Reserve had twice as many species as Kodj Kodjin with only ca 29% of species common to both (Muir this report). However, many larger plants which are frequently utilized by birds are common to both Reserves. Included in this category are Eucalyptus wandoo, E. salmonophloia, E. cylindriflora, E. salubris, E. transcontinentalis, E. redunca, Hakea coriacea, Grevillea excelsior, Acacia acuminata, Casuarina campestris, C. acutivalvis, and C. huegeliana.

Table 1 shows the number of bird species in each vegetation formation on each Reserve with the area of the formation (Muir this publication) given in brackets. While in the totals of this table each species of bird is listed only once it may be listed in several formation types. Bird species are only included in the table if they were clearly occupying a vegetation formation. If they were above a formation or clearly transient they are omitted. The table includes 70 of the 73 species recorded on the Reserves.

TABLE 1

Number of bird species in each vegetation formation on each Reserve, with the area of formation in brackets.

	Woodland	Mallee	Shrubland	Heath	Lithic	Total birds
Non- passerines DR Non-	14 (326 ha)	0 (27 ha)	4 (486 ha)	1 (184 ha)	1 (7 ha)	16
passerines KKR	13 (103 ha)	2 (91 ha)	1 (5 ha)	2 (4 ha)	_	15
Passerines DR Passerines KKR	32 (326 ha) 30 (103 ha)	6 (27 ha) 21 (91 ha)	19 (486 ha) 7 (5 ha)	12 (184 ha) 4 (4 ha)	7 (7 ha) -	43 33
Total birds and formation size	59 (429 ha)	25 (118 ha)	24 (491 ha)	15 (188 ha)	8 (7 ha)	

From Table 1 it is clear that woodlands have more than twice as many bird species than either mallee or shrublands (it should be remembered that woodlands tend to have understoreys of shrubs and patches of mallee which birds frequently occupy). There is little difference between the bird assemblages in woodlands on each Reserve despite the fact that DR has

three times the area of woodland as KKR. DR has 27 ha of mallee with 6 species of birds, while KKR has 91 ha and 23 species of birds. There is a similar relationship between number of bird species per area in shrublands and heaths. Lithic complex is absent on KKR.

A detailed analysis of relationships between area of vegetation formations and number of bird species present will be presented for all wheatbelt reserves in a later publication.

Breeding data is included for 11 species. Breeding was detected only in October; empty nests were recorded at other times.

Leake (1962) discussed changes in the avifauna of the eastern wheatbelt since clearing for agriculture. Many of these changes are referable to the area around Kodj Kodjin and Durokoppin Nature Reserves because Leake lived at Cordonia which is ca 30 km east of the Reserves, and was clearly referring to the area with which he was very familiar. Leake pointed out that changes were generally the result of clearing of immense areas, and to a lesser extent, improvement in water supplies.

CORRIGENDUM	ı his pult
Records of the Western Australian Museum: Suppl. no. 7 Page 67, after line 21, insert:	hen are
Parrot is a local name for Elegant	nd, cus

Leake which are questionable are Purple-backed Wren (probably Bluebreasted Wren Malurus pulcherrimus), Lunulated Honeyeater (this is a Gould name for White-naped Honeyeater (Melithreptus lunatus); possibly Leake is referring to Brown-headed Honeyeater (M. brevirostris), and Spotted Pardalote (two species of pardalote occur at Durokoppin Reserve).

Much of Leake's data for species for which he would have had little problem in identifying, is extremely useful in determining changes in the status of the avifauna of the eastern wheatbelt. Leake points out that many species have been seriously depleted. Western Rosella (*Platycercus icterotis*), Restless Flycatcher (*Myiagra inquieta*), Chestnut Quail-thrush (*Cinclosoma castanotum*), Bustard (*Otis australis*), Rufous Tree-creeper (*Climacteris rufa*), Hooded Robin (*Petroica cucullata*), and Ground Cuckoo-shrike (*Coracina maxima*) were included by Leake but were not recorded by me on Kodj Kodjin or Durokoppin Nature Reserves. Leake's comment on Yellow-plumed Honeyeater (*Meliphaga ornata*) is very significant. Leake says,

'practically gone are the large numbers of Yellow-plumed Honeyeaters that used to feed on the nectar of the gimlet, salmon, white and York gums, when they are in bloom.' A small population of this species is still present in Wandoo woodland on Kodj Kodjin Reserve. Crossman (1909) considered this to be the commonest honeyeater at Cumminin (now Narembeen); it does not now occur at Bendering (Dell 1977). Reduction of woodland throughout the wheatbelt has seriously reduced the range of this species.

Banded Plovers evidently moved into the eastern wheatbelt after clearing; Leake considered that they became resident after 1912. Mulga Parrots came from further north or east in 1916, shortly before Galahs reached Kellerberrin. Mistletoe-birds are considered by Leake to be annual migrants, arriving in January or February and departing in June. My two sightings were in January and April. Other comments by Leake on seasonal movements will be taken into consideration in a later publication on movements in the wheatbelt.

Ford & Stone (1957) list 137 species for the area covered by them (basically from Kellerberrin south to Kwolyin), which included an extensive salt-lake stream — an important bird habitat not included in the area covered by me. Therefore many birds, especially waterfowl, were listed by Ford & Stone but not by me. The most useful comparison can be made between the 62 passerines listed by Ford & Stone and the 51 recorded by me. Most of the 13 species recorded only by Ford & Stone are transient or nomads. Therefore there is little difference between the resident passerines in my area compared to Ford & Stone's area. A more detailed comparison with birds recorded in 1957 will be made in a future paper when I discuss birds of the Yoting area.

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