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The birds of Fort Fordyce Reserve, Eastern Cape

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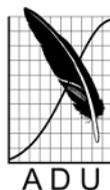
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The birds of Fort Fordyce Reserve, Eastern Cape

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Since 2007 we have carried out surveys of birds at Fort Fordyce, including mist-netting. To date, 175 species have been recorded, including 9 Red Data species, of which one is a breeding resident, and three others may be breeding in the reserve. There are 56 species typical of montane forest; most are present throughout the year. With > 500 birds ringed and 50 recaptures, the oldest records to date are 8 years for an olive thrush and a black-backed puffback.

Introduction

Forest is a rare habitat in South Africa, covering < 1% of the land surface, and it is currently much fragmented. However, there are very few areas which were covered by extensive tracts of natural forest even before human-induced changes to the original vegetation distribution (Rutherford and Westfall 1986). Many small forest remnants, originally under the control of the Department of Forestry, have subsequently been transferred to state conservation departments.

Fort Fordyce (Figure 1) was previously a hilltop forestry station, with extensive plantations of alien pine and eucalypt trees, while indigenous forest persisted on the steeper slopes. In 1987 it became a nature reserve administered by the Cape Provincial Department of Nature Conservation, and removal of alien vegetation began. Most of the plantations have now been felled, but secondary infestations of black wattle (*Acacia mearnsii*) cover significant areas, although there is also extensive regeneration of natural vegetation. This protected area covers 2155 hectares, and with the Mpofu Game Reserve (7500 hectares) in the adjacent valley, is currently managed by Eastern Cape Parks; these two reserves form part of the Amatola-Katberg Mountain Important Bird Area (BirdLife South Africa 2015).

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Figure 1: Location of Fort Fordyce in South Africa

The plateau at Fort Fordyce (altitude 1400 m) has areas of open grassland where grazing mammals have been introduced (black wildebeest *Connochaetes gnou*, Burchell's zebra *Equus quagga burchellii*, red hartebeest *Alcelaphus buselaphus caama*). Bushbuck (*Tragelaphus sylvaticus*) and blue duiker (*Philantomba monticola*) occur naturally in the forested areas; baboon (*Papio ursinus*) and vervet monkey (*Chlorocebus pygerythrus*) are present, but no samango monkeys (*Cercopithecus albogularis*) have been recorded. Caracal (*Caracal caracal*) is the largest resident predator. Annual rainfall averages 1125 mm (mean over 15 years); summer maximum temperatures range to 42°C while frost occurs regularly in winter, and snow has been recorded in some years.

Based on surveys of the avifauna since 2007 (Craig 2007, 2012) we have posed the following questions:

1. Does this patch of Afromontane forest preserve a significant component of forest birds, particularly endemic species, and species of conservation concern?
2. Are these birds resident throughout the year, or is there evidence for seasonal movements?

Methods

Since May 2007, we have visited Fort Fordyce on 47 occasions, mostly single day visits. On each occasion, at least two observers have followed a regular route within the forest and across the grassland area, recording all birds seen and heard. These data have been submitted to the Southern African Bird Atlas Project (SABAP2). We have also set approximately 100 m of mist nets along a track near the reserve office and chalets (Figure 2).



Figure 2: Mist net line at Fort Fordyce (Photo Magi Nams)

The vegetation here is regenerating scrub-forest, with a small patch of pine trees remaining to the east of the net line. All birds captured have been ringed with standard metal rings issued by SAFRING. Apart from our own data, there are 10 surveys by other observers submitted to SABAP2, and three checklists in the Birds in Reserves Project (BIRP). The reserve straddles two pentads (the 5' x 5' minute map units used for SABAP2), including the NW corner of pentad 3240_2630 and the NE sector of pentad 3240_2625 (SABAP2, accessed 13 December 2017). However, virtually all data collection has been within the map unit 3240_2625.

Prior to 2007, we visited the reserve on three occasions (September 1988, April 1989, August 1997) during student field trips lasting 3 days each. Birds were mist-netted, and species lists recorded for each visit; these data are discussed separately. Data are also available from the first bird atlas (SABAP1, Harrison *et al.* 1997), but the mapping unit at that time was a "quarter degree square" (15' x 15'), which covers a larger area than the reserve and thus incorporated the valley with dry thornveld vegetation. This is evident from the species list, which includes many taxa which have not been recorded subsequently when surveys were restricted to the forest and grassland areas within the reserve.

Results and Discussion

Avifauna

The SABAP1 list for the quarter degree square (map code 3226CB) incorporating Fort Fordyce Reserve has 211 species, but as noted above some of these are clearly birds of the low thornveld areas at the base of the pass which leads up to the plateau. Nevertheless all 86 species noted by AJFKC and PEH in the years 1988-1997 are included in the SABAP1 tally. The current list for the pentad 3240_2625, based on SABAP2, our surveys and mist-netting records, and the few additional BIRP data, is 175 species (Appendix 1); 18 of these species were not recorded during SABAP1. Three species recorded in the forest/grassland habitats in the period 1988-1997 have not been reported in this sector since then: spotted eagle-owl (*Bubo africanus*), long-billed pipit (*Anthus similis*) and golden-breasted bunting (*Emberiza flaviventris*). Of these, only the owl may be present regularly, since with few overnight stays, nocturnal birds are certainly under-reported; the other two species are likely to be occasional vagrants. For comparison, in three KwaZulu-Natal Afromontane forest reserves, Symes *et al.* (2002) recorded a total of 136

species, with no more than 110 species at any one site. However, these surveys extended over only 2-4 years at their study sites.

Species of conservation concern

Table 1 lists those species recorded at Fort Fordyce, which feature in the most recent “Red Data Book” for southern Africa (Taylor *et al.* 2015). The frequency with which these species have been recorded (cf. Appendix 1) suggests that most are only occasional visitors to the reserve. The endangered Cape parrot (*Poicephalus robustus*) has roosted here occasionally, but the large flocks seen feeding on pecan nuts on farms in the valley at certain seasons fly east in the direction of the Hogsback forests each evening (*pers. obs.*). Only the Knysna woodpecker (*Campethera notata*) is a confirmed breeding resident; the African crowned eagle (*Stephanoaetus coronatus*) probably also nests within the protected area, and the lanner falcon (*Falco biarmicus*) and bush blackcap (*Lioptilus nigricapillus*) may do so. There are historical records of southern ground hornbill (*Bucorvus leadbeateri*) from this site, but none within the past 50 years.

Table 1: Conservation status of Red Data species at Fort Fordyce

Common name	Scientific name	Red data status	Status in reserve
Cape parrot	<i>Poicephalus robustus</i>	Endangered	Occasional visitor
blue crane	<i>Anthropoides paradiseus</i>	Near-threatened	Occasional visitor
Knysna woodpecker	<i>Campethera notata</i>	Near-threatened	Breeding resident
striped flufftail	<i>Sarothrura affinis</i>	Vulnerable	Occasional visitor
Verreaux’s eagle	<i>Aquila verreauxi</i>	Vulnerable	Occasional visitor
African crowned eagle	<i>Stephanoaetus coronatus</i>	Vulnerable	Probable breeding resident
secretarybird	<i>Sagittarius serpentarius</i>	Vulnerable	Occasional visitor
lanner falcon	<i>Falco biarmicus</i>	Vulnerable	Possible breeding resident
bush blackcap	<i>Lioptilus nigricapillus</i>	Vulnerable	Possible breeding resident

Forest birds

The forest bird species in Table 2 are based on Skead (1967), who listed 74 species which occur in forest in the Eastern Cape, including riverine forest. However, of the species on his list, some do not extend as far west as the Kei River (e.g. eastern bronze-naped pigeon *Columba delegorguei*) or are restricted to coastal forests (e.g. red-capped robin-chat *Cossypha natalensis*), but we have included Barratt’s warbler (*Bradypterus barratti*) which he described as found “in scrub adjacent to forests” (Skead 1967 p. 81).

Table 2: Eastern Cape forest birds found at Fort Fordyce 2007-2017. E = endemic to southern Africa

Common name	Scientific name	Status in reserve
long-crested eagle	<i>Lophaetus occipitalis</i>	Resident
African crowned eagle	<i>Stephanoaetus coronatus</i>	Resident
forest buzzard	<i>Buteo trizonatus</i>	E Probable resident
rufous-breasted sparrowhawk	<i>Accipiter rufiventris</i>	Visitor
African goshawk	<i>Accipiter tachiro</i>	Resident
African harrier-hawk	<i>Polyboroides typus</i>	Resident
red-necked spurfowl	<i>Pternistis afer</i>	Resident
buff-spotted flufftail	<i>Sarothrura elegans</i>	Visitor

Table 2: (continued)

Common name	Scientific name	Status in reserve
African olive pigeon	<i>Columba arquatrix</i>	Resident
red-eyed dove	<i>Streptopelia semitorquata</i>	Resident
tambourine dove	<i>Turtur tympanistria</i>	Probable resident
lemon dove	<i>Columba larvata</i>	Resident
Cape parrot	<i>Poicephalus robustus</i>	E Visitor
Knysna turaco	<i>Tauraco corythaix</i>	Resident
red-chested cuckoo	<i>Cuculus solitarius</i>	Summer migrant
black cuckoo	<i>Cuculus clamosus</i>	Summer migrant
emerald cuckoo	<i>Chrysococcyx cupreus</i>	Summer migrant
barn owl	<i>Tyto alba</i>	Visitor?
African wood owl	<i>Strix woodfordii</i>	Probable resident
Narina trogon	<i>Apaloderma narina</i>	Resident
green wood-hoopoe	<i>Phoeniculus purpureus</i>	Probable resident
crowned hornbill	<i>Tockus alboterminatus</i>	Resident
red-fronted tinkerbird	<i>Pogoniulus pusillus</i>	Resident
scaly-throated honeyguide	<i>Indicator variegatus</i>	Probable resident
Knysna woodpecker	<i>Campethera notata</i>	E Resident
olive woodpecker	<i>Dendropicos griseocephalus</i>	Resident
grey cuckooshrike	<i>Coracina caesia</i>	Resident
black-headed oriole	<i>Oriolus larvatus</i>	Resident
bush blackcap	<i>Lioptilus nigricapillus</i>	E Possible resident
terrestrial brownbul	<i>Phyllastrephus terrestris</i>	Resident
sombre greenbul	<i>Andropadus importunus</i>	Resident
olive thrush	<i>Turdus olivaceus</i>	Resident
chorister robin-chat	<i>Cossypha dichroa</i>	E Resident
brown scrub-robin	<i>Cercotrichas signata</i>	E Probable resident
white-starred robin	<i>Pogonocichla stellata</i>	Probable resident
bar-throated apalis	<i>Apalis thoracica</i>	Resident
yellow-breasted apalis	<i>Apalis flavida</i>	Resident
green-backed camaroptera	<i>Camaroptera brachyura</i>	Resident
Barratt's warbler	<i>Bradypterus barratti</i>	E Resident
yellow-throated woodland warbler	<i>Phylloscopus ruficapilla</i>	Resident
African dusky flycatcher	<i>Muscicapa adusta</i>	Resident
Cape batis	<i>Batis capensis</i>	E Resident
blue-mantled crested-flycatcher	<i>Trochocercus cyanomelas</i>	Resident
African paradise-flycatcher	<i>Terpsiphone viridis</i>	Summer migrant
mountain wagtail	<i>Motacilla clara</i>	Probable resident
southern boubou	<i>Laniarius ferrugineus</i>	E Resident
black-backed puffback	<i>Dryoscopus cubla</i>	Resident
olive bush-shrike	<i>Chlorophoneus olivaceus</i>	Resident
orange-breasted bush-shrike	<i>Chlorophoneus sulfureopectus</i>	Visitor
red-winged starling	<i>Onychognathus morio</i>	Resident
southern double-collared sunbird	<i>Cinnyris chalybeus</i>	E Resident
grey sunbird	<i>Cyanomitra veroxii</i>	Resident
collared sunbird	<i>Anthodiaeta collaris</i>	Resident
Cape white-eye	<i>Zosterops virens</i>	E Resident

Table 2: (continued)

Common name	Scientific name	Status in reserve
dark-backed weaver	<i>Ploceus bicolor</i>	Resident
forest canary	<i>Crithagra scotops</i>	E Resident

Based on current distribution data in “Roberts VII” (Hockey *et al.* 2005), 66 species could occur in montane forests along the Amathole Mountain chain, and of this total, 56 have been recorded at Fort Fordyce to date. This is a significant proportion of the South African forest avifauna. Symes *et al.* (2002) found no significant seasonal variation in forest-specific or forest-endemic and near-endemic species during their surveys; 27 of their 33 “forest-specific” species were recorded at Fort Fordyce and none of these showed any seasonal pattern in occurrence.

Seasonal occurrence

How effective are visits spread over different months in different years at detecting patterns of seasonal occurrence? This can best be assessed by examining the records of known migrants in our database. Whereas the jackal buzzard (*Buteo rufofuscus*) has been seen in every month of the year, the steppe buzzard (*Buteo vulpinus*) has been recorded only from October to February. Four cuckoo species (African emerald *Chrysococcyx cupreus*, black *Cuculus clamosus*, Klaas’s *Chrysococcyx klaas*, and red-chested cuckoo *Cuculus solitarius*) have all been recorded for each of the months October to February; only Klaas’s cuckoo has been recorded at other times (March and April), and this species is known to overwinter in small numbers. The black saw-wing (*Psalidoprocne pristoptera*) and white-rumped swift (*Apus caffer*) have both been recorded in every month from September to March, with no records from April to August. A similar pattern is found in the three swallow species (barn *Hirundo rustica*, greater striped *Cecropis cucullata* and lesser striped swallows *Cecropis abyssinica*), with no winter records for any of them. This suggests that our sampling should be adequate to detect presence/absence of most species. What can we deduce about the forest birds as listed in Table 2?

Apart from the cuckoos mentioned above, only one of these forest species, the African paradise flycatcher (*Terpsiphone viridis*) (Figure 3), is primarily migratory in our area, and the records seem to reflect this with no reports from May to August - whereas the blue-mantled crested-flycatcher (*Trochocercus cyanomelas*) has been seen in every month of the year. For some species, however, we currently have too few records to draw any conclusions; these are discussed briefly below.



Figure 3: Male African paradise flycatcher (Photo Magi Nams)

There are < 5 records for the rufous-breasted sparrowhawk (*Accipiter rufiventris*), buff-spotted flufftail (*Sarothrura elegans*), Cape parrot, barn owl (*Tyto alba*), African wood owl (*Strix wood-*

fordii), tambourine dove (*Turtur tympanistria*), green wood-hoopoe (*Phoeniculus purpureus*), scaly-throated honeyguide (*Indicator variegatus*), bush blackcap (Figure 4), brown scrub-robin (*Cercotrichas signata*), mountain wagtail (*Motacilla clara*) and orange-breasted bush-shrike (*Telophorus sulfureopectus*).



Figure 4: Bush blackcap (Photo Magi Nams)

Of these species, we would speculate that the African wood owl, scaly-throated honeyguide, bush blackcap, brown scrub-robin and mountain wagtail could be rare residents within the reserve; the others are probably occasional visitors, and may be more common in the valleys below. With both summer and winter records for the forest buzzard (*Buteo trizonatus*), African goshawk (*Accipiter tachiro*) and African harrier-hawk (*Polyboroides typus*), they could be rare residents or merely irregular visitors.

For most of the other species, we have at least 15 records, while the southern boubou (*Laniarius ferrugineus*) and sombre greenbul (*Andropadus importunus*) have been recorded on every visit. Vernon (1989) discussed forest birds in the East London region, and mentioned six species with regular altitudinal movements between inland forests and the coast: grey cuckooshrike (*Coracina caesia*), bush blackcap, Cape robin-chat (*Cossypha caffra*), white-starred robin (*Pogonochla stellata*) (Figure 5), Barratt's warbler and yellow-throated warbler (*Setophaga dominica*) (Figure 6).



Figure 5: Immature white-starred robin (Photo Magi Nams)



Figure 6: Yellow-throated warbler (Photo Magi Nams)

The question of altitudinal movements has been discussed in more detail elsewhere (Craig and Hulley *in press*); it will be summarised briefly here. There is a winter record of bush black-caps from Grahamstown (Craig 1986), while Vernon (1989) noted that a high proportion of his observations of grey cuckooshrike, Cape robin-chat, Barratt's warbler and yellow-throated warbler at the coast were from the months Apr-Sept. Thus it is surprising that at Fort Fordyce all our records of Barratt's warbler are from this period (Apr-Sept), with no summer records to date. Vernon (1989), however, commented that in some years birds may not leave the montane forest, and for the white-starred robin, studies elsewhere have suggested that only a part of the population undertakes regular altitudinal movements (Oatley 1982, Dowsett 1985). At Fort Fordyce, we have recorded grey cuckooshrike, Cape robin-chat and yellow-throated warbler throughout the year, while for white-starred robin there are records for 10 months (Appendix 1). Chorister robin-chats (*Cossypha dichroa*) have been recorded in every month; Vernon (1989) categorised this species as resident, although Johnson and Maclean (1994) listed it among altitudinal migrants in KwaZulu-Natal. A chorister robin-chat ringed in July at Fort Fordyce was caught again in July the following year, confirming that some birds do stay through the winter.

Ringling

During visits up to 1997, 65 birds of 21 species were ringed. Since 2007 we have ringed 510 birds of 56 species (Appendix 2), thus capturing 32% of the species recorded, and 59% of the forest specialists (as listed by Symes *et al.* 2002, Brown 2006). We have recaptured 50 individuals (almost 10% of the ringed birds) from 17 species, with the oldest records an olive thrush (*Turdus olivaceus*) and a black-backed puffback (*Dryoscopus cubla*), both eight years after ringling. A green-backed camaroptera (*Camaroptera brachyura*), yellow-throated warbler, southern double-collared sunbird (*Cinnyris chalybeus*) and Cape white-eye (*Zosterops virens*) have been recaptured after more than six years, and a white-starred robin after four years. Few birds have been handled more than twice (Table 3); apart from the white-starred robin, these are all species for which our observations indicate that some birds, if not the same individuals, are present throughout the year (cf. Appendix 1). It is interesting to compare our ringling results with those of other ringers operating in forest sites in South Africa.

Also in Afromontane forest, Symes *et al.* (2002) ringed 403 birds at two inland forest reserves (Hlabeni and Ngele) in KwaZulu-Natal, capturing about 35% of all the species observed there, but > 50% of the forest-specific species. This paper provided no further details on the individual species ringed, nor information on recaptures. In a coastal forest reserve (Umdoni Park) in KwaZulu-Natal, Brown (2006) ringed 466 individual birds of 44 species, which comprised only 23% of the species recorded at this site, but again > 50% of the forest-specific species. Over a five-year period, Brown (2006) recaptured 8.6% of the birds ringed. His most-ringed species by far were bronze mannikin (*Lonchura cucullata*) and red-backed mannikin (*Lonchura nigriceps*) (neither of which occur at Fort Fordyce), followed by red-capped robin-chat and olive sunbird

Table 3: Ringed birds captured more than twice at Fort Fordyce

Species	Date ringed	Dates recaptured
black-backed puffback	Sept 2007	Apr 2008, Oct 2015
olive thrush	Dec 2014	Oct 2015, Jul, Oct 2017
chorister robin-chat	Feb 2015	Oct, Nov 2015
white-starred robin	Nov 2010	Oct 2011, Sept 2013, Oct 2014
green-backed camaroptera	Oct 2007	Apr, Jun 2008, Apr 2010
green-backed camaroptera	Sept 2009	Nov 2014, Nov 2015
Cape white-eye	Sept 2007	Apr 2010, Nov 2016
Cape white-eye	Apr 2010	Nov 2010, Oct 2011
Cape white-eye	Feb 2012	May 2012, Oct 2014
yellow-throated warbler	Oct 2007	Dec 2007, Dec 2008, Sept 2013
southern double-collared sunbird	Sept 2007	Oct 2011, Feb 2012
southern double-collared sunbird	May 2011	July 2015, July 2017

(*Cynomitra olivacea*) (both restricted to coastal forests in the Eastern Cape), brown scrub-robin and green-backed camaroptera.

Williams (2016) described an eleven-year ringing study in an Afromontane forest patch on the Drakensberg escarpment in Mpumalanga. At this site, 384 birds of 43 species were ringed, and 53 individuals of 10 species recaptured. The most frequently ringed species were Cape robin-chat, black-backed puffback, Knysna turaco (*Tauraco corythaix*), chorister robin-chat, Cape batis (*Batis capensis*), green-backed camaroptera, blue-mantled crested flycatcher and terrestrial brownbul (*Phyllastrephus terrestris*) (all > 20 individuals).

All of these species (except the blue-mantled crested flycatcher) have been captured at Fort Fordyce, and all were found to be present throughout the year. However, whereas Williams (2016) captured only 9 sunbirds of five species, at Fort Fordyce the southern double-collared sunbird was one of our most-ringed birds (> 40 individuals). We also caught far more sombre greenbuls than terrestrial brownbuls (see Appendix 2), the reverse of Williams (2016) capture rates; this could be influenced by net positioning at the two sites.

Conclusions

A significant proportion of the regional forest avifauna is found within the Fort Fordyce reserve, and some individuals of all species appear to be present throughout the year. Ringing to date has produced no evidence of movement between this protected area and other localities. While we currently lack good information on breeding status, and breeding success, of these forest species, it is clear that this reserve constitutes a valuable conservation area for forest birds in the Eastern Cape.

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Appendices

Appendix 1: Observations (sight and sound) of birds at Fort Fordyce; own records and SABAP2 data

Common name	Scientific name	Records	Months (min 12 records)	
			Present	Not recorded
apalis, bar-throated	<i>Apalis thoracica</i>	48	1-12	
apalis, yellow-breasted	<i>Apalis flavida</i>	21	1-3,5-12	4
barbet, black-collared	<i>Lybius torquatus</i>	3		
batis, Cape	<i>Batis capensis</i>	53	1-12	
batis, chinspot	<i>Batis molitor</i>	2		
bishop, yellow	<i>Euplectes capensis</i>	21	2,5-10,12	1,3,4,11
blackcap, bush	<i>Lioptilus nigricapillus</i>	2		
bokmakierie	<i>Telophorus zeylonus</i>	5		
boubou, southern	<i>Laniarius ferrugineus</i>	59	1-12	
brownbul, terrestrial	<i>Phyllastrephus terrestris</i>	39	1-12	
bulbul, dark-capped	<i>Pycnonotus tricolor</i>	54	1-12	
bush-shrike, orange-breasted	<i>Chlorophoneus sulphureopectus</i>	1		
bush-shrike, olive	<i>Chlorophoneus olivaceus</i>	32	1-12	
buzzard, forest	<i>Buteo trizonatus</i>	6		
buzzard, jackal	<i>Buteo rufofuscus</i>	28	1-12	
buzzard, steppe	<i>Buteo vulpinus</i>	18	1,2,10-12	3-9
camaroptera, green-backed	<i>Camaroptera brachyura</i>	49	1-12	
canary, brimstone	<i>Crithagra sulphuratus</i>	12	2,6,7,9-12	1,3-5,8
canary, Cape	<i>Serinus canicollis</i>	43	1,2,4-12	3
canary, forest	<i>Crithagra scotops</i>	50	1-12	
canary, yellow-fronted	<i>Crithagra mozambicus</i>	25	2-12	1
chat, familiar	<i>Cercolmela familiaris</i>	3		
cisticola, grey-backed	<i>Cisticola subruficapilla</i>	2		
cisticola, lazy	<i>Cisticola aberrans</i>	41	1-12	
cisticola, Levaillant's	<i>Cisticola tinniens</i>	8		
cisticola, wailing	<i>Cisticola lais</i>	12	2,4,7,9-12	1,3,5,6,8
cliff-chat, mocking	<i>Thamnolaea cinnamomeiventris</i>	1		
cormorant, reed	<i>Phalacrocorax africanus</i>	2		
cormorant, white-breasted	<i>Phalacrocorax carbo</i>	1		
coucal, Burchell's	<i>Centropus burchelli</i>	1		
crane, blue	<i>Anthropoides paradiseus</i>	3		
crested-flycatcher, blue-mantled	<i>Trochocercus cyanomelas</i>	27	1-12	
crombec, long-billed	<i>Sylvietta rufescens</i>	1		
crow, Cape	<i>Corvus capensis</i>	54	1-12	
crow, Pied	<i>Corvus albus</i>	4		
cuckoo, African emerald	<i>Chrysococcyx cupreus</i>	11	1,2,10-12	3-9
cuckoo, black	<i>Cuculus clamosus</i>	17	1,2,10-12	3-9
cuckoo, diderick	<i>Chrysococcyx caprius</i>	2		
cuckoo, Klaas's	<i>Chrysococcyx klaas</i>	16	1,3,4,10-12	2,5-9
cuckoo, red-chested	<i>Cuculus solitarius</i>	17	1,2,10-12	3-9
cuckoo-shrike, black	<i>Campephaga flava</i>	2		
cuckoo-shrike, grey	<i>Coracina caesia</i>	22	1,2,4-12	3
dove, laughing	<i>Streptopelia senegalensis</i>	2		
dove, lemon	<i>Aplopelia larvata</i>	13	1-12	
dove, red-eyed	<i>Streptopelia semitorquata</i>	33	1-12	
dove, rock	<i>Columba livia</i>	1		
dove, tambourine	<i>Turtur tympanistria</i>	4		
drongo, fork-tailed	<i>Dicrurus adsimilis</i>	35	1-12	

(Appendix 1 continued)

Common name	Scientific name	Records	Months (min 12 records)	
			Present	Not recorded
duck, yellow-billed	<i>Anas undulata</i>	2		
eagle, African crowned	<i>Stephanoaetus coronatus</i>	19	1,2,4-9,11,12	3,10
eagle, booted	<i>Aquila pennatus</i>	6		
eagle, long-crested	<i>Lophaelus occipitalis</i>	19	2-8,10-12	1,9
eagle, Verreaux's	<i>Aquila verreauxii</i>	2		
falcon, lanner	<i>Falco biarmicus</i>	3		
falcon, peregrine	<i>Falco peregrinus</i>	1		
firefinch, African	<i>Lagonosticta rubricata</i>	15	1-6,8-10,12	7,11
fiscal, common	<i>Lanius collaris</i>	37	2-12	1
flufftail, buff-spotted	<i>Sarothrura elegans</i>	1		
flufftail, striped	<i>Sarothrura affinis</i>	3		
flycatcher, African dusky	<i>Muscicapa adusta</i>	38	1-4,7-12	5,6
flycatcher, fiscal	<i>Sigelus silens</i>	1		
flycatcher, spotted	<i>Muscicapa striata</i>	2		
francolin, grey-winged	<i>Scleroptila afra</i>	2		
goose, Egyptian	<i>Alopochen aegyptiacus</i>	2		
goshawk, African	<i>Accipiter tachiro</i>	8		
goshawk, gabar	<i>Melierax gabar</i>	2		
goshawk, southern pale chanting	<i>Melierax canorus</i>	1		
grassbird, Cape	<i>Sphenoeacus afer</i>	13	2,3,5,8-10,12	1,4,6,7,11
greenbul, sombre	<i>Andropadus importunus</i>	59	1-12	
guineafowl, helmeted	<i>Numida meleagris</i>	3		
hamerkop	<i>Scopus umbretta</i>	1		
harrier, black	<i>Circus maurus</i>	1		
harrier-hawk, African	<i>Polyboroides typus</i>	12	1,2,4,8,9,12	3,5-7,10,12
heron, black-headed	<i>Ardea melanocephala</i>	2		
heron, grey	<i>Ardea cinerea</i>	1		
honeybird, brown-backed	<i>Prodotiscus regulus</i>	1		
honeyguide, greater	<i>Indicator indicator</i>	1		
honeyguide, lesser	<i>Indicator minor</i>	5		
honeyguide, scaly-throated	<i>Indicator variegatus</i>	1		
hoopoe, African	<i>Upupa africana</i>	3		
hornbill, crowned	<i>Tockus alboterminatus</i>	16	3-11	1,2,12
house-martin, common	<i>Delichon urbicum</i>	2		
ibis, African sacred	<i>Threskiornis aethiopicus</i>	1		
ibis, hadeda	<i>Bostrychia hagedash</i>	38	1-5,7-12	6
indigobird, dusky	<i>Vidua funerea</i>	2		
kestrel, rock	<i>Falco rupicolus</i>	1		
kingfisher, brown-hooded	<i>Halcyon albiventris</i>	1		
kite, black-shouldered	<i>Elanus caeruleus</i>	6		
kite, yellow-billed	<i>Milvus aegyptius</i>	1		
lapwing, black-winged	<i>Vanellus melanopterus</i>	1		
lapwing, blacksmith	<i>Vanellus armatus</i>	1		
lapwing, crowned	<i>Vanellus coronatus</i>	1		
longclaw, Cape	<i>Macronyx capensis</i>	8		
martin, rock	<i>Hirundo fuligula</i>	12	2,6,9-12	1,3-5,7,8
moorhen, common	<i>Gallinula chloropus</i>	2		
mousebird, red-faced	<i>Urocolius indicus</i>	7		
mousebird, speckled	<i>Colius striatus</i>	32	1-12	
neddicky	<i>Cisticola fulvicapilla</i>	16	1-3,6-12	4,5
nightjar, fiery-necked	<i>Caprimulgus rufigena</i>	1		
olive-pigeon, African	<i>Columba arquatrix</i>	32	1-12	

(Appendix 1 continued)

Common name	Scientific name	Records	Months (min 12 records)	
			Present	Not recorded
oriole, black-headed	<i>Oriolus larvatus</i>	51	1-12	
owl, barn	<i>Tyto alba</i>	1		
paradise-flycatcher, African	<i>Terpsiphone viridis</i>	13	1,4,9-12	2,3,5-8
parrot, Cape	<i>Poicephalus robustus</i>	1		
petronia, yellow-throated	<i>Petronia superciliaris</i>	2		
pigeon, speckled	<i>Columba guinea</i>	4		
pipit, African	<i>Anthus cinnamomeus</i>	10		
pipit, plain-backed	<i>Anthus leucophrys</i>	2		
prinia, Karoo	<i>Prinia maculosa</i>	30	1-12	
prinia, tawny-flanked	<i>Prinia subflava</i>	5		
puffback, black-backed	<i>Dryoscopus cubla</i>	55	1-12	
quail, common	<i>Coturnix coturnix</i>	2		
raven, white-necked	<i>Corvus albicollis</i>	19	1-5,7-12	6
robin, white-starred	<i>Pogonocichla stellata</i>	21	3-12	1,2
robin-chat, Cape	<i>Cossypha caffra</i>	48	1-12	
robin-chat, chorister	<i>Cossypha dichroa</i>	40	1-12	
rock-thrush, Cape	<i>Monticola rupestris</i>	1		
saw-wing, black	<i>Psaldoprocne holomelaena</i>	18	1-3,9-12	4-8
scrub-robin, brown	<i>Cercotrichas signata</i>	2		
scrub-robin, white-browed	<i>Cercotrichas leucophrys</i>	2		
secretarybird	<i>Sagittarius serpentarius</i>	4		
seedeater, streaky-headed	<i>Crithagra gularis</i>	5		
shrike, red-backed	<i>Lanius collurio</i>	3		
sparrowhawk, rufous-breasted	<i>Accipiter rufiventris</i>	1		
spurfowl, red-necked	<i>Pternistis afer</i>	40	1-12	
starling, Cape glossy	<i>Lamprotornis nitens</i>	12	4,7,8,11,12	1-3,5,6,9,10
starling, common	<i>Sturnus vulgaris</i>	2		
starling, pied	<i>Lamprotornis bicolor</i>	1		
starling, red-winged	<i>Onychognathus morio</i>	55	1-12	
stonechat, African	<i>Saxicola torquatus</i>	32	2-12	1
stork, white	<i>Ciconia ciconia</i>	1		
sunbird, amethyst	<i>Chalcomitra amethystina</i>	31	1-5,7-12	6
sunbird, collared	<i>Hedydipna collaris</i>	31	1-12	
sunbird, greater double-collared	<i>Cinnyris afer</i>	30	1-12	
sunbird, grey	<i>Cyanomitra veroxii</i>	17	1,5,7-12	2-4,6
sunbird, malachite	<i>Nectarinia famosa</i>	6		
sunbird, southern double-collared	<i>Cinnyris chalybeus</i>	45	1-12	
swallow, barn	<i>Hirundo rustica</i>	13	1-3,10-12	4-9
swallow, greater striped	<i>Hirundo cucullata</i>	15	1-4,9,11,12	5-8,10
swallow, lesser striped	<i>Hirundo abyssinica</i>	24	1-3,9-12	4-8
swallow, white-throated	<i>Hirundo albigularis</i>	6		
swift, African black	<i>Apus barbatus</i>	13	2,3,7,9-12	1,4-6,8
swift, alpine	<i>Tachymarptis melba</i>	8		
swift, horus	<i>Apus horus</i>	1		
swift, little	<i>Apus affinis</i>	3		
swift, white-rumped	<i>Apus caffer</i>	18	1-3,9-12	4-8
tchagra, southern	<i>Tchagra tchagra</i>	13	2,3,5-12	1,4
thick-knee, spotted	<i>Burhinus capensis</i>	4		
thrush, olive	<i>Turdus olivaceus</i>	39	1-12	
tinkerbird, red-fronted	<i>Pogoniulus pusillus</i>	32	1-12	
tit, southern black	<i>Parus niger</i>	17	1-3,5-11	4,12
trogon, Narina	<i>Apaloderma narina</i>	13	6,7,9-12	1-5,8

(Appendix 1 continued)

Common name	Scientific name	Records	Months (min 12 records)	
			Present	Not recorded
turaco, Knysna	<i>Tauraco corythaix</i>	46	1-12	
turtle-dove, Cape	<i>Streptopelia capicola</i>	30	1-12	
wagtail, Cape	<i>Motacilla capensis</i>	41	2-12	1
wagtail, mountain	<i>Motacilla clara</i>	2		
warbler, Barratt's	<i>Bradypterus barratti</i>	20	4-10	1-3,11,12
warbler, willow	<i>Phylloscopus trochilus</i>	3		
waxbill, common	<i>Estrilda astrild</i>	9		
waxbill, swee	<i>Coccyzygia melanotis</i>	19	1-4,6,9-12	5,7,8
weaver, Cape	<i>Ploceus capensis</i>	4		
weaver, dark-backed	<i>Ploceus bicolor</i>	35	1-12	
weaver, spectacled	<i>Ploceus ocularis</i>	1		
weaver, thick-billed	<i>Amblyospiza albifrons</i>	2		
weaver, village	<i>Ploceus cucullatus</i>	1		
white-eye, Cape	<i>Zosterops virens</i>	56	1-12	
whydah, pin-tailed	<i>Vidua macroura</i>	3		
widowbird, red-collared	<i>Euplectes ardens</i>	1		
wood-dove, emerald-spotted	<i>Turtur chalcospilos</i>	7		
wood-hoopoe, green	<i>Phoeniculus purpureus</i>	3		
wood-owl, African	<i>Strix woodfordii</i>	3		
warbler, yellow-throated	<i>Phylloscopus ruficapilla</i>	32	2-12	1
woodpecker, cardinal	<i>Dectopicos fuscescens</i>	1		
woodpecker, Knysna	<i>Campethera notata</i>	29		
woodpecker, olive	<i>Dendropicos griseocephalus</i>	25	1-10,12	11

Appendix 2: Records of birds ringed at Fort Fordyce

Common name	1988-1997	2007-2017	Total	Recaptures	Max. time since ringing
apalis, bar-throated		9	9		
batis, Cape	3	14	17		
bishop, yellow	5	37	42	5	23 months
blackcap, bush		1	1		
boubou, southern	3	11	14	1	3 months
brownbul, terrestrial		3	3	1	33 months
bulbul, dark-capped		4	4		
bunting, golden-breasted	1		1		
bush-shrike, olive		3	3		
camaroptera, green-backed	1	16	17	3	74 months
canary, brimstone	2	1	3		
canary, forest	4	16	20	1	16 months
canary, yellow-fronted	1	2	3		
cisticola, lazy	1	8	9	1	1 month
cuckoo, black		1	1		
cuckoo, diderick		1	1		
cuckoo, red-chested		4	4		
cuckoo, Klaas'		1	1		
dove, lemon		4	4		
drongo, fork-tailed		1	1		
firefinch, African	4	1	5		
fiscal, common	1	1	2		
flycatcher, African dusky	1	8	9	1	14 months
goshawk, African		2	2		
greenbul, sombre	2	33	35	4	14 months
honeyguide, lesser		1	1		
mousebird, speckled	3	1	4		
neddicky		1	1		
oriole, black-headed	3		3		
paradise-flycatcher, African		1	1		
prinia, Karoo		2	2		
puffback, black-backed		4	4	1	97 months
robin, white-starred		8	8	2	48 months
robin-chat, Cape	1	12	13	5	25 months
robin-chat, chorister		19	19	3	12 months
seedeater, streaky-headed		2	2		
starling, red-winged		4	4		
stonechat, African	1	4	5		
sunbird, amethyst	1		1		
sunbird, collared		6	6		
sunbird, greater double-collared	2	7	9	3	23 months
sunbird, grey		3	3		
sunbird, malachite		1	1		
sunbird, southern double-collared	4	44	48	3	74 months
swallow, lesser striped		1	1		
thrush, olive	5	21	26	3	95 months
turaco, Knysna		1	1		
wagtail, Cape		1	1		
wagtail, mountain		1	1		
warbler, Barratt's		2	2		
waxbill, swee		3	3		
weaver, dark-backed		2	2		

(Appendix 2 continued)

Common name	1988-1997	2007-2017	Total	Recaptures	Max. time since ringing
white-eye, Cape	16	173	189	15	79 months
warbler, yellow-throated		5	5	1	71 months
woodpecker, Knysna		3	3		
woodpecker, olive		1	1		
Totals	65	510	575	53	