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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).
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).
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.

| Common name               | Scientific name          | Red data status  | Status in reserve          |
|---------------------------|--------------------------|------------------|-----------------------------|
| Cape parrot               | Poicephalus robustus     | Endangered       | Occasional visitor          |
| blue crane                | Anthropoides paradiseus  | Near-threatened  | Occasional visitor          |
| Knysna woodpecker         | Campethera notata        | Near-threatened  | Breeding resident           |
| striped flufftail         | Sarothrura affinis       | Vulnerable       | Occasional visitor          |
| Verreaux’s eagle          | Aquila verreauxi         | Vulnerable       | Occasional visitor          |
| African crowned eagle     | Stephanoaetus coronatus  | Vulnerable       | Probable breeding resident  |
| secretarybird             | Sagittarius serpentarius| Vulnerable       | Occasional visitor          |
| lanner falcon             | Falco biarmicus          | Vulnerable       | Possible breeding resident  |
| bush blackcap             | Lioptilus nigricapillus  | 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        | Lophaetus occipitalis    | Resident                    |
| African crowned eagle     | Stephanoaetus coronatus  | Resident                    |
| forest buzzard            | Buteo trizonatus         | E Probable resident         |
| rufous-breasted sparrowhawk| Accipiter rufiventris    | Visitor                     |
| African goshawk           | Accipiter tachiro        | Resident                    |
| African harrier-hawk      | Polyboroides typus       | Resident                    |
| red-necked spurfowl       | Pternistis afer          | Resident                    |
| buff-spotted flufftail    | Sarothrura elegans       | Visitor                     |
Table 2: (continued)

| Common name                  | Scientific name                  | Status in reserve       |
|------------------------------|----------------------------------|-------------------------|
| African olive pigeon         | Columba arquatrix                | Resident                |
| red-eyed dove                | Streptopelia semitorquata        | Resident                |
| tambourine dove              | Turtur tympanistria              | Probable resident       |
| lemon dove                   | Columba larvata                  | Resident                |
| Cape parrot                  | Poicephalus robustus             | E Visitor               |
| Knysna turaco                | Tauraco corythaix                | Resident                |
| red-chested cuckoo           | Cuculus solitarius              | Summer migrant          |
| black cuckoo                 | Cuculus clamosus                 | Summer migrant          |
| emerald cuckoo               | Chrysococcyx cupreus             | Summer migrant          |
| barn owl                     | Tyto alba                        | Visitor?                |
| African wood owl             | Strix woodfordii                 | Probable resident       |
| Narina trogon                | Apaloderma narina                | Resident                |
| green wood-hoopoe            | Phoeniculus purpureus            | Probable resident       |
| crowned hornbill             | Tockus alboterminatus            | Resident                |
| red-fronted tinkerbird       | Pogoniulus pusillus              | Resident                |
| scaly-throated honeyguide    | Indicator variegatus             | Probable resident       |
| Knysna woodpecker            | Campethera notata                | E Resident              |
| olive woodpecker             | Dendropicos griseocephalus       | Resident                |
| grey cuckoooshrike           | Coracina caesia                  | Resident                |
| black-headed oriole          | Oriolus larvatus                 | Resident                |
| bush blackcap                | Lioptilus nigricapillus          | E Possible resident     |
| terrestrial brownbul         | Phyllastrephus terrestris        | Resident                |
| sombre greenbul              | Andropadus importunus            | Resident                |
| olive thrush                 | Turdus olivaceus                 | Resident                |
| chorister robin-chat         | Cosypha dichroa                  | E Resident              |
| brown scrub-robin            | Cercotrichas signata             | E Probable resident     |
| white-starred robin          | Pogonochila stellata             | Probable resident       |
| bar-throated apalis          | Apalis thoracica                 | Resident                |
| yellow-breasted apalis       | Apalis flaviga                   | Resident                |
| green-backed camaroptera     | Camaroptera brachyura            | Resident                |
| Barratt’s warbler            | Bradypterus barratti             | E Resident              |
| yellow-throated woodland warbler | Phylloscopus ruficapilla         | Resident                |
| African dusky flycatcher     | Muscicapa adusta                 | Resident                |
| Cape batis                   | Batis capensis                   | E Resident              |
| blue-mantled crested-flycatcher | Trochocercus cyanomelas         | Resident                |
| African paradise-flycatcher  | Terpsiphone viridis              | Summer migrant          |
| mountain wagtail             | Motacilla Clara                  | Probable resident       |
| southern boubou              | Laniarius ferrugineus            | E Resident              |
| black-backed puffback        | Dryoscopus cubla                 | Resident                |
| olive bush-shrike            | Chlorophoneus olivaceus          | Resident                |
| orange-breasted bush-shrike  | Chlorophoneus sulphuropectus     | Visitor                 |
| red-winged starling          | Onychognathus morio              | Resident                |
| southern double-collared sunbird | Cinnyris chalybeus            | E Resident              |
| grey sunbird                 | Cyanomitra veroxii               | Resident                |
| collared sunbird             | Anthodiusa collaris              | Resident                |
| Cape white-eye               | Zosterops virens                 | E Resident              |
Table 2: (continued)

| Common name       | Scientific name | Status in reserve |
|-------------------|-----------------|-------------------|
| dark-backed weaver| *Ploceus bicolor* | Resident          |
| forest canary     | *Crithagra scotops* | 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 ruffuscus*) 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)](image)

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-fourth*).
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 sultureopectus).

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 (Pogonocichla stellata) (Figure 5), Barratt’s warbler and yellow-throated warbler (Setophaga dominica) (Figure 6).
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 blackcaps from Grahamstown (Craig 1986), while Vernon (1989) noted that a high proportion of his observations of grey cuckoo-shrike, 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 cuckoo-shrike, 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.

Ringing

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 ringing. 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 ringing 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         | Apalis thoracica                 | 48      | 1-12                    |         |              |
| apalis, yellow-breasted      | Apalis flavida                   | 21      | 1-3, 5-12               | 4       |              |
| barbet, black-collared       | Lybius torquatus                 | 3       |                         |         |              |
| batis, Cape                  | Batis capensis                   | 53      | 1-12                    |         |              |
| batis, chinspot              | Batis molitor                    | 2       |                         |         |              |
| bishop, yellow               | Euplectes capensis               | 21      | 2, 5-10, 12             | 1, 3, 4, 11 |              |
| blackcap, bush               | Liopptilus nigricapillus         | 2       |                         |         |              |
| bokmokari                     | Telophorus zeylonus              | 5       |                         |         |              |
| boubou, southern             | Laniarius ferrugineus            | 59      | 1-12                    |         |              |
| brownbul, terrestrial        | Phyllastrephus terrestalis       | 39      | 1-12                    |         |              |
| bulbul, dark-capped          | Pycnonotus tricolor              | 54      | 1-12                    |         |              |
| bush-shrike, orange-breasted | Chlorophoneus sulphureopectus    | 1       |                         |         |              |
| bush-shrike, olive            | Chlorophoneus olivaceus          | 32      | 1-12                    |         |              |
| buzzard, forest              | Buteo trizonatus                 | 6       |                         |         |              |
| buzzard, jackal              | Buteo rufocinclus                | 28      | 1-12                    |         |              |
| buzzard, steppe              | Buteo vulpinus                   | 18      | 1, 2, 10-12             | 3, 9    |              |
| camaroptera, green-backed    | Camaroptera brachyura            | 49      | 1-12                    |         |              |
| canary, brimstone            | Crithagra sulphuratus            | 12      | 2, 6, 7, 9-12           | 1, 3, 5, 8 |              |
| canary, Cape                 | Serinus canicollis               | 43      | 1, 2, 4-12              | 3       |              |
| canary, forest               | Crithagra scotos                 | 50      | 1-12                    |         |              |
| canary, yellow-fronted       | Crithagra mozambicus             | 25      | 2-12                    |         |              |
| chat, familiar               | Cercolmela familiaris            | 3       |                         |         |              |
| cisticola, grey-backed       | Cisticola subrubricapilla        | 2       |                         |         |              |
| cisticola, lazy              | Cisticola aberrans               | 41      | 1-12                    |         |              |
| cisticola, Levallant’s       | Cisticola tinniens               | 8       |                         |         |              |
| cisticola, wailing           | Cisticola lais                   | 12      | 2, 4, 7, 9-12           | 1, 3, 5, 6, 8 |              |
| cliff-chat, mocking          | Thamnolaea cinnamomeiventris    | 1       |                         |         |              |
| cormorant, reed              | Phalacrocorax africanus          | 2       |                         |         |              |
| cormorant, white-breasted    | Phalacrocorax carbo              | 1       |                         |         |              |
| coucal, Burchell’s           | Centropus burchelli              | 1       |                         |         |              |
| crane, blue                  | Anthropoides paradiseus          | 3       |                         |         |              |
| crested-flycatcher, blue-mantled | Trochocercus cyanomelas    | 27      | 1-12                    |         |              |
| crombec, long-billed         | Sylvietta rufescens              | 1       |                         |         |              |
| crow, Cape                   | Corvus capensis                  | 54      | 1-12                    |         |              |
| crow, Pied                   | Corvus albus                     | 4       |                         |         |              |
| cuckoo, African emerald      | Chrysococcyx cupreus             | 11      | 1, 2, 10-12             | 3, 9    |              |
| cuckoo, black                | Cuculus clamosus                 | 17      | 1, 2, 10-12             | 3, 9    |              |
| cuckoo, diderick             | Chrysococcyx caprius             | 2       |                         |         |              |
| cuckoo, Klaas’s              | Chrysococcyx klaas               | 16      | 1, 3, 4, 10-12          | 2, 5-9  |              |
| cuckoo, red-chested          | Cuculus solitarius               | 17      | 1, 2, 10-12             | 3-9     |              |
| cuckoo-shrike, black         | Campephaga flavia                | 2       |                         |         |              |
| cuckoo-shrike, grey          | Coracina caesia                  | 22      | 1, 2, 4-12              | 3       |              |
| dove, laughing               | Streptopelia senegalensis        | 2       |                         |         |              |
| dove, lemon                  | Alopela larvata                  | 13      | 1-12                    |         |              |
| dove, red-eyed               | Streptopelia semitorquata        | 33      | 1-12                    |         |              |
| dove, rock                   | Columba livia                    | 1       |                         |         |              |
| dove, tambourine             | Turtur tympanistria              | 4       |                         |         |              |
| drongo, fork-tailed          | Dicrurus adsimilis               | 35      | 1-12                    |         |              |
### (Appendix 1 continued)

| Common name                      | Scientific name               | Records | Months (min 12 records) |
|----------------------------------|-------------------------------|---------|-------------------------|
| duck, yellow-billed              | *Anas undulata*               | 2       | 1, 2, 4-9, 11, 12, 3, 10|
| eagle, African crowned           | *Stephaenoaetus coronatus*    | 19      | 2, 4-9, 11, 12          |
| eagle, booted                    | *Aquila pennatus*             | 6       |                         |
| eagle, long-crested              | *Lophaetus occipitalis*       | 19      | 2-8, 10-12, 1, 9       |
| eagle, Verreaux’s                | *Aquila verreauxii*           | 2       |                         |
| falcon, lanner                   | *Falco biarminicus*           | 3       |                         |
| falcon, peregrine                | *Falco peregrinus*            | 1       |                         |
| firefinch, African               | *Lagonosticta rubricata*      | 15      | 1-6, 8-10, 12, 7, 11   |
| fiscal, common                   | *Lanius collaris*             | 37      | 2-12                    |
| flufftail, buff-spotted          | *Sarothrura elegans*          | 1       |                         |
| flufftail, striped               | *Sarothrura affinis*          | 3       |                         |
| flycatcher, African dusky        | *Muscicapa adusta*            | 38      | 1-4, 7-12, 5, 6        |
| flycatcher, fiscal               | *Sigelus silens*              | 1       |                         |
| flycatcher, spotted              | *Muscicapa striata*           | 2       |                         |
| francolin, grey-winged           | *Scleroptila atra*            | 2       |                         |
| goose, Egyptian                  | *Alopochen aegyptiacus*       | 2       |                         |
| goshawk, African                 | *Accipter tachiro*            | 8       |                         |
| goshawk, gabar                   | *Meliarax gabor*              | 2       |                         |
| goshawk, southern pale chanting  | *Meliarax canorus*            | 1       |                         |
| grassbird, Cape                  | *Sphenoeacus afer*            | 13      | 2, 3, 5, 8-10, 12, 1, 4, 6, 7, 11 |
| greenbun, sombre                 | *Andropodus importunus*       | 59      | 1-12                    |
| guineafowl, helmeted              | *Numida meleagris*            | 3       |                         |
| hamerkop                          | *Scopus umbretta*             | 1       |                         |
| harrier, black                    | *Circus maurus*               | 1       |                         |
| harrier-hawk, African            | *Polyboroides typus*          | 12      | 1, 2, 4, 8, 9, 12, 3, 5-7, 10, 12 |
| heron, black-headed              | *Ardea melanocephala*         | 2       |                         |
| heron, grey                       | *Ardea cinerea*               | 1       |                         |
| honeybird, brown-backed          | *Prodotiscus regulus*         | 1       |                         |
| honeyguide, greater              | *Indicator indicator*         | 1       |                         |
| honeyguide, lesser               | *Indicator minor*             | 1       |                         |
| honeyguide, scaly-throated       | *Indicator variegatus*        | 1       |                         |
| hoopoe, African                  | *Upupa africana*              | 3       |                         |
| hornbill, crowned                | *Tockus alboterminatus*       | 16      | 3-11                    |
| house-martin, common             | *Delichon urbicum*            | 2       |                         |
| ibis, African sacred             | *Threskiornis aethiopicus*    | 1       |                         |
| ibis, hadeda                     | *Bostrychia hagedash*         | 38      | 1-5, 7-12, 6            |
| indigobird, dusky                | *Vidua funerea*               | 2       |                         |
| kestrel, rock                    | *Falco rupicolus*             | 1       |                         |
| kingfisher, brown-hooded         | *Halcyon albiventris*         | 1       |                         |
| kite, black-shouldered           | *Elanus caerulesus*           | 6       |                         |
| kite, yellow-billed              | *Milvus aegyptius*            | 1       |                         |
| lapwing, black-winged            | *Vanellus melanopterus*       | 1       |                         |
| lapwing, blacksmith              | *Vanellus armatus*            | 1       |                         |
| lapwing, crowned                 | *Vanellus coronatus*          | 1       |                         |
| longclaw, Cape                   | *Macronyx capensis*           | 8       |                         |
| martin, rock                     | *Hirundo fulgula*             | 12      | 2, 6, 9-12, 1, 3-5, 7, 8|
| moorhen, common                  | *Gallinula chloropus*         | 2       |                         |
| mousebird, red-faced             | *Urocolius indicus*           | 7       |                         |
| mousebird, speckled              | *Colius striatus*             | 32      | 1-12                    |
| neddicky                         | *Cisticola fulvicapilla*      | 16      | 1-3, 6-12, 4, 5        |
| nightjar, fiery-necked           | *Caprimulgus rufusgena*       | 1       |                         |
| olive-pigeon, African            | *Columba arquatrix*          | 32      | 1-12                    |
## Birds of Fort Fordyce Reserve

(Appendix 1 continued)

| Common name                      | Scientific name        | Records | Months (min 12 records) | Present | Not recorded |
|----------------------------------|------------------------|---------|-------------------------|---------|--------------|
| oriole, black-headed             | Oriolus larvatus       | 51      | 1-12                    |         |              |
| owl, barn                        | Tyto alba              | 1       |                         |         |              |
| paradise-flycatcher, African     | Terpsiphone viridis    | 13      | 1,4,9-12                | 2,3,5-8 |              |
| parrot, Cape                     | Poicephalus robustus   | 1       |                         |         |              |
| petronia, yellow-throated        | Petronia superciliaris | 2       |                         |         |              |
| pigeon, speckled                 | Columba guinea         | 4       |                         |         |              |
| pipit, African                   | Anthus cinnamomeus     | 10      |                         |         |              |
| pipit, plain-backed              | Anthus leucophrys      | 2       |                         |         |              |
| prinia, Karoo                    | Prinia maculosa        | 30      | 1-12                    |         |              |
| prinia, tawny-flanked            | Prinia subflava        | 5       |                         |         |              |
| puffback, black-backed           | Dryoscopus cubla       | 55      | 1-12                    |         |              |
| quail, common                    | Columbina colurnix     | 2       |                         |         |              |
| raven, white-necked              | Corvus albus           | 19      | 1-5,7-12                | 6       |              |
| robin, white-starred             | Pogonichila stellata   | 21      | 3-12                    | 1,2     |              |
| robin-chat, Cape                 | Cossypha caffra        | 48      | 1-12                    |         |              |
| robin-chat, chorister            | Cossypha dichroa       | 40      | 1-12                    |         |              |
| rock-thrush, Cape                | Monticola rupetris     | 1       |                         |         |              |
| saw-wing, black                  | Psalidoprocne hoelomelaena | 18 | 1-3,9-12                | 4-8     |              |
| scrub-robin, brown               | Cercotrichas signata   | 2       |                         |         |              |
| scrub-robin, white-browed        | Cercotrichas leucophrys| 2       |                         |         |              |
| secretarybird                    | Sagittarius serpentarius| 4   |                         |         |              |
| seedeater, streaky-headed        | Crithagra gularis      | 5       |                         |         |              |
| shrike, red-backed               | Lanius collurio        | 3       |                         |         |              |
| sparrowhawk, rufus-breasted      | Accipiter rufinventris | 1       |                         |         |              |
| spurfowl, red-necked             | Ptternistis afer       | 40      | 1-12                    |         |              |
| starling, Cape glossy            | Lamprotornis nitens   | 12      | 4,7,8,11,12             | 1-3,5,6,9,10 |              |
| starling, common                 | Sturnus vulgaris       | 2       |                         |         |              |
| starling, pied                   | Lamprotornis bicolor   | 1       |                         |         |              |
| starling, red-winged             | Onychognathus morio    | 55      | 1-12                    |         |              |
| stonechat, African               | Saxicola torquatus     | 32      | 2-12                    | 1       |              |
| stork, white                     | Ciconia ciconia       | 1       |                         |         |              |
| sunbird, amethyst                | Chalcirora amethystina | 31      | 1-5,7-12                | 6       |              |
| sunbird, collared                | Hedydipa collaris     | 31      | 1-12                    |         |              |
| sunbird, greater double-collared | Cinnyris afer         | 30      | 1-12                    |         |              |
| sunbird, grey                    | Cyanomitra veraxii    | 17      | 1,5,7-12                | 2-4,6   |              |
| sunbird, malachite               | Nectarinia famosa      | 6       |                         |         |              |
| sunbird, southern double-collared| Cinnyris chalybeus     | 45      | 1-12                    |         |              |
| swallow, barn                    | Hirundo rustica       | 13      | 1-3,10-12               | 4-9     |              |
| swallow, greater striped         | Hirundo cuculata      | 15      | 1-4,9,11,12             | 5-8,10  |              |
| swallow, lesser striped          | Hirundo abyssinica    | 24      | 1-3,9-12                | 4-8     |              |
| swallow, white-throated          | Hirundo albigularis   | 6       |                         |         |              |
| swift, African black             | Apus barbatus          | 13      | 2,3,7,9-12              | 1-4,6,8 |              |
| swift, alpine                    | Tachymarps melba      | 8       |                         |         |              |
| swift, horus                     | Apus horus            | 1       |                         |         |              |
| swift, little                    | Apus affinis          | 3       |                         |         |              |
| swift, white-rumped              | Apus caffer           | 18      | 1-3,9-12                | 4-8     |              |
| tchagra, southern                | Tchagra tchagra       | 13      | 2,3,5-12                | 1,4     |              |
| thick-knee, spotted              | Burhinus capensis     | 4       |                         |         |              |
| thrush, olive                    | Turdus olivaceus      | 39      | 1-12                    |         |              |
| tinkerbird, red-fronted          | Pogoniulus pusillus   | 32      | 1-12                    |         |              |
| tit, southern black              | Parus niger           | 17      | 1-3,5-11                | 4,12    |              |
| trogon, Narina                   | Apaloderma marina     | 13      | 6,7,9-12                | 1-5,8   |              |
| Common name                  | Scientific name       | Records | Months (min 12 records) |
|------------------------------|-----------------------|---------|-------------------------|
| turaco, Knysna               | Tauraco corythaix     | 46      | 1-12                    |
| turtle-dove, Cape            | Streptopelia capicola | 30      | 1-12                    |
| wagtail, Cape                | Motacilla capensis    | 41      | 2-12                    |
| wagtail, mountain            | Motacilla clara       | 2       |                         |
| warbler, Barratt’s           | Bradypterus barratti  | 20      | 4-10                    |
| warbler, willow              | Phylloscopus trochilus | 3       | 1-3,11,12               |
| waxbill, common              | Estrilda australis    | 9       |                         |
| waxbill, swee                | Coccygla melanotis    | 19      | 1-4,6,9-12              |
| weaver, Cape                 | Ploceus capensis      | 4       | 5,7,8                   |
| weaver, dark-backed          | Ploceus bicolor       | 35      | 1-12                    |
| weaver, spectacled           | Ploceus ocularis      | 1       |                         |
| weaver, thick-billed         | Amblyospiza albifrons | 2       |                         |
| weaver, village              | Ploceus cucullatus    | 1       |                         |
| white-eye, Cape              | Zosterops virens      | 56      | 1-12                    |
| whydah, pin-tailed           | Vidua macroua         | 3       |                         |
| widowbird, red-collared      | Euplectes ardens      | 1       |                         |
| wood-dove, emerald-spotted   | Turtur chalcospilos   | 7       |                         |
| wood-hoopoe, green           | Phoeniculus purpureus | 3       |                         |
| wood-owl, African            | Strix woodfordii      | 3       |                         |
| warbler, yellow-throated     | Phylloscopus ruficapilla | 32   | 2-12                    |
| woodpecker, cardinal         | Dectropicos fuscescens | 1       |                         |
| woodpecker, Knysna           | Campethera notata     | 29      |                         |
| woodpecker, olive            | Dendropicos griseoccephalus | 25 | 1-10,12 |

(Appendix 1 continued)
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         | 18    |            |                         |
| batis, Cape                          | 3         | 14        | 17    |            |                         |
| bishop, yellow                       | 5         | 37        | 42    | 5          | 23 months               |
| blackcap, bush                       | 1         | 1         | 2     |            |                         |
| boubou, southern                     | 3         | 11        | 14    | 1          | 3 months                |
| brownbul, terrestrial                | 3         | 3         | 6     |            | 33 months               |
| bulbul, dark-capped                  | 4         | 4         | 8     |            |                         |
| bunting, golden-breasted             | 1         | 1         | 2     |            |                         |
| bush-shrike, olive                   | 3         | 3         | 6     |            |                         |
| 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         | 2     |            |                         |
| cuckoo, diderick                     | 1         | 1         | 2     |            |                         |
| cuckoo, red-chested                  | 4         | 4         | 8     |            |                         |
| cuckoo, Klaas’                       | 1         | 1         | 2     |            |                         |
| dove, lemon                          | 4         | 4         | 8     |            |                         |
| drongo, fork-tailed                  | 1         | 1         | 2     |            |                         |
| firefinch, African                   | 4         | 1         | 5     |            |                         |
| fiscal, common                       | 1         | 1         | 2     |            |                         |
| flycatcher, African dusky            | 1         | 8         | 9     | 1          | 14 months               |
| goshawk, African                     | 2         | 2         | 4     |            |                         |
| greenbul, sombre                     | 2         | 33        | 35    | 4          | 14 months               |
| honeyguide, lesser                   | 1         | 1         | 2     |            |                         |
| mousebird, speckled                  | 3         | 1         | 4     |            |                         |
| neddicky                             | 1         | 1         | 2     |            |                         |
| oriole, black-headed                 | 3         | 3         | 6     |            |                         |
| paradise-flycatcher, African         | 1         | 1         | 2     |            |                         |
| prinia, Karoo                        | 2         | 2         | 4     |            |                         |
| puffback, black-backed               | 4         | 4         | 8     | 1          | 97 months               |
| robin, white-starred                 | 8         | 8         | 16    | 2          | 48 months               |
| robin-chat, Cape                     | 1         | 12        | 13    | 5          | 25 months               |
| robin-chat, chorister                | 19        | 19        | 38    | 1          | 12 months               |
| seedeater, streaky-headed            | 2         | 2         | 4     |            |                         |
| starling, red-winged                 | 4         | 4         | 8     |            |                         |
| stonechat, African                   | 1         | 4         | 5     |            |                         |
| sunbird, amethyst                    | 1         | 1         | 2     |            |                         |
| sunbird, collared                    | 6         | 6         | 12    |            |                         |
| sunbird, greater double-collared     | 2         | 7         | 9     | 3          | 23 months               |
| sunbird, grey                        | 3         | 3         | 6     |            |                         |
| sunbird, malachite                   | 1         | 1         | 2     |            |                         |
| sunbird, southern double-collared    | 4         | 44        | 48    | 3          | 74 months               |
| swallow, lesser striped              | 1         | 1         | 2     |            |                         |
| thrush, olive                        | 5         | 21        | 26    | 3          | 95 months               |
| turaco, Knysna                       | 1         | 1         | 2     |            |                         |
| wagtail, Cape                        | 1         | 1         | 2     |            |                         |
| wagtail, mountain                    | 1         | 1         | 2     |            |                         |
| warbler, Barratt’s                   | 2         | 2         | 4     |            |                         |
| waxbill, swee                        | 3         | 3         | 6     |            |                         |
| weaver, dark-backed                  | 2         | 2         | 4     |            |                         |
(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         |                        |