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THE BIRDS OF THE GROENKLOOF CONSERVATION COMPLEX, PRETORIA

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Abstract

The avifauna of the conservation complex, of predominantly natural vegetation and bordering the suburb of Groenkloof, Pretoria, is described. The avifauna is compared to that of the suburban environment, and woodland birds are classified according to the degree of avoidance, tolerance or exploitation of the suburban environment. A group of 30 woodland species are described as locally conservation dependent. Differences between the seasonality in the conservation area and in the suburban environment are described for several species. Seasonal movements between the conservation complex and the suburb are described for four species (Hadeda Ibis *Bostrychia hagedash*, Southern Grey-headed Sparrow *Passer diffusus*, Bronze Mannikin *Spermestes cucculata* and Yellow-fronted Canary *Serinus mozambicus*).

Aims

To describe the species composition, structure and seasonal fluctuations in density of the avifauna of the conservation complex bordering the suburb of Groenkloof, Pretoria, and to contrast these with those of the suburban environment of Groenkloof.

Fig 1 – The lush tree habitat around the Voortrekker Monument

Study Area

The study area consists of three contiguous nature reserves (the Groenkloof Nature Reserve, the Klapperkop Hill Nature Reserve, and the grounds of the Voortrekker Monument), with a combined area of approximately 1 200 ha, adjoining the suburb of Groenkloof, Pretoria, and the Austin Roberts Bird Sanctuary, consisting of a wetland about 2 km distant from the rest of the complex, within the suburb. The complex is a little more than 5 km from the city centre.

The Groenkloof Nature Reserve (S25˚47' E28˚12') was proclaimed

by President Paul Kruger of the South African Republic in 1895, to protect Oribi and other game animals and became the first known nature sanctuary in Africa. Its protected status fell away with incorporation into the Union of South Africa in 1910, and was used for commercial purposes (particularly timber extraction) for most of the period to 1994. In 1994, it's status as a nature reserve was restored. Introduction of game (Impala, sable antelope, blue wildebeest, red hartebeest, zebra and giraffe) was carried out from 2002.

The complex falls within the bankenveld (central variation) type of false grassveld of Acocks's Veld Types of South Africa (1975). The vegetation consists of mixed woodland, savanna and marsh of predominantly indigenous species. Typical tree species include *Acacia caffra, Searsia lancea, Searsia leptodicta, Combretum molle* and *Dombeya rotundifolia*. Traces of temperate forest are found in the gullies, with *Celtis africana* and *Kiggelaria africana*. Some invasive aliens are present, including Eucalyptus sp, black wattle and lantana. The grass *Themeda tiandra* is prominent and is the main source of sustenance for grazing animals. The fact that the Groenkloof Nature Reserve was originally intended to preserve the grassland loving Oribi is an indication that open grassland was more prominent in 1895 than it is today.

Methods

Transect counts were carried out in woodland and savanna habitats in each of the three conservation areas adjoining the suburb, between December 2007 and June 2013. In all, 150 transect counts of average length 4 km, on four different routes, were carried out.

Fig 2 – The water feature at the Austin Roberts Bird Sanctuary

The method for estimating densities for bird species is described in a similar study for the suburban environment of Groenkloof (Parker 2012). The ratio of the estimated density in the conservation

Fig 3 – A view of the mixed woodland in the conservation complex

complex to that in the suburban environment was used to classify the species as locally conservation dependent, urban avoiders, urban tolerant or urban exploiters (following the terminology of Blair (1996)).

Results

A group of 30 woodland species were found to be locally conservation dependent. They are resident in or regular visitors to the conservation complex and absent from or present only as rare visitors in the suburban environment of Groenkloof. The occurrence of these species within the city limits is therefore dependent on the existence of protected areas of predominantly natural vegetation. They are listed in Table 1.

A second group were found to be urban avoiders, in that they were observed at significantly higher densities in the conservation complex than in the suburban habitat (Table 2).

A third group can be described as urban tolerant in that they were observed at similar densities in both the conservation complex and the suburban environment (Table 3).

The last group are described as urban exploiters. They were observed at higher densities in the suburban environment than in the conservation complex (Table 4).

The structure of the woodland bird community in the conservation complex

An estimate of the number of adult birds of each woodland species present on a typical day in October or April is presented in Table 5. In most cases, the actual number is expected to be larger than the estimate. The estimates are based on the assumption that each species is evenly distributed across the conservation complex. In the case of the Groundscraper Thrush, the birds tend to concentrate on disturbed ground, especially road verges where they are easily seen, and their overall numbers may have been over-estimated. Numbers for other species that have a restricted range within the conservation complex may also have been over- or under-estimated.

Birds of prey

Ovambo Sparrowhawk and Little Sparrowhawk were regularly observed and are probably breeding residents. Black Sparrowhawk was observed breeding within the Austin Roberts Bird Sanctuary.
The following birds of prey were observed irregularly within the study area:

African Fish-eagle	*Haliaeetus vocifer*
Black-chested Snake-eagle	*Circaetus pectoralis*
Verreaux's Eagle	*Aquila verreauxii*
Long-crested Eagle	*Lophaetus occipitalis*
Steppe Buzzard	*Buteo vulpinus*
African Harrier-hawk	*Polyboroides typus*
Yellow-billed Kite	*Milvus parasitus*
Black-shouldered Kite	*Elanus caeruleus*
Gabar Goshawk	*Melierax gabar*
African Goshawk	*Accipiter tachiro*
Lanner Falcon	*Falco biarmicus*
Peregrine Falcon	*Falco peregrinus*
Amur Falcon	*Falco amurensis*
Barn Owl	*Tyto alba*
Spotted Eagle Owl	*Bubo africanus*

Other woodland species

The following species were observed irregularly in the study area.

Natal Francolin	*Pternistes natalensis*
Levaillant's Cuckoo	*Oxylophus levaillantii*
Jacobin Cuckoo	*Oxylophus jacobinus*
Fiery-necked Nightjar	*Caprimulgus pectoralis*
Freckled Nightjar	*Caprimulgus tristigma*
Alpine Swift	*Tachymarptis melba*
Horus Swift	*Apus horus*
White-fronted Bee-eater	*Merops bullockoides*
Swallow-tailed Bee-eater	*Merops hirundineus*
Greater Honeyguide	*Indicator indicator*
Lesser Honeyguide	*Indicator minor*
Brown-backed Honeybird	*Prodotiscus regulus*
Yellow-fronted Tinkerbird	*Pogniulus chrysoconus*
Common House-martin	*Delichon urbicum*
Grey-backed Camaroptera	*Camaroptera brevicaudata*
African Pied Wagtail	*Motacilla aguimp*
Long-billed Pipit	*Anthus similis*
African Pipit	*Anthus cinnamomeus*
Striped Pipit	*Anthus lineiventris*
Cape Longclaw	*Macronyx capensis*
Red-backed Shrike	*Lanius collurio*
White-crested Helmet-shrike	*Prionops plumatus*
Wattled Starling	*Creatophora cinerea*
Malachite Sunbird	*Nectarinia famosa*
Longtailed Widowbird	*Euplectes progne*
Purple Indigobird	*Vidua purpurascens*
Blue Waxbill	*Uraeginthus angolensis*
Red-headed Finch	*Amadina erythrocephala*

Seasonality

The seasonality for selected species, where the data strongly suggest a pattern which sheds new light on the seasonal movements or general behaviour of the species within the study area, is described.

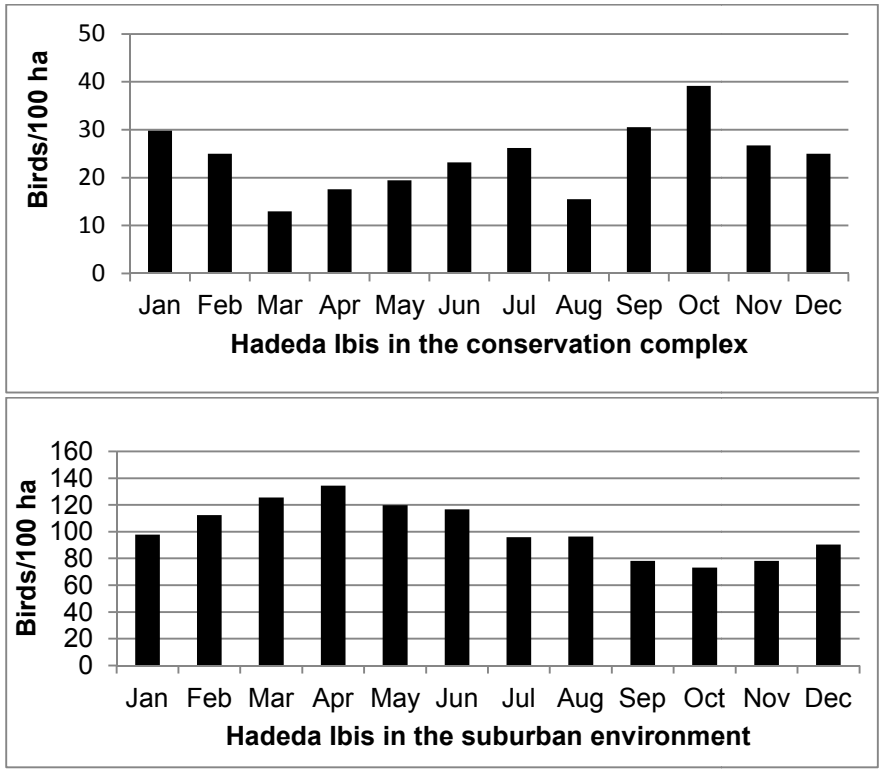


Fig 4 – Seasonality of the Hadeda Ibis in the conservation complex and in the suburb.

The seasonality for the Hadeda Ibis in the conservation complex shows strong complementarity with that for the suburban environment (Fig 4). It suggests that part of the population of the conservation complex take refuge in the suburban environment in winter. The first southern African bird atlas (Harrison *et al.* 1997) shows the same trend in reporting rates as the observed densities in the conservation complex for most of the range of the species.

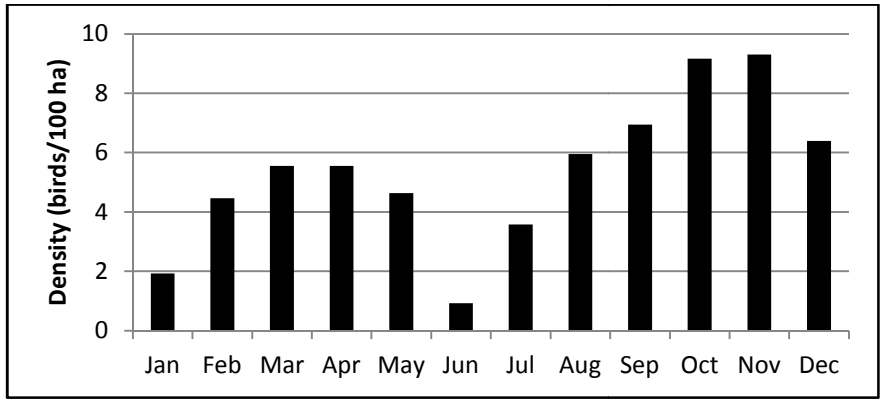


Fig 5 - Seasonality of the Crested Francolin in the conservation complex

The seasonality chart for the Crested Francolin shows a double peak (Fig 5). The birds were usually detected while calling, and the seasonality reflects calling frequencies and does not suggest seasonal movements. The pattern reveals two distinct peaks in calling frequency and may represent two distinct breeding seasons, in early summer and late summer.

Numbers of Laughing Doves appear to be lower in winter, but there is not a noticeable simultaneous increase in the suburban population (Fig 6). Birds from the conservation complex and other surrounding areas may move into the suburbs for the winter. The corresponding increase in the suburban population may be masked by the relative size of that population.

The pattern of seasonality for the Grey Go-away-bird is the same for the suburb and the conservation complex, including the winter peak (Fig 7a and b). There is therefore no indication of movement

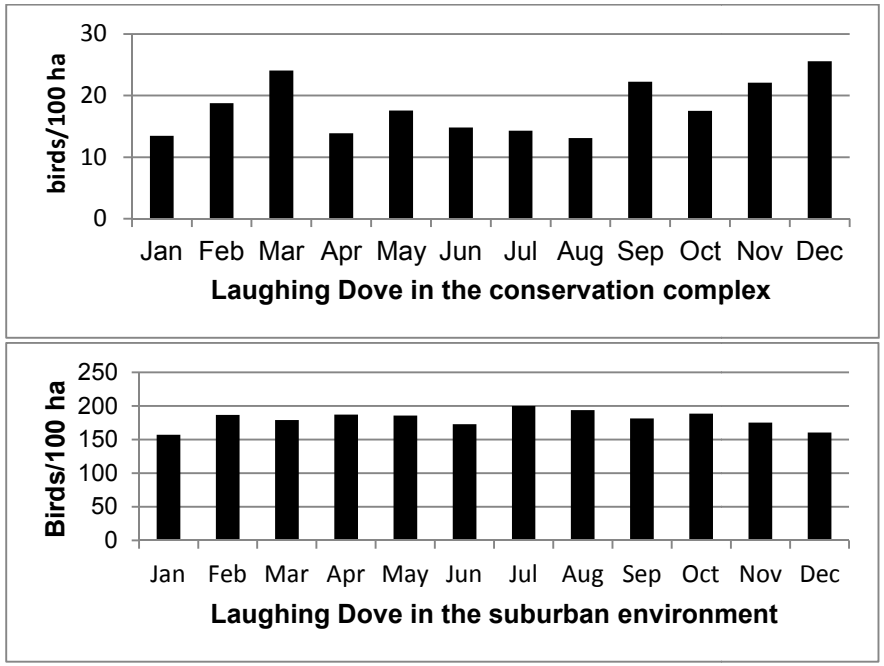
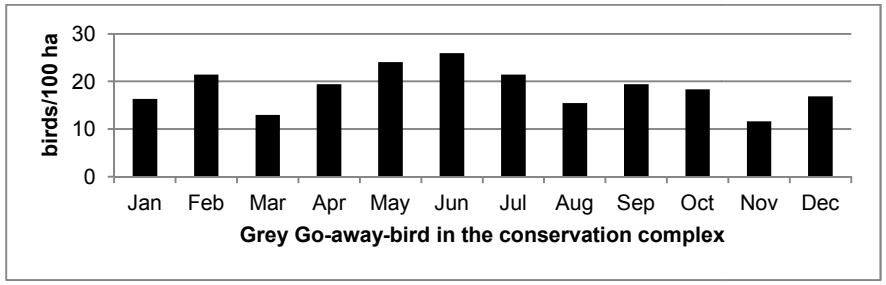


Fig 6 - Seasonality of the Laughing Dove in the conservation complex and in the suburb

between the two habitats. Similarly, for the Black-collared Barbet and Crested Barbet (Fig 8 and 9).



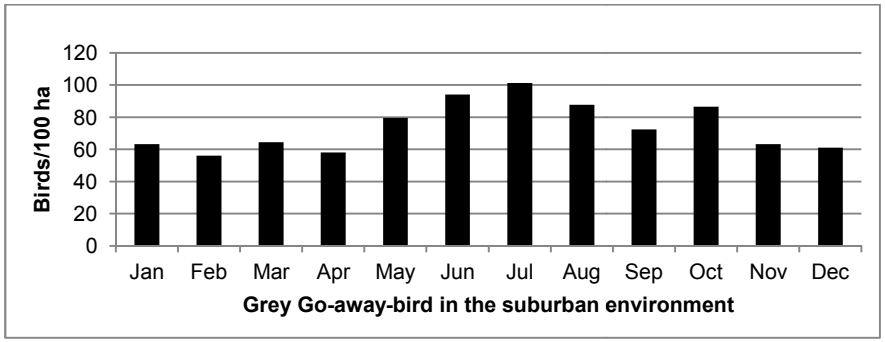
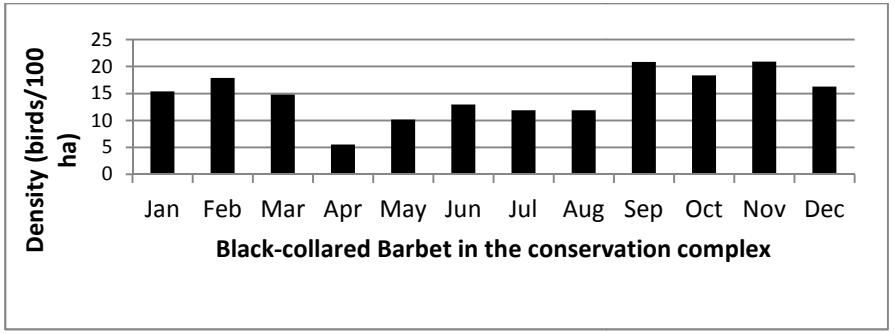


Fig 7a and b - Seasonality of the Grey Go-away-bird in the conservation complex and in the suburb



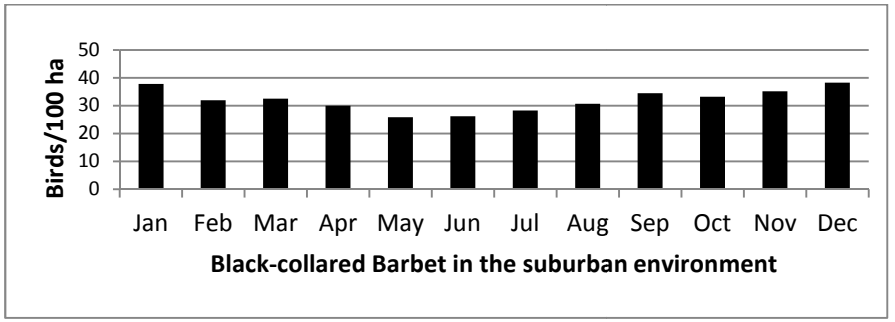


Fig 8 - Seasonality of the Black-collared Barbet in the conservation complex and in the suburb

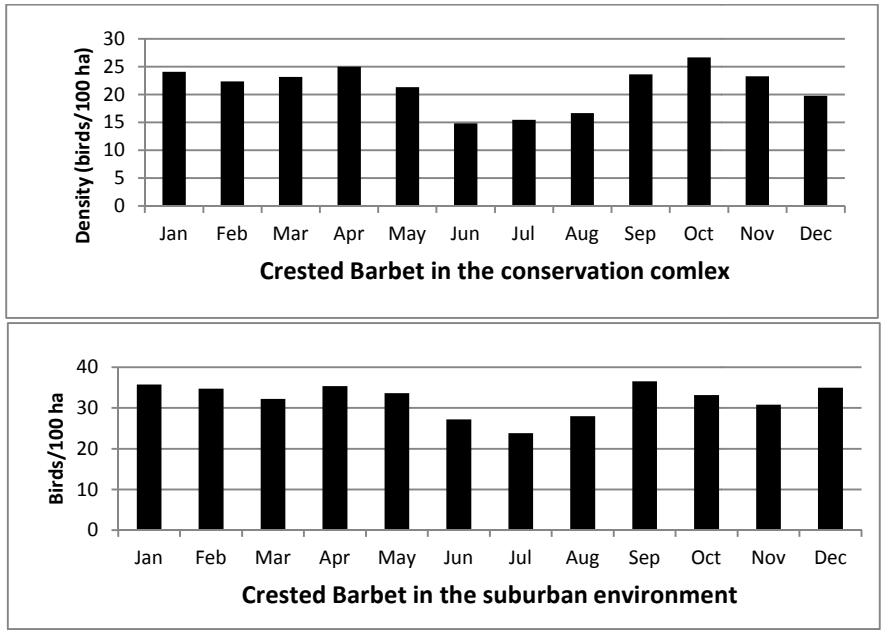


Fig 9 - Seasonality of the Crested Barbet in the conservation complex and in the suburb

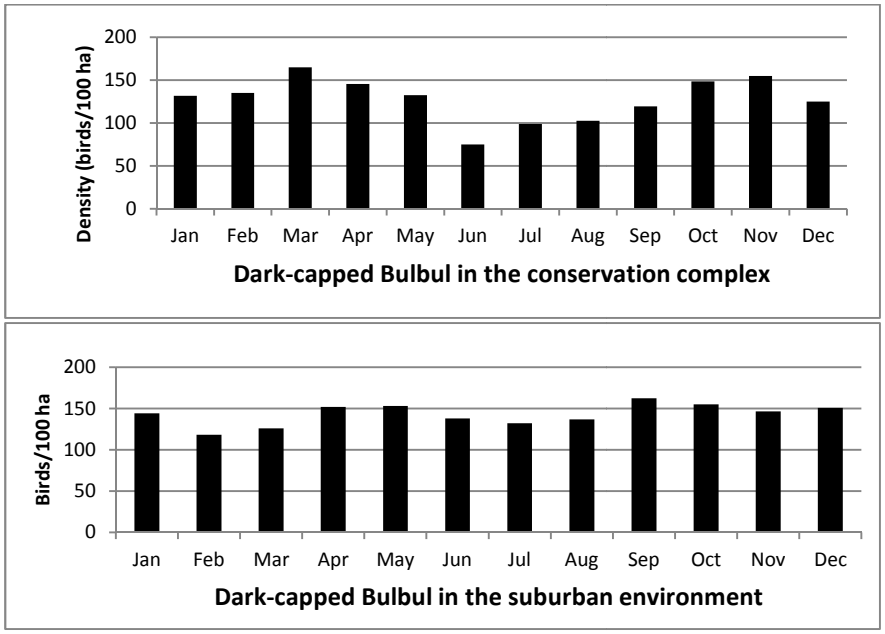


Fig 10 - Seasonality of the Dark-capped Bulbul in the conservation complex and in the suburb

Data for the Dark-capped Bulbul show a winter decline in the conservation complex, but not in the suburb (Fig 10). There may or may not be some movement between the two, but what is evident is that birds in the conservation complex may experience more winter hardship than those in the suburbs.

The observed density of the White-throated Robin-chat is surprisingly greatest in winter (Fig 11). The same trend was reported for the reporting rate data on a regional scale in the first southern African bird atlas (Harrison *et al.* 1997). The observed abundance may be related more to calling frequency than to actual abundance. But that too is hard to explain. Calling frequencies are expected to be highest during the breeding season, and it is a summer breeder.

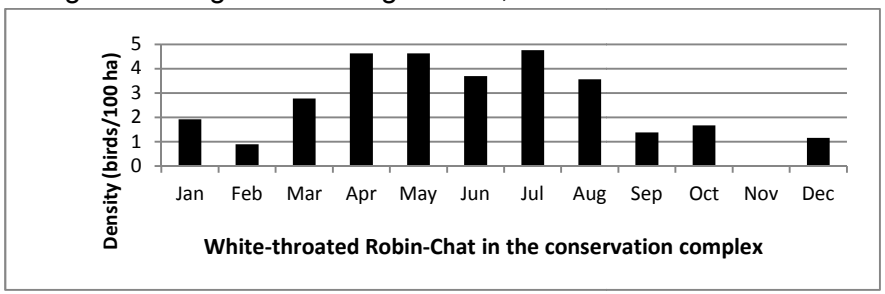


Fig 11 - Seasonality of the White-throated Robin-Chat in the conservation complex

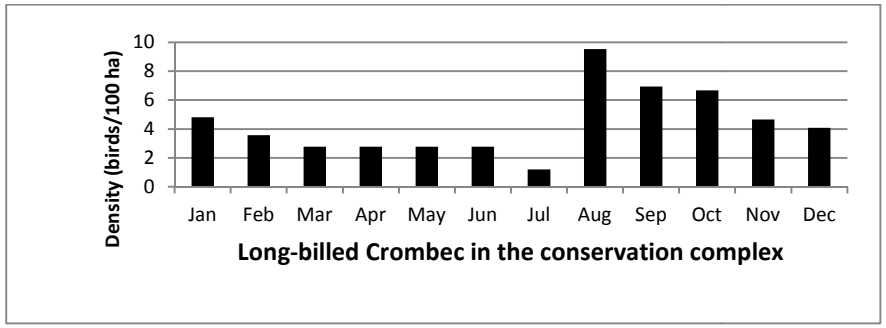


Fig 12 - Seasonality of the Long-billed Crombec in the conservation complex

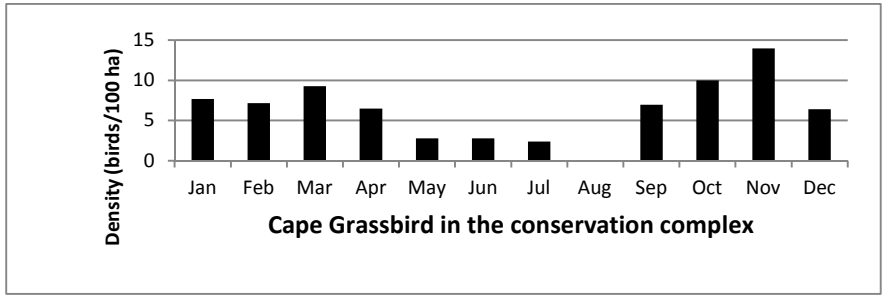


Fig 13 - Seasonality of the Cape Grassbird in the conservation complex

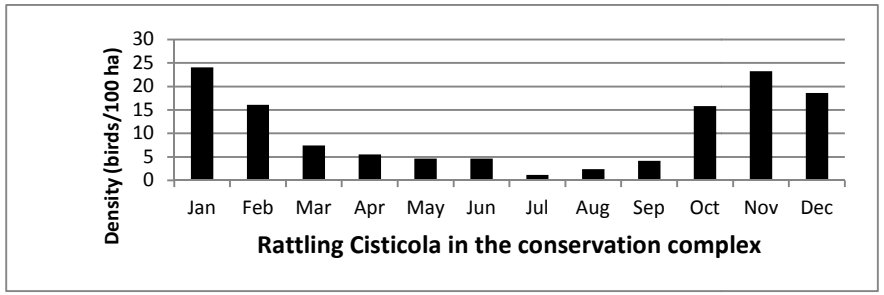


Fig 14 - Seasonality of the Rattling Cisticola in the conservation complex

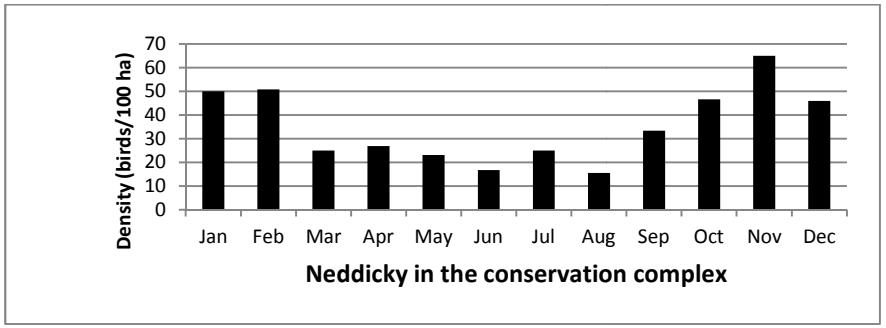


Fig 15 - Seasonality of the Neddicky in the conservation complex

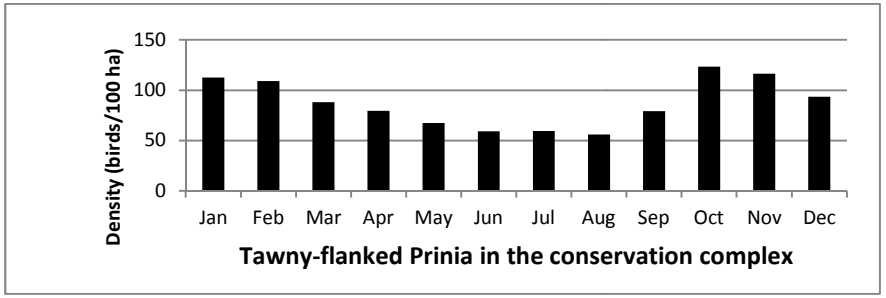


Fig 16 - Seasonality of the Tawny-flanked Prinia in the conservation complex

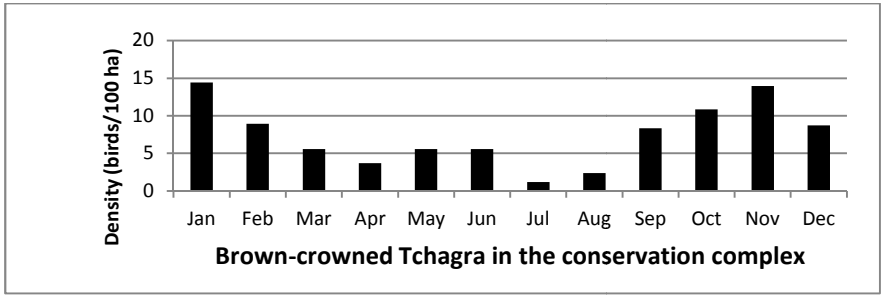


Fig 17 - Seasonality of the Brown-crowned Tchagra in the conservation complex

Long-billed Crombec, Cape Grassbird, Rattling Cisticola, Neddicky, Tawny-flanked Prinia and Brown-crowned Tchagra all show declines in observed abundance in winter (there is no clear pattern for the Black-crowned Tchagra) (Fig 12 to 17). The reporting rate data on a regional scale in the first southern African bird atlas (Harrison *et al.* 1997) also show the winter decline for the Rattling Cisticola, but no clear trend for the rest of the species mentioned above (reporting rate data is less sensitive than count data to changes in conspicuousness or abundance).

These species are cryptic when not calling, and the winter declines can probably be attributed to reduced conspicuousness (especially reduced calling frequency) during winter, rather than seasonal movements. On the other hand, the Black-chested Prinia shows a winter peak (Fig 18). There is no obvious explanation for this, but it does indicate that the lifestyle of this species is significantly different from that of the Tawny-flanked Prinia.

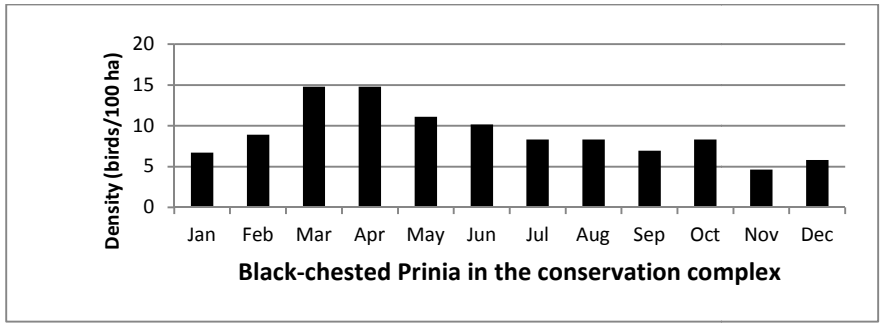


Fig 18 - Seasonality of the Black-chested Prinia in the conservation complex

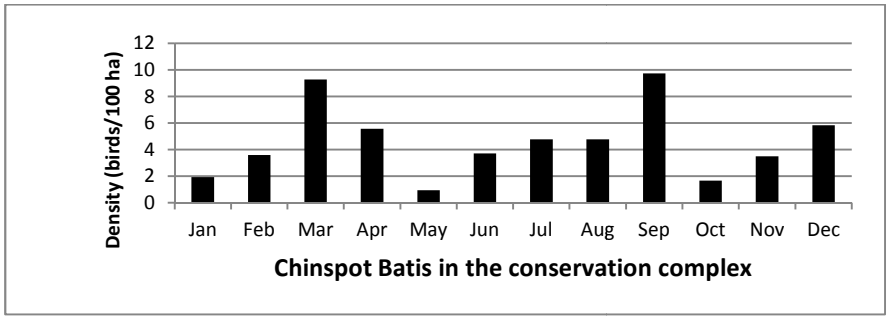


Fig 19 - Seasonality of the Chinspot Batis in the conservation complex

For the Chin-spot Batis, if there is a seasonal pattern, it does not correspond to the solar seasons (Fig 19).

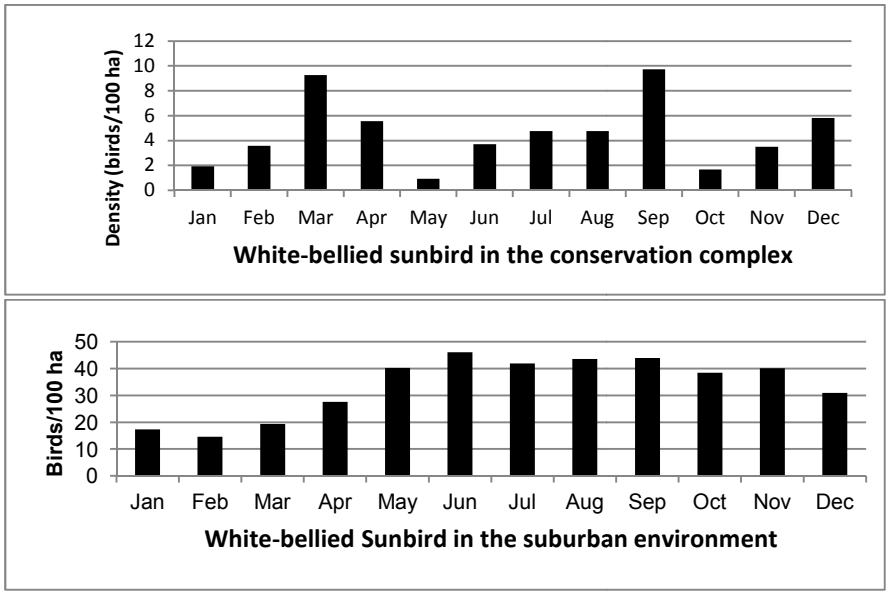


Fig 20 - Seasonality of the White-bellied Sunbird in the conservation complex and in the suburb

The White-bellied Sunbird shows the same seasonality here as in the suburb (Fig 20). It is also similar to the pattern reported for reporting rates on a regional scale in the first southern African bird atlas (Harrison *et al.* 1997). The pattern is hard to explain, but it may relate to greater conspicuousness when the birds cluster around certain flowering plants (especially aloes).

The Amethyst Sunbird shows a similar pattern here as in the suburb, confirming that it is a non-breeding migrant in the region (Fig 21).

The Cape White-eye and Cape Sparrow show the same seasonality here as in the suburb (Fig 22 and 24).

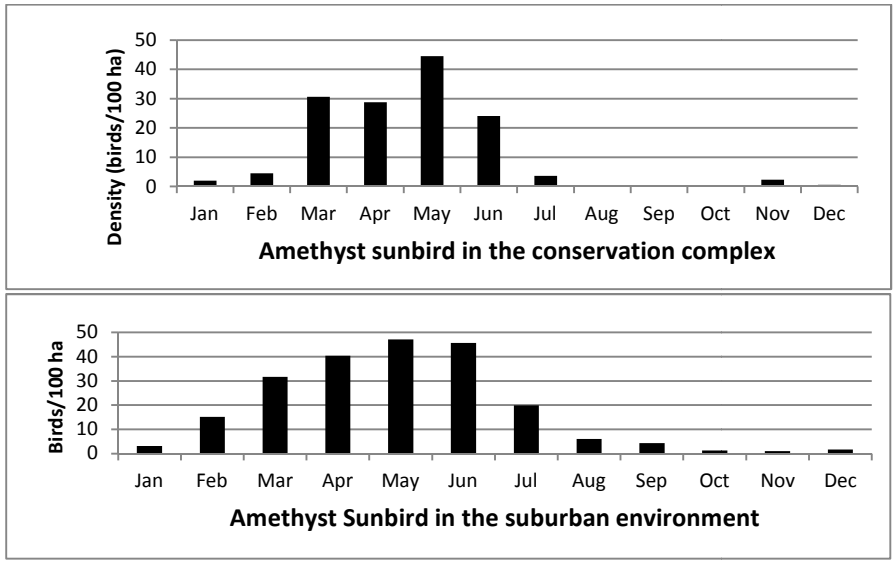


Fig 21 - Seasonality of the Amethyst Sunbird in the conservation complex and in the suburb

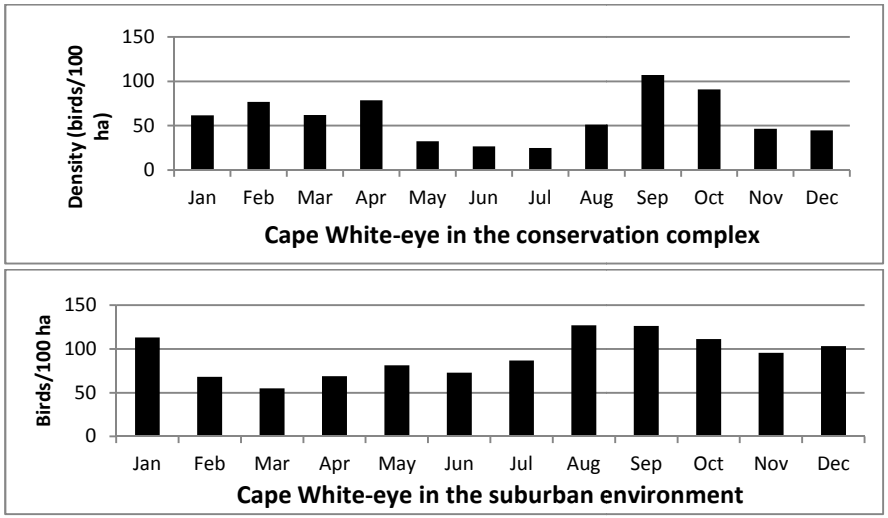


Fig 22 - Seasonality of the Cape White-eye in the conservation complex and in the suburb

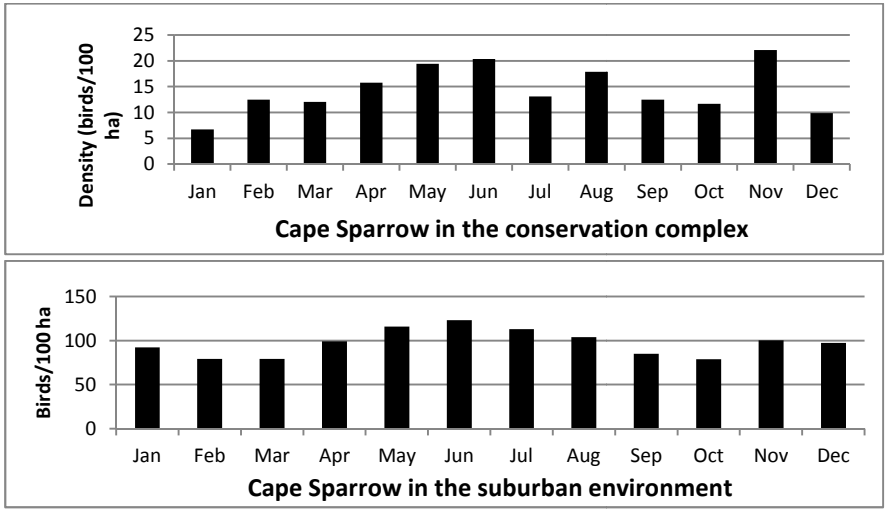
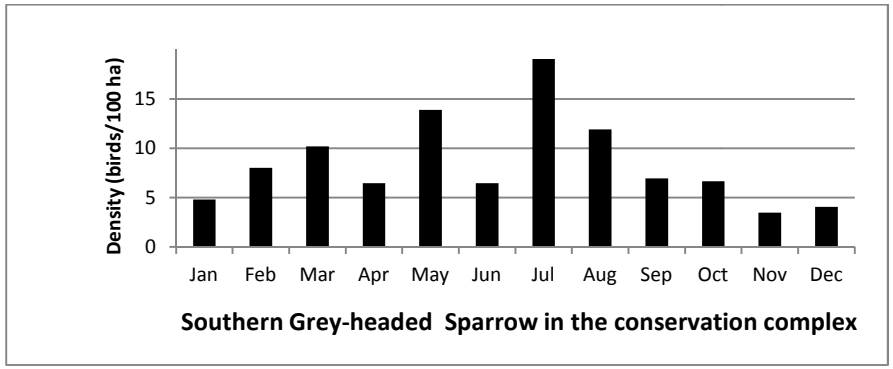


Fig 23 - Seasonality of the Cape Sparrow in the conservation complex and in the suburb



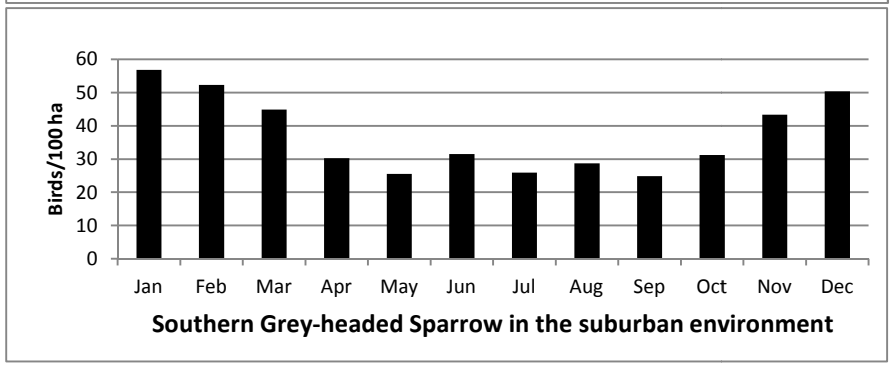
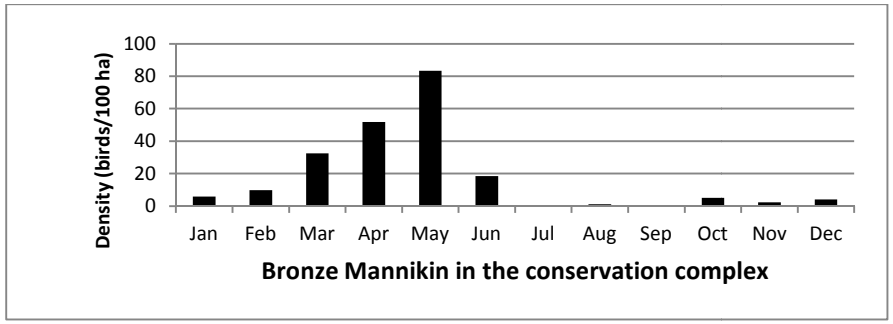


Fig 24 - Seasonality of the Southern Grey-headed Sparrow in the conservation complex and in the suburb



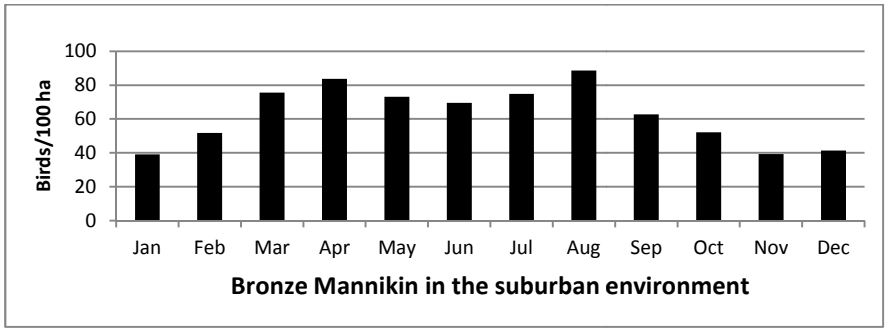
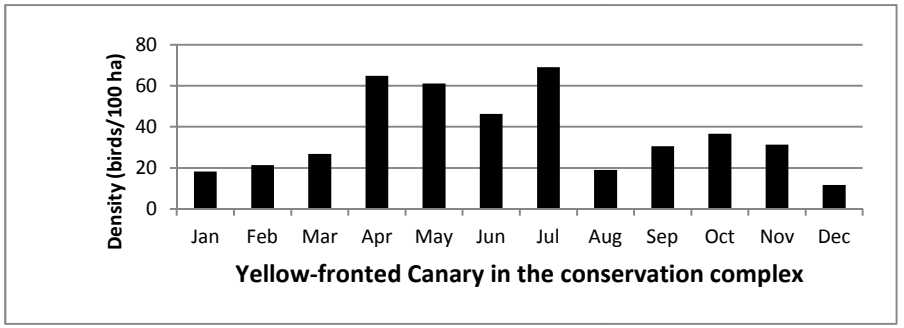


Fig 25a(below left) and b - Seasonality of the Bronze Manniken in the conservation complex and in the suburb



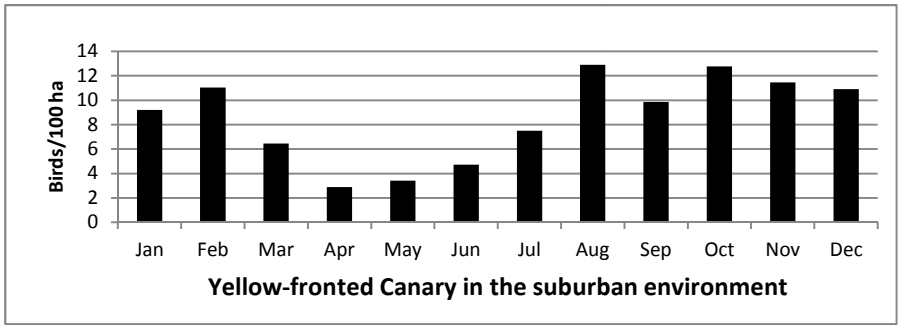


Fig 26 - Seasonality of the Yellow-fronted Canary in the conservation complex and in the suburb

For the Southern Grey-headed Sparrow, Bronze Mannikin and Yellow-fronted Canary, there is strong complementarity between the seasonality for the conservation complex and for the suburb (Fig 24 to 26). It appears as if birds from the suburb invade the conservation complex during winter, possibly to exploit the seasonal abundance of natural grass seeds. For the Southern Grey-headed Sparrow, the summer concentration in the suburb may be related to the abundance of man-made nest sites (for example, the hollow horizontals of power pylons). For the Bronze Mannikin, a study at the National Botanic Garden, Pretoria, found evidence for the same pattern of movement between the semi-natural and suburban habitats (Parker 2013). For the Yellow-fronted Canary, the pattern in the conservation complex is similar to that for reporting rates on a regional scale in the first southern African bird atlas (Harrison *et al.* 1997).

Red-billed Queleas (all in non-breeding plumage) were observed in mid-summer only.

Water birds

Water birds were observed regularly at the Austin Roberts Bird Sanctuary. Most of the species listed occasionally overflew the rest of the conservation complex or settled on its wetlands. Table 6 lists the species that were observed. For resident species, the average number of adult birds of each species that were observed per visit is listed.

Captive and semi-captive species

The following species were artificially introduced at the Austin Roberts Bird Sanctuary and persist in a captive or semi-captive state.

Blue Crane	*Anthropoides paradiseus*
Grey Crowned Crane	*Balearica regulorum*
Hottentot Teal	*Anas hottentota*
Red-billed Teal	*Anas erythrorhyncha*
Cape Teal	*Anas capensis*
Cape Shoveler	*Anas smithii*
Mallard	*Anas platyrhynchos*
Maccoa Duck	*Oxyura maccoa*
Southern Pochard	*Netta erythropthalma*
Fulvous Duck	*Dendrocygna bicolor*
Comb Duck (Knob-billed Duck)	*Sarkidiornis melanotos*
South African Shelduck	*Tadorna cana*

In addition, Ostriches *Struthio camelus* are present in the Groenkloof Nature Reserve.

Discussion

In terms of vegetation, most of the trees and shrubs found in the conservation complex are also present in the suburban environment, where they are intermingled with alien species. The most significant difference between the two environments from an avian habitat point of view is the absence of natural grasses in the suburban environment (grass cover in the suburban environment consists entirely of alien species and is artificially managed). Most of the bird species which are found regularly in the conservation

complex and seldom or never in the suburban environment are insectivorous. The most likely explanation for the differences in avifauna between the two environments is that the microfauna associated with the natural grasses is significantly different from that found in suburban gardens and parks. It is therefore essential for the conservation of the indigenous avifauna within urban areas that "green" or undeveloped areas should include substantial areas with natural grass cover.

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References

Acocks JPH 1975. Veld Types of South Africa. Memoirs of the Botanical Survey of South Africa No. 40.

Blair R 1996. Land use of alien species diversity along an urban gradient. Ecol. Appl. 6: 506-519.

Harrison JA, Allan DG, Underhill LG, Herremans M, Tree AJ, Parker V, Brown CJ (eds). 1997. The Atlas of southern African Birds. Birdlife South Africa.

Parker V 2012. Seasonal and Medium Term Changes in Observed Densities of Woodland Birds in Groenkloof, Pretoria. Ornithological Observations, Vol 3: 128-185.

Parker V 2013. Population Densities of Woodland Bird Species at the National Botanic Garden, Pretoria. Ornithological Observations, Vol 4: 94-103.

Table 1 – Locally conservation dependent species

Species		Density in complex (adult birds/100ha)	Density in suburb (adult birds/100 ha)	Ratio
Cape Grassbird	*Sphenoeacus afer*	6	0	
Zitting Cisticola	*Cisticola juncidis*	6	0	
Neddicky	*Cisticola fulvicapilla*	36	0	
White-winged Widowbird	*Euplectes albonotatus*	27	0	
Cattle Egret	*Bubulcus ibis*	12	0	
Rattling Cisticola	*Cisticola chiniana*	11	0	
Black-chested Prinia	*Prinia flavicans*	9	0	
Brown-crowned Tchagra	*Tchagra australis*	8	0	
Swainson's Spurfowl	*Pternistes swainsonii*	8	0	
Crested Francolin	*Peliperdix sephaena*	5	0	
Orange-breasted Waxbill	*Amandava subflava*	5	0.1	53.7
Cinnamon-breasted Rock	*Emberiza tahapisi*	5	0	
African Stonechat	*Saxicola torquatus*	5	0	
Chinspot Batis	*Batis molitor*	5	0.1	45.0
White-browed Scrub-Robin	*Cercotrichas leucophrys*	4	0	
Black Cuckooshrike	*Campephaga flava*	3	0	
Red-billed Quelea	*Quelea quelea*	3	0	
Chestnut-vented Tit-babbler	*Parisoma subcaeruleum*	3	0	
Rufous-naped Lark	*Mirafra africana*	3	0	
White-throated Robin-chat	*Cossypha humeralis*	3	0	
African Wattled Lapwing	*Vanellus senegallus*	2	0	
Black Cuckoo	*Cucullus clamosus*	2	0.1	21.3
Acacia Pied Barbet	*Tricholaema leucomelas*	2	0	
Levaillant's Cisticola	*Cisticola tinniens*	2	0	
Bokmakierie	*Telophorus zeylonus*	2	0	
Jameson's Firefinch	*Lagonosticta rhodoparaia*	13	1	12.6
Kurrichane Thrush	*Turdus libonyanus*	10	1	10.3
Fork-tailed Drongo	*Dicrurus adsimilis*	9	1	9.2
Black-crowned Tchagra	*Tchagra senegalus*	6	1	6.2
Long-billed Crombec	*Sylvietta rufescens*	4	1	4.3

Table 2 – Urban avoiders

Species		Density in complex (adult birds/100ha)	Density in suburb (adult birds/100 ha)	Ratio
Barn Swallow	*Hirundo rustica*	24	1	24.4
Marsh Warbler	*Acrocephalus palustris*	2	0	22.9
Lesser Striped Swallow	*Hirundo abyssinica*	2	0	20.5
Red-collared Widowbird	*Euplectes ardens*	45	10	4.5
Yellow-fronted Canary	*Serinus mozambicus*	35	9	3.9
Spotted Flycatcher	*Muscicapa striata*	4	1	3.6
Tawny-flanked Prinia	*Prinia subflava*	88	26	3.4
Pied Crow	*Corvus albus*	7	2	3.3
Red-chested Cuckoo	*Cuculus solitarius*	3	1	3.1
Cardinal Woodpecker	*Dendropicus fuscescens*	6	2	2.9
Klaas' Cuckoo	*Chrysococcyx klaas*	1	1	2.8
Black-throated Canary	*Serinus atrogularis*	14	5	2.7
Southern Boubou	*Laniarius ferrugineus*	30	12	2.5
Groundscraper Thrush	*Psophocichla litsipsirupa*	2	1	2.4
Common fiscal	*Lanius collaris*	18	9	2.0
African Paradise	*Terpsiphone viridis*	8	4	2.0
Diderick Cuckoo	*Chrysococcyx caprius*	5	3	1.8
Helmeted Guineafowl	*Numida meleagris*	33	20	1.7

Table 3 – Urban tolerant species

Species		Density in complex (adult birds/100ha)	Density in suburb (adult birds/100 ha)	Ratio
Golden-tailed Woodpecker	*Campethera abingoni*	1	1	1.6
Arrow-marked Babbler	*Turdoides jardineii*	14	9	1.5
Streaky-headed Seedeater	*Serinus gularis*	25	20	1.2
Black-backed Puffback	*Dryoscopus cubla*	7	6	1.1
Green Wood-Hoopoe	*Phoeniculus purpureus*	9	9	1.0
Dark-capped Bulbul	*Pycnonotus tricolor*	129	143	0.9
Southern Masked-Weaver	*Ploceus velatus*	79	88	0.9
Black-headed Oriole	*Oriolus larvatus*	5	6	0.8
Pin-tailed whydah	*Vidua macroura*	2	2	0.8
White-bellied Sunbird	*Nectarinia talatala*	27	34	0.8
Brown-hooded Kingfisher	*Halcyon albiventris*	3	4	0.8
Woodland Kingfisher	*Halcyon senegalensis*	1	1	0.7
Grey-headed Bush-Shrike	*Malaconotus blanchoti*	1	1	0.7
Cape Robin-Chat	*Cossypha caffra*	23	33	0.7
Crested Barbet	*Trachyphonus vaillantii*	21	32	0.7
Amethyst Sunbird	*Nectarinia amethystina*	12	18	0.7
Greater Striped Swallow	*Hirundo cucullata*	11	18	0.6
Common Waxbill	*Estrilda astrild*	1	2	0.6
Cape Turtle-Dove	*Streptopelia capicola*	36	57	0.6
Cape White-eye	*Zosterops capensis*	58	92	0.6
Red-winged Starling	*Onychognathus morio*	8	12	0.6
Crowned Lapwing	*Vanellus coronatus*	7	12	0.6

Table 3 – Urban tolerant species (continued)

Species		Density in complex (adult birds/100ha)	Density in suburb (adult birds/100 ha)	Ratio
European Bee-eater	*Merops apiaster*	13	21	0.6
Rock Martin	*Hirundo fuligula*	3	5	0.6
Cape Glossy Starling	*Lamprotornis Nitens*	7	12	0.6
Southern Red Bishop	*Euplectes orix*	14	24	0.6
Red-faced Mousebird	*Urocolius indicus*	14	28	0.5
Willow Warbler	*Phylloscopus trochilus*	1	2	0.5
Bar-throated Apalis	*Apalis thoracica*	1	1	0.5
Orange-breasted Bush-Shrike	*Telophorus sulfureopectus*	1	1	0.5

Table 4 – Urban exploiters

Species		Density in complex (adult birds/100ha)	Density in suburb (adult birds/100 ha)	Ratio
Hadeda Ibis	Bostrychia hagedash	24	50	0.5
Black-collared Barbet	Lybius torquatus	15	32	0.5
Little Swift	Apus affinis	10	23	0.4
White-rumped Swift	Apus caffer	4	10	0.4
African Hoopoe	Upupa africana	4	10	0.4
Fiscal Flycatcher	Sigelus silens	5	13	0.4
Speckled Mousebird	Colius striatus	16	45	0.3
African Grey Hornbill	Tockus nasutus	2	5	0.3
African Palm-Swift	Cypsiurus parvus	8	27	0.3
Bronze Mannikin	Spermestes cucullata	18	63	0.3
Spotted Thick-knee	Burhinus capensis	1	3	0.3
Grey Go-away-bird	Corythaixoides concolor	19	74	0.3
Southern Grey-headed Sparrow	Passer diffusus	8	37	0.2
Red-eyed Dove	Streptopelia semitorquata	31	146	0.2
Common Myna	Acridotheres tristis	23	111	0.2
African Olive-Pigeon	Columba arquatrix	3	15	0.2
Red-throated Wryneck	Jynx ruficollis	1	3	0.2
Burchell's Coucal	Centropus burchelli	1	4	0.2
Cape Sparrow	Passer melanurus	14	97	0.1
Thick-billed Weaver	Ambliospiza albifrons	3	27	0.1
Laughing Dove	Streptopelia senegalensis	18	180	0.1
Cape Weaver	Ploceus capensis	1	6	0.1

Table 4 – Urban exploiters (continued)

Species		Density in complex (adult birds/100ha)	Density in suburb (adult birds/100 ha)	Ratio
African Green-Pigeon	Treron calva	1	7	0.1
Village Weaver	Ploceus cucullatus	1	12	0.1
White-throated Swallow	Hirundo albigularis	0	2	0.1
Karoo Thrush	Turdus smithi	5	114	0.0
Rock Dove	Columba livia	4	153	0.0
Cape Wagtail	Motacilla capensis	0	5	0.0
Cut-throat Finch	Amadina fasciata	0	7	0.0
Speckled Pigeon	Columba guinea	1	40	0.0
House Sparrow	Passer domesticus	0	18	0.0

Table 5 – An estimate of the composition of the woodland bird community of the Groenkloof Conservation Complex, Pretoria on a typical day in April or October

Species	Number of adult birds
Dark-capped Bulbul	1,543
Tawny-flanked Prinia	1,062
Southern Masked-Weaver	948
Cape White-eye	695
Red-collared Widowbird	536
Neddicky	433
Cape Turtle-Dove	431
Yellow-fronted Canary	422
Helmeted Guineafowl	396
Red-eyed Dove	371
Southern Boubou	357
White-bellied Sunbird	320
White-winged Widowbird	319
Barn Swallow	298
Streaky-headed Seedeater	293
Cape Robin-Chat	275
Common Myna	274
Crested Barbet	257
Grey Go-away-bird	224
Laughing Dove	222
Bronze Mannikin	222
Common Fiscal	217
Speckled Mousebird	189
Black-collared Barbet	176

Table 5 – Estimated composition (continued)

Species	Number of adult birds
Red-faced Mousebird	173
Cape Sparrow	170
Southern Red Bishop	167
Black-throated Canary	165
Arrow-marked Babbler	162
European Bee-eater	153
Jameson's Firefinch	152
Hadeda Ibis*	146
Amethyst Sunbird	143
Greater Striped Swallow	136
Rattling Cisticola	136
Kurrichane Thrush	124
Little Swift	122
Fork-tailed Drongo	110
Black-chested Prinia	109
Green Wood-Hoopoe	108
African Palm-Swift	100
Southern Grey-headed Sparrow	98
African Paradise-Flycatcher	95
Brown-crowned Tchagra	91
Swainson's Spurfowl	90
Red-winged Starling	90
Crowned Lapwing	89
Cape Glossy Starling	84
Black-backed Puffback	82
Cape Grassbird	77

Table 5 – Estimated composition (continued)

Species	Number of adult birds
Black-crowned Tchagra	74
Zitting Cisticola	72
Cardinal Woodpecker	69
Diderick Cuckoo	65
Crested Francolin	64
Orange-breasted Waxbill	64
Karoo Thrush	63
Cinnamon-breasted Rock Bunting	60
African Stonechat	59
Black-headed Oriole	58
Fiscal Flycatcher	57
Chinspot Batis	54
Rock Dove	53
White-rumped Swift	51
Long-billed Crombec	51
White-browed Scrub-Robin	48
African Hoopoe	46
Spotted Flycatcher	43
Black Cuckooshrike	42
Thick-billed Weaver	41
Red-chested Cuckoo	37
Brown-hooded Kingfisher	36
Rock Martin	36
Chestnut-vented Tit-babbler	34
African Olive-Pigeon	33
Rufous-naped Lark	33

Table 5 – Estimated composition (continued)

Species	Number of adult birds
White-throated Robin-chat	30
Groundscraper Thrush	28
Marsh Warbler	27
Black Cuckoo	26
Lesser Striped Swallow	25
Acacia Pied Barbet	23
Levaillant's Cisticola	23
Bokmakierie	23
African Grey Hornbill	19
Pin-tailed Whydah	19
Klaas' Cuckoo	17
Common Waxbill	15
Willow Warbler	12
Spotted Thick-knee	10
Golden-tailed Woodpecker	9
Woodland Kingfisher	9
Grey-headed Bush-Shrike	9
Village Weaver	9
Burchell's Coucal	8
Garden Warbler	8
Pied Crow*	8
Natal Francolin	7
Brown-backed Honeybird	7
Desert Cisticola	6

Table 5 – Estimated composition (continued)

Species	Number of adult birds
Lazy Cisticola	5
Fairy Flycatcher	5
Others	20
Total	**15 400**

*The estimates for Hadeda Ibis and Pied Crow were adjusted downward to compensate for their relative conspicuousness

Table 6 – Water birds in the Groenkloof Conservation Complex

Resident and breeding		**Average number of adult birds observed per visit**	
Whitefaced Duck	*Dendrocygna viduata*	64	
Egyptian Goose	*Alopochen aegyptiaca*	13	
Yellow-billed Duck	*Anas undulata*	11	
Red-knobbed Coot	*Fulica cristata*	11	
Common Moorhen	*Gallinula chloropus*	6	
Blacksmith Lapwing	*Vanellus armatus*	4	
Reed Cormorant	*Phalacrocorax africanus*	2	
Black Crake	*Amourornis flavirostris*	1	
African Black Duck	*Anas sparsa*	1	
Pied Kingfisher	*Ceryle rudis*	1	
Giant Kingfisher	*Megaceryle maximus*	1	
Lesser Swamp Warbler	*Acrocephalus gracilirostris*	1	
Little Rush Warbler	*Bradypterus baboecala*	1	
Resident, non-breeding			
Sacred Ibis	*Threskiornis aethiopicus*	11	
Frequent visitors		**Occasional visitors**	
White-breasted Cormorant	*Phalacrocorax lucidus*	Squacco Heron	*Ardeola ralloides*
African Darter	*Anhinga rufa*	Abdim's Stork	*Ciconia abdimii*
Grey Heron	*Ardea cinerea*	White Stork	*Ciconia ciconia*
Little Egret	*Egretta garzetta*	Glossy Ibis	*Plegadis falcinellus*
Cattle Egret	*Bubulcus ibis*	African Spoonbill	*Platalea alba*
Green-backed Heron	*Butorides striata*	Corn Crake	*Crex crex*
Little Grebe	*Tachybaptus ruficollis*	Red-chested Flufftail	*Sarothrura rufa*
Frequent visitors		**Occasional visitors**	
Black-headed Heron	*Ardea melanocephala*	African Purple Swamphen	*Porphyrio madagascariensis*
Purple Heron	*Ardea purpurea*	Wood Sandpiper	*Tringa glareola*
Black Heron	*Egretta ardesiaca*	Grey-headed Gull	*Larus cirrocephalus*
White-backed Night Heron	*Nycticorax nycticorax*	Half-collared Kingfisher	*Alcedo semitorquata*
Little Bittern	*Ixobrychus minutus*	Malachite Kingfisher	*Alcedo cristata*
Hamerkop	*Scopus umbretta*		
Red-billed Teal	*Anas erythrorhyncha*		
Spurwing Goose	*Plectropterus gambensis*		
Three-banded Plover	*Charadrius tricollaris*		
Wattled Lapwing	*Vanellus senegallus*		
African Reed Warbler	*Acrocephalus baeticatus*		