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Ornithological Observations accepts papers containing faunistic information about birds. This includes descriptions of distribution, behaviour, breeding, foraging, food, movement, measurements, habitat and plumage. It will also consider for publication a variety of other interesting or relevant ornithological material: reports of projects and conferences, annotated checklists for a site or region, specialist bibliographies, and any other interesting or relevant material.

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PRELIMINARY SUMMARY OF CHANGES IN BIRD DISTRIBUTIONS BETWEEN THE FIRST AND SECOND SOUTHERN AFRICAN BIRD ATLAS PROJECTS (SABAP1 AND SABAP2)

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The First and Second Southern African Bird Atlas Projects took place two decades apart (Fig. 1). The first Southern African Bird Atlas Project (SABAP1 1987–1991; Harrison 1992; Harrison *et al.* 1997, 2008) and the second Southern African Bird Atlas Project (SABAP2: July 2007–ongoing) provide an opportunity to study how the ranges of species have changed (Harebottle *et al.* 2007; Loftie-Eaton 2014). This paper demonstrates how large these changes have been.

SABAP1 used quarter degree grid cells (QDGC) as the spatial sampling unit. These cover 15 minutes of latitude by 15 minutes of longitude (15'×15') and correspond to the standard 1:50 000 topographical maps used within southern Africa (Harebottle *et al.* 2007). The SABAP2 spatial sampling unit is the “pentad” which covers 5 minutes of latitude by 5 minutes of longitude (5'×5'), about 8.0 km×7.6 km. There are nine pentads per QDGC. The pentads are nested within QDGC, and data for each pentad can be combined into QDGC format, which can then be compared with SABAP1 data to detect any large-scale



Fig 1 – The logos for SABAP1 and SABAP2. SABAP1 collected 7.3 million records of bird distribution on 140000 checklists. On 9 June 2014, when SABAP2 data were extracted for this analysis, the database contained 5.6 million records on 106 000 checklists..

changes in bird distribution. SABAP2 was initially confined to South Africa, Lesotho and Swaziland (Harebottle *et al.* 2007), and this limitation constrains this analysis of range changes to these three countries.

Making comparisons between SABAP1 and SABAP2 is more complex than anticipated at the start of SABAP2 (Loftie-Eaton 2014). The difficulties relate mainly to the change in scale from the QDGC for SABAP1 to the pentad for SABAP2. This analysis follows the precedent of lumping the data for the nine pentads within a QDGC together, and treating them as equivalent to the lists from SABAP1 for the QDGC. This was done for example by Altwegg *et al.* (2013), Hofmeyr *et al.* (2014) and Loftie-Eaton (2014). Problems with this approach

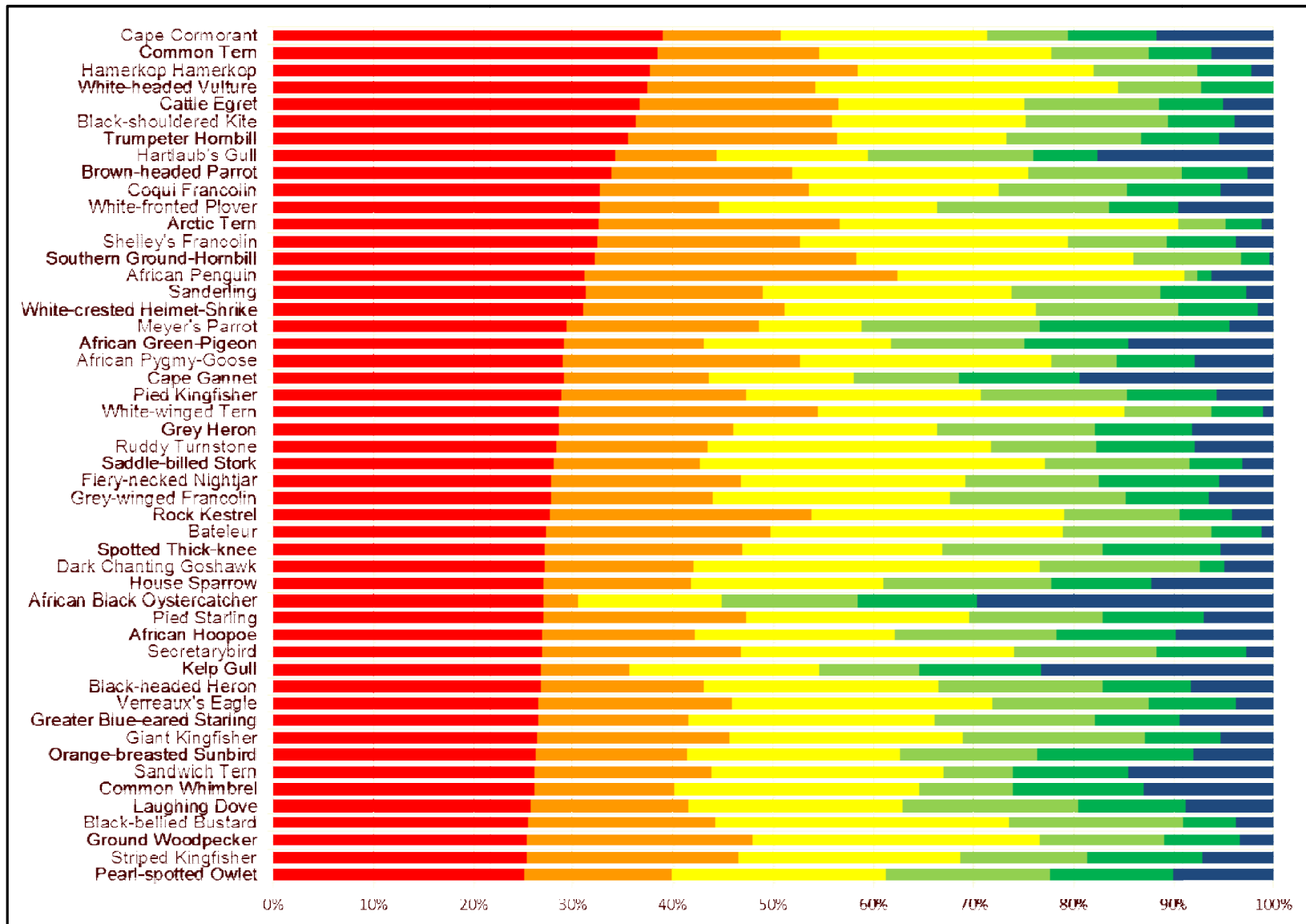


Fig 2 - Graphical representation of the 50 worst performing species in Table 2. Red is associated with Major declines, Orange with Moderate declines, Yellow with Minor declines, Light Green with Minor increases, Dark Green with Moderate increases and Blue with Major increases.



have been highlighted by case studies comparing SABAP1 and SABAP2 results for a single QDGC (McKenzie 2011; de Swardt 2012, 2014; Carter 2012; Retief 2014) and discussed and reviewed in considerable detail by Loftie-Eaton (2014).

Our fundamental unit of comparison is the reporting rates, the proportion of checklists which reported the species in a particular grid cell, in each of the atlas projects. Caveats to the interpretation of reporting rates were discussed in detail by Harrison and Underhill (1997); nevertheless there is overwhelming evidence that reporting rates are monotonically related to abundance, but non-linearly (eg Harrison and Navarro 1994; Griffioen 2001). For one species in one QDGC, the change in reporting rates between SABAP1 and SABAP2 is likely to be due to changes in abundance. The standard test statistic for the equality of two proportions (Underhill and Bradfield 1996) was used as index to measure change:

$$Z = \frac{P_2 - P_1}{\sqrt{P(1-P)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

where P_1 and P_2 are the reporting rates from SABAP1 and SABAP2 respectively, n_1 and n_2 are the numbers of checklists on which the reporting rates are based, and P , the pooled reporting rate, is given by

$$P = \frac{n_1 P_1 + n_2 P_2}{n_1 + n_2}$$

This approach was also used by Hofmeyr *et al.* (2014). The analysis was confined to the 1440 quarter degree grid cells for which there were four or more checklists for both SABAP1 and SABAP2 on 9 June 2014. This is 72% of the 2002 QDGCs in South Africa, Lesotho and Swaziland. We calculated the Z-score for each species for those of the 1440 QDGCs where it had occurred either in SABAP1 or SABAP2. For each species, we classified the Z-scores into six verbal categories using conventional values from the standard normal distribution as the cutpoints: major decrease ($Z < -1.96$), moderate decrease ($-1.96 < Z < -1.04$), minor decrease ($-1.04 < Z < 0$), minor increase ($0 < Z < 1.04$), moderate increase ($1.04 < Z < 1.96$), and major increase ($Z > 1.96$). As done by Hofmeyr *et al.* (2014), we do not associate formal significance levels with these cutpoints; we intend that these be used as providing useful insights into the overall patterns of change for each species. The values 1.04 and 1.96 are the 15% and 2.5% points of the normal distribution.

The results are meaningless for species that have been subject to splits since SABAP1, and these species were excluded. The key issue that the data collection was done for SABAP1 using the species recognized at the time; it is not possible, with integrity, to allocate these records into split species. We also restricted the analysis to species which had been recorded in at least 50 of the 1440 QDGCs across both SABAP1 and SABAP2.

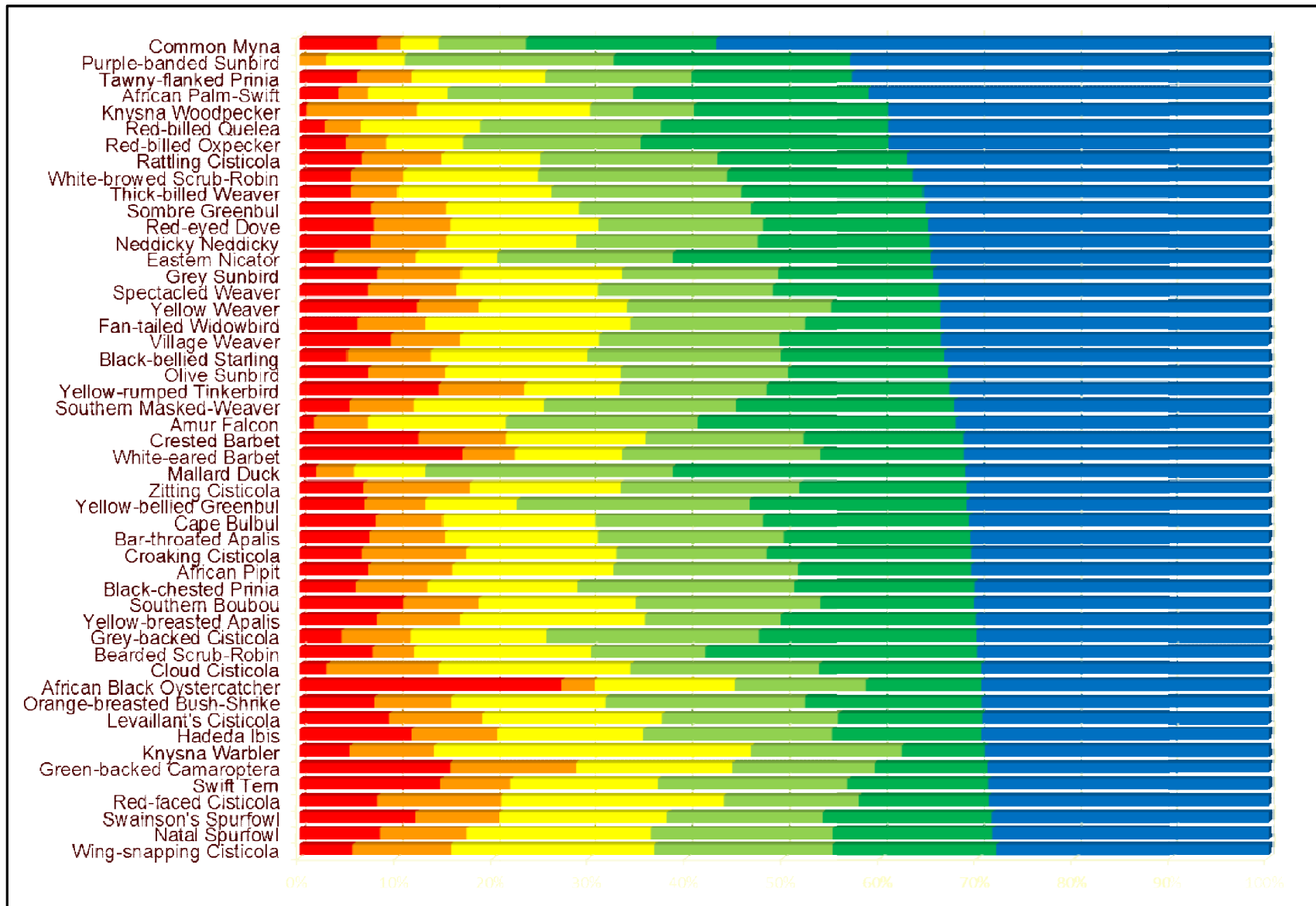


Fig 3 - Graphical representation of the 50 best performing species in Table 3. Colours are coded as in Figure 2.



This yielded a total of 574 species (Table 1). In Table 1, the six categories, from major decrease to major increase, are headed <<<, <<, <, >, >> and >>>, respectively.

In Table 2, the 125 species with the largest proportional decreases (<<<) in Table 1 are listed in order of the magnitude of the decrease. Table 3, likewise, shows the 125 species with the largest proportional increases. Occurrence of a species in both Tables 2 and 3 would be suggestive of a range shift for the species, if the area of increase was contiguous and the area of decrease was likewise contiguous. Only one species occurs in both Tables 2 and 3. This is the African Black Oystercatcher *Haematopus moquini*. Inspection of the "range-change" map tends to suggest that the species has declined on the West Coast of South Africa, and increased in abundance on the coastline of the Eastern Cape and KwaZulu-Natal.

The purpose of this paper is to present these results. In depth discussion of them will largely need to be dealt with on a species-by-species basis. This process has already been initiated for the Secretarybird *Sagittarius serpentarius* (Hofmeyr *et al.* 2014).

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Acknowledgements

Many thousands of citizen scientists submitted more than 13 million records of bird distribution to the First and Second Southern African Bird Atlas Projects and this paper is evidence of the value of their contributions. The understanding of bird distributions and how they are changing represents the pivotal information requirement for effective bird conservation. SABAP2 is a partnership between the South African National Biodiversity Institute, BirdLife South Africa and the Animal Demography Unit at the University of Cape Town.

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Table 1. Range change dynamics for 574 species occurring in 1440 quarter degree grid cells (QDGCs) in southern Africa. The number of checklists for each QDGC was at least four for both SABAP1 and SABAP2. The number of QDGCs in which each species occurred in either SABAP1 or SABAP2 was at least 50. The number of QDGCs (out of the 1440) in which each species was recorded is provided in the final column of the table. The remaining values in the table are percentages of this total relative to the number of QDGCs for the species occurring in each of six categories:

Major decrease (<<<), Moderate decrease (<<), Minor decrease (<), Minor increase (>), Moderate increase (>>) and Major increase (>>>). See text.

No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
1	Common Ostrich	<i>Struthio camelus</i>	16.0	11.6	17.9	16.3	17.0	21.3	1034
2	African Penguin	<i>Spheniscus demersus</i>	31.3	31.3	28.8	1.3	1.3	6.3	80
4	Great Crested Grebe	<i>Podiceps cristatus</i>	17.0	13.3	24.5	17.5	16.0	11.7	376
5	Black-necked Grebe	<i>Podiceps nigricollis</i>	12.2	16.7	29.5	17.3	15.8	8.4	335
6	Little Grebe	<i>Tachybaptus ruficollis</i>	19.0	13.5	18.7	20.4	13.3	15.1	1260
29	Sooty Shearwater	<i>Puffinus griseus</i>	22.8	22.8	29.8	12.3	7.0	5.3	57
41	Pink-backed Pelican	<i>Pelecanus rufescens</i>	21.2	29.3	24.2	6.1	9.1	10.1	99
42	Great White Pelican	<i>Pelecanus onocrotalus</i>	23.5	18.8	30.2	10.7	8.1	8.7	149
44	Cape Gannet	<i>Morus capensis</i>	29.0	14.5	14.5	10.5	12.1	19.4	124
47	White-breasted Cormorant	<i>Phalacrocorax carbo</i>	21.1	15.2	22.2	19.1	11.8	10.5	1140
48	Cape Cormorant	<i>Phalacrocorax capensis</i>	39.0	11.8	20.6	8.1	8.8	11.8	136
50	Reed Cormorant	<i>Phalacrocorax africanus</i>	17.9	16.4	18.0	18.5	12.8	16.5	1228
52	African Darter	<i>Anhinga rufa</i>	20.9	17.4	20.5	17.7	11.8	11.7	1034
54	Grey Heron	<i>Ardea cinerea</i>	28.5	17.4	20.5	15.8	9.7	8.2	1301
55	Black-headed Heron	<i>Ardea melanocephala</i>	26.7	16.3	23.5	16.4	8.9	8.2	1334
56	Goliath Heron	<i>Ardea goliath</i>	13.3	12.3	25.6	18.3	15.3	15.3	563
57	Purple Heron	<i>Ardea purpurea</i>	15.2	17.9	27.1	17.0	13.3	9.5	676
58	Great Egret	<i>Egretta alba</i>	22.2	18.8	28.2	18.8	7.8	4.2	744
59	Little Egret	<i>Egretta garzetta</i>	16.7	16.8	24.0	18.7	14.2	9.6	966
60	Yellow-billed Egret	<i>Egretta intermedia</i>	21.4	21.9	26.4	17.0	9.1	4.1	734
61	Cattle Egret	<i>Bubulcus ibis</i>	36.6	19.9	18.5	13.5	6.4	5.1	1287
62	Squacco Heron	<i>Ardeola ralloides</i>	10.6	16.5	30.7	21.7	13.1	7.3	479
63	Green-backed Heron	<i>Butorides striata</i>	16.5	14.0	21.1	16.0	21.3	11.2	394
64	Black Heron	<i>Egretta ardesiaca</i>	6.2	17.5	35.8	20.8	13.1	6.6	274
66	Dwarf Bittern	<i>Ixobrychus sturmii</i>	4.7	20.8	35.8	25.5	12.3	0.9	106



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
67	Little Bittern	<i>Ixobrychus minutus</i>	8.5	16.7	34.5	19.5	11.5	9.3	365
69	Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	15.5	21.2	31.4	16.1	9.9	5.8	684
70	White-backed Night-Heron	<i>Gorsachius leuconotus</i>	14.1	18.8	40.6	15.6	9.4	1.6	64
72	Hamerkop Hamerkop	<i>Scopus umbretta</i>	37.6	20.8	23.5	10.5	5.4	2.2	1266
73	Marabou Stork	<i>Leptoptilos crumeniferus</i>	20.0	15.1	25.5	18.2	13.3	7.9	165
74	African Openbill	<i>Anastomus lamelligerus</i>	11.9	6.3	10.1	28.3	28.3	15.1	159
75	Saddle-billed Stork	<i>Ephippiorhynchus senegalensis</i>	28.1	14.6	34.4	14.6	5.2	3.1	96
76	Yellow-billed Stork	<i>Mycteria ibis</i>	12.8	24.4	35.5	13.2	8.8	5.3	431
77	Woolly-necked Stork	<i>Ciconia episcopus</i>	11.9	12.7	20.1	16.4	15.7	23.1	134
78	Abdim's Stork	<i>Ciconia abdimii</i>	18.6	29.5	35.0	9.7	5.3	1.9	414
79	Black Stork	<i>Ciconia nigra</i>	18.5	26.5	35.9	12.1	6.6	0.4	821
80	White Stork	<i>Ciconia ciconia</i>	20.4	28.1	30.6	13.1	5.8	2.0	1046
81	African Sacred Ibis	<i>Threskiornis aethiopicus</i>	21.7	17.4	22.9	18.0	7.9	12.1	1195
82	Southern Bald Ibis	<i>Geronticus calvus</i>	14.1	11.0	24.5	18.3	17.6	14.5	290
83	Glossy Ibis	<i>Plegadis falcinellus</i>	9.1	15.9	24.0	20.8	16.3	13.8	667
84	Hadedda Ibis	<i>Bostrychia hagedash</i>	11.5	8.9	15.1	19.4	15.4	29.6	1353
85	African Spoonbill	<i>Platalea alba</i>	23.0	21.1	24.9	15.2	10.0	5.8	1126
86	Greater Flamingo	<i>Phoenicopterus ruber</i>	12.0	16.3	24.3	19.3	16.1	12.1	535
87	Lesser Flamingo	<i>Phoenicopterus minor</i>	13.3	19.8	30.4	20.1	9.1	7.4	339
88	Spur-winged Goose	<i>Plectropterus gambensis</i>	15.7	12.7	20.6	17.9	15.3	17.9	1193
89	Egyptian Goose	<i>Alopochen aegyptiacus</i>	10.4	10.9	15.8	20.8	17.1	25.0	1369
90	South African Shelduck	<i>Tadorna cana</i>	12.1	13.3	19.9	19.2	17.1	18.5	995
91	Comb Duck	<i>Sarkidiornis melanotos</i>	15.3	20.8	34.0	17.5	8.0	4.5	400
92	African Pygmy-Goose	<i>Nettapus auritus</i>	29.0	23.7	25.0	6.6	7.9	7.9	76
94	Cape Shoveler	<i>Anas smithii</i>	12.5	13.0	18.8	21.8	15.8	18.1	823
95	African Black Duck	<i>Anas sparsa</i>	18.5	16.9	27.9	17.9	11.5	7.3	1043
1016	Mallard Duck	<i>Anas platyrhynchos</i>	1.7	3.9	7.3	25.7	30.2	31.3	179
96	Yellow-billed Duck	<i>Anas undulata</i>	19.0	15.1	20.6	16.8	12.5	15.9	1229
97	Red-billed Teal	<i>Anas erythrorhyncha</i>	11.8	15.7	21.5	19.2	14.6	17.1	1108
98	Cape Teal	<i>Anas capensis</i>	11.4	11.9	23.7	20.4	15.4	17.3	683



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
99	Hottentot Teal	<i>Anas hottentota</i>	16.9	13.7	29.1	15.7	12.6	12.0	350
100	White-faced Duck	<i>Dendrocygna viduata</i>	12.7	12.8	20.4	17.0	16.6	20.6	899
101	Fulvous Duck	<i>Dendrocygna bicolor</i>	10.4	20.1	28.0	17.9	16.8	6.7	268
102	Southern Pochard	<i>Netta erythrophthalma</i>	14.9	19.1	29.5	17.0	13.1	6.4	739
103	Maccoa Duck	<i>Oxyura maccoa</i>	16.1	20.8	25.5	16.1	13.0	8.5	447
104	White-backed Duck	<i>Thalassornis leuconotus</i>	11.9	18.7	29.6	18.3	11.5	9.9	486
105	Secretarybird	<i>Sagittarius serpentarius</i>	26.9	19.9	27.2	14.3	9.0	2.7	1088
106	Cape Vulture	<i>Gyps coprotheres</i>	21.3	22.0	29.9	13.6	9.2	4.2	546
107	White-backed Vulture	<i>Gyps africanus</i>	17.1	13.9	25.9	18.5	14.7	9.9	374
108	Lappet-faced Vulture	<i>Torgos tracheliotus</i>	24.8	18.8	22.8	16.8	15.4	1.5	202
109	White-headed Vulture	<i>Trionoceph occipitalis</i>	37.3	16.9	30.1	8.4	7.2	0.0	83
113	Peregrine Falcon	<i>Falco peregrinus</i>	1.4	4.8	17.2	22.6	33.0	20.9	354
114	Lanner Falcon	<i>Falco biarmicus</i>	8.6	16.3	30.9	24.0	14.7	5.6	1064
115	Eurasian Hobby	<i>Falco subbuteo</i>	8.4	18.3	43.8	15.9	11.9	1.6	251
119	Amur Falcon	<i>Falco amurensis</i>	1.5	5.5	14.3	19.7	26.7	32.3	742
120	Red-footed Falcon	<i>Falco vespertinus</i>	2.3	15.9	31.1	25.8	22.0	3.0	132
122	Greater Kestrel	<i>Falco rupicoloides</i>	19.4	20.7	29.0	16.6	9.6	4.6	782
123	Rock Kestrel	<i>Falco rupicolus</i>	27.7	26.1	25.2	11.5	5.3	4.2	1296
125	Lesser Kestrel	<i>Falco naumanni</i>	17.4	20.2	32.2	16.7	9.0	4.6	792
126	Pygmy Falcon	<i>Polihierax semitorquatus</i>	11.3	8.3	20.6	33.0	19.6	7.2	97
127	African Cuckoo Hawk	<i>Aviceda cuculoides</i>	6.6	18.7	39.6	18.1	14.3	2.8	182
128	Black Kite	<i>Milvus migrans</i>	23.4	31.9	39.3	3.5	1.9	0.0	521
129	Yellow-billed Kite	<i>Milvus aegyptius</i>	17.3	18.0	28.7	16.0	10.3	9.7	885
130	Black-shouldered Kite	<i>Elanus caeruleus</i>	36.2	19.6	19.3	14.2	6.6	4.0	1341
132	European Honey-Buzzard	<i>Pernis apivorus</i>	0.0	1.0	8.4	43.2	36.8	10.5	95
133	Verreaux's Eagle	<i>Aquila verreauxii</i>	26.6	19.3	26.1	15.6	8.9	3.7	836
134	Tawny Eagle	<i>Aquila rapax</i>	17.3	23.5	38.7	13.3	5.6	1.5	323
135	Steppe Eagle	<i>Aquila nipalensis</i>	5.8	24.1	43.7	18.4	5.8	2.3	87
136	Lesser Spotted Eagle	<i>Aquila pomarina</i>	3.7	14.8	24.7	25.9	19.8	11.1	81
137	Wahlberg's Eagle	<i>Aquila wahlbergi</i>	17.6	20.0	25.6	19.2	10.4	7.3	386



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
138	Long-crested Eagle	<i>Lophaetus occipitalis</i>	8.9	11.0	19.0	14.7	20.8	25.7	327
139	Booted Eagle	<i>Aquila pennatus</i>	4.7	13.5	27.2	25.5	19.8	9.3	600
141	African Hawk-Eagle	<i>Aquila spilogaster</i>	20.5	19.2	23.2	22.3	11.6	3.1	224
142	Martial Eagle	<i>Polemaetus bellicosus</i>	17.1	21.7	33.6	17.5	8.5	1.7	885
143	African Crowned Eagle	<i>Stephanoaetus coronatus</i>	23.3	16.1	28.3	17.2	7.9	7.2	279
144	Lizard Buzzard	<i>Kaupifalco monogrammicus</i>	19.0	26.0	29.3	14.9	8.7	2.1	242
145	Brown Snake-Eagle	<i>Circaetus cinereus</i>	12.0	14.6	25.6	23.5	18.5	5.9	426
146	Black-chested Snake-Eagle	<i>Circaetus pectoralis</i>	9.2	14.7	25.9	21.9	20.6	7.7	544
149	African Fish-Eagle	<i>Haliaeetus vocifer</i>	13.6	9.8	17.7	19.1	21.0	18.8	953
150	Bearded Vulture	<i>Gypaetus barbatus</i>	17.8	23.3	38.4	15.1	5.5	0.0	73
151	Bateleur	<i>Terathopius ecaudatus</i>	27.3	22.4	29.2	14.9	5.0	1.2	161
152	Jackal Buzzard	<i>Buteo rufofuscus</i>	16.1	15.5	22.4	17.5	13.3	15.2	1076
154	Steppe Buzzard	<i>Buteo vulpinus</i>	13.2	18.4	24.0	22.0	12.4	10.1	1269
155	Forest Buzzard	<i>Buteo trizonatus</i>	12.4	16.6	24.4	17.1	16.1	13.5	193
156	Rufous-chested Sparrowhawk	<i>Accipiter rufiventris</i>	13.4	15.1	39.0	17.4	11.9	3.2	344
157	Ovambo Sparrowhawk	<i>Accipiter ovampensis</i>	7.5	19.2	29.2	19.2	17.5	7.5	120
158	Little Sparrowhawk	<i>Accipiter minullus</i>	11.9	15.9	28.8	21.8	18.3	3.3	427
159	Black Sparrowhawk	<i>Accipiter melanoleucus</i>	6.6	9.4	22.3	20.5	21.9	19.3	502
160	African Goshawk	<i>Accipiter tachiro</i>	15.3	15.7	26.3	19.4	14.9	8.4	464
161	Shikra	<i>Accipiter badius</i>	14.8	22.4	28.8	20.5	9.9	3.8	264
162	Gabar Goshawk	<i>Melierax gabar</i>	11.6	17.0	26.4	21.7	15.5	7.7	594
163	Dark Chanting Goshawk	<i>Melierax metabates</i>	27.2	14.8	34.6	16.0	2.5	4.9	81
165	Southern Pale Chanting Goshawk	<i>Melierax canorus</i>	10.7	13.3	23.6	22.9	17.1	12.4	838
167	African Marsh-Harrier	<i>Circus ranivorus</i>	13.7	20.1	33.6	17.9	7.7	6.9	547
168	Pallid Harrier	<i>Circus macrourus</i>	1.9	11.5	29.8	32.7	19.2	4.8	104
169	Black Harrier	<i>Circus maurus</i>	11.4	21.8	35.1	16.9	9.0	5.8	587
170	Montagu's Harrier	<i>Circus pygargus</i>	1.5	13.3	23.0	22.2	32.6	7.4	135
171	African Harrier-Hawk	<i>Polyboroides typus</i>	16.4	15.9	25.4	21.0	13.6	7.7	860
172	Osprey	<i>Pandion haliaetus</i>	11.7	11.7	27.0	22.3	17.5	9.9	274
173	Coqui Francolin	<i>Peliperdix coqui</i>	32.7	20.8	18.9	12.9	9.4	5.3	318



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
174	Crested Francolin	<i>Dendroperdix sephaena</i>	13.4	13.7	21.4	15.3	13.7	22.4	313
176	Grey-winged Francolin	<i>Scleroptila africanus</i>	27.8	16.1	23.7	17.5	8.4	6.4	497
177	Shelley's Francolin	<i>Scleroptila shelleyi</i>	32.4	20.2	26.7	9.9	6.9	3.8	262
178	Red-winged Francolin	<i>Scleroptila levaillantii</i>	17.9	19.7	31.4	14.8	8.9	7.4	325
179	Orange River Francolin	<i>Scleroptila levaillantoides</i>	10.8	10.0	20.8	20.2	19.1	19.1	351
181	Cape Spurfowl	<i>Pternistis capensis</i>	15.7	11.7	17.5	20.6	14.4	20.2	223
183	Natal Spurfowl	<i>Pternistis natalensis</i>	8.2	9.0	19.0	18.8	16.4	28.5	536
185	Swainson's Spurfowl	<i>Pternistis swainsonii</i>	11.9	8.8	17.3	16.0	17.5	28.6	707
188	Red-necked Spurfowl	<i>Pternistis afer</i>	15.7	15.7	18.1	14.7	16.7	19.1	204
189	Common Quail	<i>Coturnix coturnix</i>	16.3	19.7	27.9	18.6	9.4	8.1	1039
190	Harlequin Quail	<i>Coturnix delegorguei</i>	12.6	26.2	36.1	13.7	8.7	2.7	183
192	Helmeted Guineafowl	<i>Numida meleagris</i>	19.9	12.4	17.8	15.8	13.7	20.5	1340
193	Crested Guineafowl	<i>Guttera edouardi</i>	16.2	20.6	11.8	17.6	19.1	14.7	68
196	Kurriichane Buttonquail	<i>Turnix sylvaticus</i>	13.5	20.0	29.7	21.1	13.2	2.4	370
197	African Rail	<i>Rallus caerulescens</i>	12.1	14.5	26.0	14.8	18.0	14.5	338
199	African Crake	<i>Crecopsis egregia</i>	0.0	21.5	33.3	25.8	18.3	1.1	93
202	Baillon's Crake	<i>Porzana pusilla</i>	8.0	16.0	45.3	16.0	10.7	4.0	75
203	Black Crake	<i>Amauornis flavirostris</i>	14.0	12.3	19.0	15.8	17.4	21.5	657
205	Red-chested Flufftail	<i>Sarothrura rufa</i>	9.8	14.6	25.8	14.9	21.0	13.9	295
206	Buff-spotted Flufftail	<i>Sarothrura elegans</i>	18.2	18.2	28.2	20.4	7.7	7.2	181
208	African Purple Swamphen	<i>Porphyrio madagascariensis</i>	16.1	16.8	24.4	17.9	12.1	12.6	446
210	Common Moorhen	<i>Gallinula chloropus</i>	11.8	11.6	19.8	19.4	17.0	20.4	1049
211	Lesser Moorhen	<i>Gallinula angulata</i>	3.4	18.6	15.3	32.2	23.7	6.8	59
212	Red-knobbed Coot	<i>Fulica cristata</i>	21.7	14.7	19.5	18.7	10.6	14.8	1181
213	African Finfoot	<i>Podica senegalensis</i>	9.4	12.2	38.1	18.0	15.1	7.2	139
214	Grey Crowned Crane	<i>Balearica regulorum</i>	20.8	19.8	24.0	16.7	9.0	9.7	288
215	Wattled Crane	<i>Bugeranus carunculatus</i>	22.2	22.2	27.2	9.9	11.1	7.4	81
216	Blue Crane	<i>Anthropoides paradiseus</i>	21.3	18.2	23.8	12.8	9.6	14.3	757
217	Kori Bustard	<i>Ardeotis kori</i>	20.9	22.4	24.7	17.7	12.2	2.0	344
218	Ludwig's Bustard	<i>Neotis ludwigii</i>	8.9	18.0	23.6	23.9	19.7	5.9	406



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
219	Denham's Bustard	<i>Neotis denhami</i>	19.1	18.8	27.5	16.2	8.1	10.1	345
220	Karoo Korhaan	<i>Eupodotis vigorsii</i>	7.8	17.9	25.1	22.8	19.2	7.2	307
222	White-bellied Korhaan	<i>Eupodotis senegalensis</i>	13.9	23.8	31.4	12.6	12.1	6.3	223
223	Blue Korhaan	<i>Eupodotis caerulescens</i>	20.9	15.6	23.6	19.8	10.3	9.7	339
224	Red-crested Korhaan	<i>Lophotis ruficrista</i>	13.9	12.5	23.6	17.7	16.3	16.0	368
227	Black-bellied Bustard	<i>Lissotis melanogaster</i>	25.5	18.6	29.3	17.5	5.3	3.7	188
228	African Jacana	<i>Actophilornis africanus</i>	15.6	13.1	22.2	17.2	16.2	15.8	482
230	Greater Painted-snipe	<i>Rostratula benghalensis</i>	4.6	16.2	42.4	18.2	14.6	4.0	198
231	African Black Oystercatcher	<i>Haematopus moquini</i>	27.1	3.4	14.4	13.6	11.9	29.7	118
232	Ruddy Turnstone	<i>Arenaria interpres</i>	28.3	15.1	28.3	10.5	9.9	7.9	152
233	Common Ringed Plover	<i>Charadrius hiaticula</i>	16.1	19.4	34.7	14.7	8.9	6.1	360
235	White-fronted Plover	<i>Charadrius marginatus</i>	32.6	12.0	21.7	17.1	6.9	9.7	175
236	Chestnut-banded Plover	<i>Charadrius pallidus</i>	17.2	16.1	39.1	12.6	6.9	8.1	87
237	Kittlitz's Plover	<i>Charadrius pecuarius</i>	13.9	19.2	28.5	16.9	11.6	9.9	818
238	Three-banded Plover	<i>Charadrius tricollaris</i>	18.7	16.4	21.0	19.2	12.1	12.7	1351
239	Greater Sand Plover	<i>Charadrius leschenaultii</i>	16.4	20.0	43.6	10.9	1.8	7.3	55
241	Grey Plover	<i>Pluvialis squatarola</i>	23.0	21.0	26.3	13.2	9.2	7.2	152
242	Crowned Lapwing	<i>Vanellus coronatus</i>	22.1	13.5	20.5	20.0	13.4	10.5	1311
243	Black-winged Lapwing	<i>Vanellus melanopterus</i>	11.4	16.1	25.0	26.7	12.7	8.1	236
245	Blacksmith Lapwing	<i>Vanellus armatus</i>	19.6	13.1	21.4	17.5	10.2	18.2	1379
247	African Wattled Lapwing	<i>Vanellus senegallus</i>	16.7	14.2	16.5	21.9	16.0	14.7	443
250	African Snipe	<i>Gallinago nigripennis</i>	10.8	17.7	23.6	18.0	17.4	12.4	677
251	Curlew Sandpiper	<i>Calidris ferruginea</i>	23.0	24.1	32.7	10.7	5.6	3.9	569
253	Little Stint	<i>Calidris minuta</i>	18.4	21.0	33.3	13.2	8.2	5.9	760
254	Red Knot	<i>Calidris canutus</i>	21.9	25.0	37.5	9.4	6.3	0.0	64
255	Sanderling	<i>Calidris alba</i>	31.2	17.7	24.8	14.9	8.5	2.8	141
256	Ruff	<i>Philomachus pugnax</i>	17.3	22.1	30.0	13.1	9.4	8.1	738
257	Terek Sandpiper	<i>Xenus cinereus</i>	18.8	21.7	30.4	10.1	8.7	10.1	69
258	Common Sandpiper	<i>Actitis hypoleucos</i>	24.3	25.4	29.1	11.7	7.2	2.2	983
262	Marsh Sandpiper	<i>Tringa stagnatilis</i>	19.2	26.5	35.7	11.4	4.7	2.6	661



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263	Common Greenshank	<i>Tringa nebularia</i>	16.8	22.4	28.4	17.8	9.4	5.3	1014
264	Wood Sandpiper	<i>Tringa glareola</i>	17.8	23.5	27.6	16.4	9.5	5.3	941
266	Bar-tailed Godwit	<i>Limosa lapponica</i>	15.8	14.5	32.9	14.5	11.8	10.5	76
267	Eurasian Curlew	<i>Numenius arquata</i>	23.5	11.1	50.6	8.6	4.9	1.2	81
268	Common Whimbrel	<i>Numenius phaeopus</i>	26.1	13.9	24.6	9.2	13.1	13.1	130
269	Pied Avocet	<i>Recurvirostra avosetta</i>	14.1	20.6	30.0	15.8	12.6	6.9	669
270	Black-winged Stilt	<i>Himantopus himantopus</i>	14.1	17.4	21.1	21.0	14.5	11.9	988
274	Water Thick-knee	<i>Burhinus vermiculatus</i>	15.1	14.9	20.7	17.1	16.0	16.3	363
275	Spotted Thick-knee	<i>Burhinus capensis</i>	27.2	19.7	20.0	16.1	11.9	5.2	1263
276	Burchell's Courser	<i>Cursorius rufus</i>	5.9	26.5	40.2	15.7	7.3	4.4	204
277	Temminck's Courser	<i>Cursorius temminckii</i>	11.8	23.6	31.0	17.8	13.2	2.6	348
278	Double-banded Courser	<i>Rhinoptilus africanus</i>	14.0	19.0	34.1	18.5	9.7	4.7	443
280	Bronze-winged Courser	<i>Rhinoptilus chalcopterus</i>	9.3	19.3	27.1	28.6	15.0	0.7	140
282	Black-winged Pratincole	<i>Glareola nordmanni</i>	1.6	13.7	35.2	22.5	17.6	9.3	182
286	Subantarctic Skua	<i>Catharacta antarctica</i>	10.8	12.3	27.7	15.4	12.3	21.5	65
287	Kelp Gull	<i>Larus dominicanus</i>	26.7	8.9	18.9	10.0	12.2	23.3	180
288	Grey-headed Gull	<i>Larus cirrocephalus</i>	16.9	14.4	31.7	14.8	10.9	11.3	486
289	Hartlaub's Gull	<i>Larus hartlaubii</i>	34.2	10.1	15.2	16.5	6.3	17.7	79
290	Caspian Tern	<i>Sterna caspia</i>	12.4	9.5	20.7	17.8	19.4	20.3	242
291	Common Tern	<i>Sterna hirundo</i>	38.5	16.1	23.1	9.8	6.3	6.3	143
294	Arctic Tern	<i>Sterna paradisaea</i>	32.5	24.1	33.7	4.8	3.6	1.2	83
296	Sandwich Tern	<i>Sterna sandvicensis</i>	26.1	17.7	23.1	6.9	11.5	14.6	130
298	Swift Tern	<i>Sterna bergii</i>	14.5	7.3	15.2	19.6	14.5	29.0	138
299	Little Tern	<i>Sterna albifrons</i>	18.3	9.9	23.9	8.4	16.9	22.5	71
304	White-winged Tern	<i>Chlidonias leucopterus</i>	28.5	26.0	30.6	8.8	5.1	1.1	628
305	Whiskered Tern	<i>Chlidonias hybrida</i>	5.4	12.2	22.5	20.9	17.1	21.9	590
307	Namaqua Sandgrouse	<i>Pterocles namaqua</i>	12.8	19.2	28.1	20.2	13.5	6.2	579
308	Burchell's Sandgrouse	<i>Pterocles burchelli</i>	13.8	22.8	23.6	21.1	13.0	5.7	123
310	Double-banded Sandgrouse	<i>Pterocles bicinctus</i>	17.4	15.3	25.7	20.1	16.0	5.6	144
940	Rock Dove	<i>Columba livia</i>	10.8	14.2	21.1	21.4	16.5	16.0	1062



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311	Speckled Pigeon	<i>Columba guinea</i>	13.9	11.3	16.8	20.2	14.7	23.0	1384
312	African Olive-Pigeon	<i>Columba arquatrix</i>	16.7	18.5	25.3	19.3	10.2	10.0	509
314	Red-eyed Dove	<i>Streptopelia semitorquata</i>	7.6	7.9	15.4	17.0	17.0	35.2	1336
315	African Mourning Dove	<i>Streptopelia decipiens</i>	15.7	19.6	39.2	9.8	7.8	7.8	51
316	Cape Turtle-Dove	<i>Streptopelia capicola</i>	16.3	11.2	17.1	21.8	17.5	16.1	1443
317	Laughing Dove	<i>Streptopelia senegalensis</i>	25.7	15.7	21.5	17.4	10.9	8.7	1435
318	Namaqua Dove	<i>Oena capensis</i>	23.1	18.9	25.9	17.5	8.8	6.0	1300
319	Tambourine Dove	<i>Turtur tympanistria</i>	13.4	14.7	24.2	16.3	14.5	16.8	380
321	Emerald-spotted Wood-Dove	<i>Turtur chalcospilos</i>	21.6	17.6	20.7	17.0	12.7	10.4	518
322	Lemon Dove	<i>Aplopelia larvata</i>	16.3	17.6	29.4	15.8	10.9	9.9	221
323	African Green-Pigeon	<i>Treron calvus</i>	29.0	13.9	18.8	13.3	10.4	14.5	345
327	Meyer's Parrot	<i>Poicephalus meyeri</i>	29.4	19.1	10.3	17.6	19.1	4.4	68
328	Brown-headed Parrot	<i>Poicephalus cryptoxanthus</i>	33.8	18.2	23.4	15.6	6.5	2.6	77
337	Purple-crested Turaco	<i>Gallirex porphyreolophus</i>	24.1	8.5	13.7	17.9	11.3	24.5	212
339	Grey Go-away-bird	<i>Corythaixoides concolor</i>	17.3	14.7	24.0	17.6	13.2	13.2	341
340	Common Cuckoo	<i>Cuculus canorus</i>	8.5	20.9	46.5	11.6	12.4	0.0	129
341	African Cuckoo	<i>Cuculus gularis</i>	11.7	23.5	28.0	21.2	10.1	5.5	307
343	Red-chested Cuckoo	<i>Cuculus solitarius</i>	10.4	16.2	26.1	20.2	15.9	11.2	838
344	Black Cuckoo	<i>Cuculus clamosus</i>	4.7	11.8	20.4	23.9	21.2	18.0	637
346	Great Spotted Cuckoo	<i>Clamator glandarius</i>	6.4	24.0	38.3	20.8	9.3	1.1	279
347	Levaillant's Cuckoo	<i>Clamator levaillantii</i>	2.4	11.0	23.0	24.4	27.8	11.5	209
348	Jacobin Cuckoo	<i>Clamator jacobinus</i>	8.6	16.6	28.3	20.2	16.7	9.7	724
350	African Emerald Cuckoo	<i>Chrysococcyx cupreus</i>	8.4	16.9	25.4	19.7	16.0	13.6	213
351	Klaas's Cuckoo	<i>Chrysococcyx klaas</i>	11.6	14.9	26.2	23.5	14.4	9.4	786
352	Diderick Cuckoo	<i>Chrysococcyx caprius</i>	6.7	12.9	20.9	24.2	18.3	17.0	1288
359	Barn Owl	<i>Tyto alba</i>	21.2	18.3	24.7	16.7	12.6	6.6	953
360	African Grass-Owl	<i>Tyto capensis</i>	16.1	27.4	38.6	9.0	6.3	2.7	223
361	Marsh Owl	<i>Asio capensis</i>	18.8	23.8	31.1	13.1	9.2	4.0	479
362	African Wood-Owl	<i>Strix woodfordii</i>	24.1	15.4	31.1	16.2	10.1	3.1	228
363	African Scops-Owl	<i>Otus senegalensis</i>	19.1	21.8	30.7	14.2	9.3	4.9	225



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364	Southern White-faced Scops-Owl	<i>Ptilopus granti</i>	17.2	19.4	27.8	19.4	14.4	1.7	180
365	Pearl-spotted Owlet	<i>Glaucidium perlatum</i>	25.1	14.7	21.5	16.3	12.4	10.1	307
367	Cape Eagle-Owl	<i>Bubo capensis</i>	14.0	21.2	44.0	8.4	10.4	2.0	250
368	Spotted Eagle-Owl	<i>Bubo africanus</i>	24.6	20.4	25.9	15.8	9.0	4.3	1193
369	Verreaux's Eagle-Owl	<i>Bubo lacteus</i>	21.1	18.4	26.0	17.3	14.6	2.7	185
371	European Nightjar	<i>Caprimulgus europaeus</i>	5.9	28.1	43.2	14.6	6.5	1.6	185
372	Rufous-cheeked Nightjar	<i>Caprimulgus rufigena</i>	9.1	24.6	29.0	20.8	13.4	3.1	418
373	Fiery-necked Nightjar	<i>Caprimulgus pectoralis</i>	27.8	18.9	22.5	13.2	12.1	5.5	672
374	Freckled Nightjar	<i>Caprimulgus tristigma</i>	12.1	19.4	34.7	14.9	12.5	6.3	288
376	Square-tailed Nightjar	<i>Caprimulgus fossii</i>	23.7	24.7	30.9	9.3	7.2	4.1	97
378	Common Swift	<i>Apus apus</i>	4.2	13.4	33.5	21.0	19.2	8.7	620
380	African Black Swift	<i>Apus barbatus</i>	10.9	15.8	31.3	21.6	13.2	7.2	983
381	Bradfield's Swift	<i>Apus bradfieldi</i>	1.6	9.5	25.4	36.5	17.5	9.5	63
383	White-rumped Swift	<i>Apus caffer</i>	6.8	10.6	19.6	21.2	19.0	22.6	1328
384	Horus Swift	<i>Apus horus</i>	5.6	16.9	32.3	23.6	14.1	7.4	644
385	Little Swift	<i>Apus affinis</i>	13.5	12.7	22.8	20.8	14.7	15.6	1366
386	Alpine Swift	<i>Tachymarptis melba</i>	14.6	17.6	27.3	22.1	12.4	6.1	1009
387	African Palm-Swift	<i>Cypsiurus parvus</i>	4.0	3.0	8.2	19.2	24.2	41.3	693
390	Speckled Mousebird	<i>Colius striatus</i>	17.1	11.1	17.8	18.8	17.0	18.2	1079
391	White-backed Mousebird	<i>Colius colius</i>	15.5	11.3	21.4	20.2	16.1	15.6	833
392	Red-faced Mousebird	<i>Urocolius indicus</i>	9.8	11.4	21.0	22.8	15.2	19.9	1284
393	Narina Trogon	<i>Apaloderma narina</i>	18.3	16.6	29.0	15.4	13.3	7.5	241
394	Pied Kingfisher	<i>Ceryle rudis</i>	28.8	18.5	23.4	14.6	9.0	5.7	1033
395	Giant Kingfisher	<i>Megaceryle maximus</i>	26.4	19.3	23.2	18.3	7.7	5.2	964
396	Half-collared Kingfisher	<i>Alcedo semitorquata</i>	12.3	22.4	29.7	14.0	14.9	6.7	357
397	Malachite Kingfisher	<i>Alcedo cristata</i>	15.9	18.3	23.3	21.2	14.2	7.2	1030
398	African Pygmy-Kingfisher	<i>Ispidina picta</i>	16.2	19.9	27.0	22.0	11.1	3.7	296
399	Woodland Kingfisher	<i>Halcyon senegalensis</i>	4.6	11.0	13.3	27.8	24.3	19.0	263
401	Grey-headed Kingfisher	<i>Halcyon leucocephala</i>	5.4	17.2	25.8	30.1	19.4	2.2	93
402	Brown-hooded Kingfisher	<i>Halcyon albiventris</i>	21.2	13.7	20.1	16.4	13.6	14.9	876



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
403	Striped Kingfisher	<i>Halcyon chelicuti</i>	25.3	21.1	22.1	12.8	11.5	7.1	312
404	European Bee-eater	<i>Merops apiaster</i>	7.3	14.8	23.6	21.2	17.1	16.0	992
405	Blue-cheeked Bee-eater	<i>Merops persicus</i>	4.7	16.5	29.9	18.9	20.5	9.4	127
407	Southern Carmine Bee-eater	<i>Merops nubicoides</i>	24.1	27.7	28.4	12.8	5.0	2.1	141
409	White-fronted Bee-eater	<i>Merops bullockoides</i>	9.9	8.0	15.5	18.9	23.1	24.7	477
410	Little Bee-eater	<i>Merops pusillus</i>	21.7	19.0	19.7	17.2	13.4	8.9	447
411	Swallow-tailed Bee-eater	<i>Merops hirundineus</i>	7.6	15.5	23.1	21.2	21.8	10.8	316
412	European Roller	<i>Coracias garrulus</i>	8.8	18.6	34.7	22.7	12.2	3.1	617
413	Lilac-breasted Roller	<i>Coracias caudatus</i>	22.4	20.4	26.8	15.6	11.0	4.0	501
415	Purple Roller	<i>Coracias naevius</i>	20.2	27.2	29.5	15.1	5.4	2.6	312
416	Broad-billed Roller	<i>Eurystomus glaucurus</i>	5.0	18.3	18.3	26.7	18.3	13.3	60
418	African Hoopoe	<i>Upupa africana</i>	26.9	15.3	19.8	16.2	12.0	9.8	1351
419	Green Wood-Hoopoe	<i>Phoeniculus purpureus</i>	17.8	11.7	17.9	17.3	17.7	17.7	770
421	Common Scimitarbill	<i>Rhinopomastus cyanomelas</i>	14.0	14.4	22.4	20.9	15.6	12.6	665
422	Trumpeter Hornbill	<i>Bycanistes bucinator</i>	35.5	20.7	17.0	13.4	7.8	5.5	217
424	African Grey Hornbill	<i>Tockus nasutus</i>	21.3	18.6	24.1	15.6	12.2	8.2	403
426	Southern Yellow-billed Hornbill	<i>Tockus leucomelas</i>	23.0	17.4	23.3	21.1	11.3	3.9	408
427	Crowned Hornbill	<i>Tockus alboterminatus</i>	24.9	16.6	24.5	18.9	7.6	7.6	265
430	Southern Ground-Hornbill	<i>Bucorvus leadbeateri</i>	32.2	26.2	27.6	10.8	2.8	0.5	214
431	Black-collared Barbet	<i>Lybius torquatus</i>	17.0	10.1	14.0	14.5	16.9	27.5	759
432	Acacia Pied Barbet	<i>Tricholaema leucomelas</i>	17.6	14.1	16.2	17.1	16.9	18.1	1254
433	White-eared Barbet	<i>Stactolaema leucotis</i>	16.7	5.6	11.1	20.4	14.8	31.5	54
436	Red-fronted Tinkerbird	<i>Pogoniulus pusillus</i>	17.7	11.7	18.1	13.3	14.5	24.6	248
437	Yellow-fronted Tinkerbird	<i>Pogoniulus chrysoconus</i>	11.8	14.6	19.7	22.4	15.4	16.1	254
438	Yellow-rumped Tinkerbird	<i>Pogoniulus bilineatus</i>	14.3	8.9	9.8	15.2	18.8	33.0	112
439	Crested Barbet	<i>Trachyphonus vaillantii</i>	12.2	9.1	14.4	16.3	16.5	31.5	822
440	Greater Honeyguide	<i>Indicator indicator</i>	13.3	16.8	28.6	21.4	13.1	6.8	833
441	Scaly-throated Honeyguide	<i>Indicator variegatus</i>	11.3	14.2	24.5	19.1	16.2	14.7	204
442	Lesser Honeyguide	<i>Indicator minor</i>	6.2	11.1	23.6	22.6	21.4	15.0	791
443	Brown-backed Honeybird	<i>Prodotiscus regulus</i>	4.5	12.8	30.6	25.9	14.8	11.4	359



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
445	Ground Woodpecker	<i>Geocolaptes olivaceus</i>	25.3	22.5	28.7	12.5	7.6	3.4	471
446	Bennett's Woodpecker	<i>Campethera bennettii</i>	10.9	22.5	26.5	22.5	12.9	4.8	147
447	Golden-tailed Woodpecker	<i>Campethera abingoni</i>	7.3	9.8	15.4	23.0	19.3	25.2	560
448	Knysna Woodpecker	<i>Campethera notata</i>	0.7	11.4	17.9	10.7	20.0	39.3	140
450	Cardinal Woodpecker	<i>Dendropicos fuscescens</i>	10.6	11.1	20.6	20.3	21.5	15.9	1038
451	Bearded Woodpecker	<i>Dendropicos namaquus</i>	9.5	13.5	23.7	18.8	21.7	12.8	304
452	Olive Woodpecker	<i>Dendropicos griseocephalus</i>	12.5	11.9	22.0	18.4	15.0	20.2	327
453	Red-throated Wryneck	<i>Jynx ruficollis</i>	10.9	9.9	18.3	14.8	19.9	26.2	553
456	Melodious Lark	<i>Mirafra cheniana</i>	2.6	13.7	25.2	19.2	26.1	13.3	234
457	Monotonous Lark	<i>Mirafra passerina</i>	10.7	16.7	20.7	27.3	19.3	5.3	150
458	Rufous-naped Lark	<i>Mirafra africana</i>	7.7	11.1	18.3	19.9	15.7	27.4	874
459	Fawn-coloured Lark	<i>Calendulauda africanoides</i>	2.1	9.9	20.2	20.9	22.3	24.5	282
460	Sabota Lark	<i>Calendulauda sabota</i>	10.1	13.2	20.3	21.0	17.5	17.8	779
461	Karoo Lark	<i>Calendulauda albescens</i>	10.0	12.6	20.1	27.6	20.9	8.8	239
463	Large-billed Lark	<i>Galerida magnirostris</i>	11.6	13.7	22.7	19.7	17.6	14.8	534
464	Dusky Lark	<i>Pinarocorys nigricans</i>	4.2	19.4	18.1	36.1	19.4	2.8	72
465	Short-clawed Lark	<i>Certhilauda chuana</i>	3.5	14.0	31.6	17.5	17.5	15.8	57
468	Flappet Lark	<i>Mirafra rufocinnamomea</i>	17.7	23.1	19.7	25.9	8.2	5.4	147
474	Spike-heeled Lark	<i>Chersomanes albofasciata</i>	18.2	16.6	20.8	18.2	13.8	12.2	817
484	Chestnut-backed Sparrowlark	<i>Eremopterix leucotis</i>	16.1	19.7	30.7	17.0	11.0	5.5	417
485	Grey-backed Sparrowlark	<i>Eremopterix verticalis</i>	10.6	23.1	30.1	19.4	11.1	5.8	624
486	Black-eared Sparrowlark	<i>Eremopterix australis</i>	5.1	19.7	26.3	25.5	19.0	4.4	137
488	Red-capped Lark	<i>Calandrella cinerea</i>	11.7	14.6	20.6	21.0	15.2	16.9	1120
490	Pink-billed Lark	<i>Spizocorys conirostris</i>	10.1	21.0	29.6	16.9	16.9	5.6	338
493	Barn Swallow	<i>Hirundo rustica</i>	6.2	11.2	20.4	26.0	17.8	18.4	1425
495	White-throated Swallow	<i>Hirundo albigularis</i>	7.7	12.3	20.0	21.0	17.5	21.5	1197
496	Wire-tailed Swallow	<i>Hirundo smithii</i>	12.9	8.8	20.1	18.6	16.0	23.7	194
498	Pearl-breasted Swallow	<i>Hirundo dimidiata</i>	6.1	11.2	23.2	23.2	18.8	17.5	607
499	Grey-rumped Swallow	<i>Pseudhirundo griseopyga</i>	7.8	14.4	23.3	26.7	13.3	14.4	90
501	Red-breasted Swallow	<i>Hirundo semirufa</i>	15.2	18.0	24.9	17.5	14.1	10.3	639



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
502	Greater Striped Swallow	<i>Hirundo cucullata</i>	4.8	8.9	17.1	23.1	19.5	26.4	1300
503	Lesser Striped Swallow	<i>Hirundo abyssinica</i>	11.7	11.8	21.9	20.2	16.8	17.6	643
504	South African Cliff-Swallow	<i>Hirundo spilodera</i>	9.6	11.2	26.0	19.5	14.7	19.0	573
506	Rock Martin	<i>Hirundo fuligula</i>	14.8	12.9	20.5	20.5	15.8	15.4	1270
507	Common House-Martin	<i>Delichon urbicum</i>	5.1	14.6	29.9	22.7	19.6	8.1	841
508	Sand Martin	<i>Riparia riparia</i>	6.2	23.7	36.0	16.6	14.0	3.6	308
509	Brown-throated Martin	<i>Riparia paludicola</i>	9.5	12.6	20.0	19.6	17.6	20.6	1228
510	Banded Martin	<i>Riparia cincta</i>	5.5	10.5	22.3	19.3	20.5	21.9	638
511	Black Saw-wing	<i>Psalidoprocne holomelaena</i>	6.8	8.1	17.5	21.4	19.4	26.9	458
513	Black Cuckooshrike	<i>Campephaga flava</i>	6.0	10.8	22.2	22.0	19.8	19.4	501
514	Ashy Tit	<i>Parus cinerascens</i>	10.9	12.9	22.9	20.1	19.9	13.4	433
516	Grey Cuckooshrike	<i>Coracina caesia</i>	14.4	19.7	27.4	14.9	13.9	9.6	208
517	Fork-tailed Drongo	<i>Dicrurus adsimilis</i>	14.5	14.9	20.9	18.9	14.1	16.7	1035
518	Square-tailed Drongo	<i>Dicrurus ludwigii</i>	16.3	16.3	16.3	21.4	15.3	14.3	98
519	Eurasian Golden Oriole	<i>Oriolus oriolus</i>	8.1	21.1	44.0	16.2	8.8	1.8	284
521	Black-headed Oriole	<i>Oriolus larvatus</i>	14.5	11.6	19.6	20.0	15.5	18.8	664
522	Pied Crow	<i>Corvus albus</i>	14.7	9.5	14.1	18.2	17.5	26.0	1341
523	Cape Crow	<i>Corvus capensis</i>	21.5	21.4	24.4	14.7	9.0	9.0	1027
524	White-necked Raven	<i>Corvus albicollis</i>	12.4	13.1	19.1	18.7	17.5	19.1	748
525	Grey Tit	<i>Parus afer</i>	12.8	18.9	25.5	21.7	13.5	7.7	392
527	Southern Black Tit	<i>Parus niger</i>	18.6	10.9	19.3	18.0	16.9	16.2	549
530	Grey Penduline-Tit	<i>Anthoscopus caroli</i>	16.8	22.0	24.3	19.6	12.7	4.6	173
531	Cape Penduline-Tit	<i>Anthoscopus minutus</i>	8.4	15.7	25.6	20.5	19.8	10.1	606
533	Arrow-marked Babbler	<i>Turdoides jardineii</i>	12.7	12.4	20.0	14.3	20.8	19.8	379
536	Southern Pied Babbler	<i>Turdoides bicolor</i>	12.9	16.5	19.4	24.7	14.1	12.4	170
540	Cape Rock-jumper	<i>Chaetops frenatus</i>	22.9	20.0	28.6	11.4	8.6	8.6	70
542	Bush Blackcap	<i>Lioptilus nigricapillus</i>	9.5	6.7	31.4	16.2	22.9	13.3	105
543	Cape Bulbul	<i>Pycnonotus capensis</i>	7.9	6.8	15.8	17.3	21.2	30.9	278
544	African Red-eyed Bulbul	<i>Pycnonotus nigricans</i>	9.0	13.2	16.6	22.2	19.2	19.7	775
545	Dark-capped Bulbul	<i>Pycnonotus tricolor</i>	11.0	7.1	15.3	23.4	19.2	24.0	672



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
546	Terrestrial Brownbul	<i>Phyllastrephus terrestris</i>	6.9	12.4	20.2	22.1	17.4	21.0	362
550	Yellow-bellied Greenbul	<i>Chlorocichla flaviventris</i>	6.7	6.2	9.6	23.9	22.5	31.1	209
551	Sombre Greenbul	<i>Andropadus importunus</i>	7.4	7.7	13.8	17.8	18.0	35.4	557
552	Kurrichane Thrush	<i>Turdus libonyanus</i>	23.6	15.0	21.9	14.4	12.4	12.7	466
557	Groundscraper Thrush	<i>Psophocichla litsipsirupa</i>	23.3	16.6	20.5	15.4	10.8	13.4	566
559	Cape Rock-Thrush	<i>Monticola rupestris</i>	17.3	19.3	27.7	19.4	10.5	5.8	618
560	Sentinel Rock-Thrush	<i>Monticola explorator</i>	11.4	24.5	36.2	18.5	6.0	3.4	298
561	Short-toed Rock-Thrush	<i>Monticola brevipes</i>	5.7	16.7	26.8	19.3	22.4	9.2	228
564	Mountain Wheatear	<i>Oenanthe monticola</i>	22.6	17.8	27.8	16.5	9.3	6.0	970
566	Karoo Chat	<i>Cercomela schlegelii</i>	9.9	22.2	28.2	23.3	10.1	6.3	365
568	Capped Wheatear	<i>Oenanthe pileata</i>	6.2	14.2	22.1	24.1	17.5	15.9	755
569	Buff-streaked Chat	<i>Oenanthe bifasciata</i>	14.6	14.2	27.5	16.3	12.0	15.4	233
570	Familiar Chat	<i>Cercomela familiaris</i>	10.4	11.9	21.4	22.4	17.0	16.9	1324
571	Tractrac Chat	<i>Cercomela tractrac</i>	5.5	12.3	30.7	22.1	15.9	13.5	163
572	Sickle-winged Chat	<i>Cercomela sinuata</i>	10.3	13.8	29.5	25.1	15.0	6.3	494
573	Mocking Cliff-Chat	<i>Thamnolaea cinnamomeiventris</i>	17.9	16.1	28.0	16.3	12.5	9.1	503
575	Anteating Chat	<i>Myrmecocichla formicivora</i>	15.1	16.9	21.6	17.6	14.8	14.1	1103
576	African Stonechat	<i>Saxicola torquatus</i>	11.8	13.1	18.9	18.5	14.2	23.5	1215
578	Chorister Robin-Chat	<i>Cossypha dichroa</i>	16.3	16.3	23.6	19.7	16.3	7.7	233
579	Red-capped Robin-Chat	<i>Cossypha natalensis</i>	12.8	13.8	13.3	23.9	12.4	23.9	218
580	White-browed Robin-Chat	<i>Cossypha heuglini</i>	14.2	13.5	16.9	16.2	22.3	16.9	148
581	Cape Robin-Chat	<i>Cossypha caffra</i>	11.1	11.2	18.7	21.2	15.9	21.9	1217
582	White-throated Robin-Chat	<i>Cossypha humeralis</i>	14.9	13.3	24.0	19.6	16.3	11.9	362
583	Karoo Scrub-Robin	<i>Cercotrichas coryphoeus</i>	7.4	12.1	21.4	21.1	19.7	18.4	679
584	Brown Scrub-Robin	<i>Cercotrichas signata</i>	8.2	16.4	22.1	23.0	17.2	13.1	122
585	Bearded Scrub-Robin	<i>Cercotrichas quadrivirgata</i>	7.5	4.3	18.3	11.8	28.0	30.1	93
586	Kalahari Scrub-Robin	<i>Cercotrichas paena</i>	8.3	8.3	15.5	22.3	20.7	25.0	497
588	White-browed Scrub-Robin	<i>Cercotrichas leucophrys</i>	5.3	5.4	13.9	19.5	19.1	36.8	570
589	White-starred Robin	<i>Pogonocichla stellata</i>	7.3	19.3	29.3	18.7	15.3	10.0	150
594	Common Whitethroat	<i>Sylvia communis</i>	6.9	14.7	33.3	30.4	11.8	2.9	102



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
595	Garden Warbler	<i>Sylvia borin</i>	9.6	20.1	27.6	25.1	14.2	3.3	239
596	Icterine Warbler	<i>Hippolais icterina</i>	6.9	19.8	35.1	21.5	12.1	4.5	288
597	Olive-tree Warbler	<i>Hippolais olivetorum</i>	1.4	11.0	13.7	28.8	34.3	11.0	73
599	Willow Warbler	<i>Phylloscopus trochilus</i>	7.3	13.8	25.6	20.9	18.0	14.4	980
600	Yellow-bellied Eremomela	<i>Eremomela icteropygialis</i>	8.1	16.0	24.7	21.4	17.2	12.6	831
601	Burnt-necked Eremomela	<i>Eremomela usticollis</i>	2.8	7.4	18.1	25.5	27.8	18.5	216
602	Green-capped Eremomela	<i>Eremomela scotops</i>	12.7	14.1	32.4	18.3	16.9	5.6	71
603	Great Reed-Warbler	<i>Acrocephalus arundinaceus</i>	4.6	13.5	30.0	25.7	19.3	7.0	327
604	Lesser Swamp-Warbler	<i>Acrocephalus gracilirostris</i>	10.4	11.4	21.8	18.0	15.7	22.6	1014
606	African Reed-Warbler	<i>Acrocephalus baeticatus</i>	6.3	10.6	23.5	23.6	20.4	15.7	848
607	Marsh Warbler	<i>Acrocephalus palustris</i>	3.2	9.1	21.0	19.0	26.3	21.4	342
608	Sedge Warbler	<i>Acrocephalus schoenobaenus</i>	17.6	22.5	34.1	13.2	10.4	2.2	182
609	Little Rush-Warbler	<i>Bradypterus baboecala</i>	8.6	9.6	20.4	18.1	16.5	26.8	686
610	Barratt's Warbler	<i>Bradypterus barratti</i>	6.3	15.2	24.0	20.9	17.7	15.8	158
611	Knysna Warbler	<i>Bradypterus sylvaticus</i>	5.2	8.6	32.8	15.5	8.6	29.3	58
612	Victorin's Warbler	<i>Cryptillas victorini</i>	14.3	11.9	14.3	23.8	17.9	17.9	84
613	Cinnamon-breasted Warbler	<i>Euryptila subcinnamomea</i>	4.4	22.1	33.8	20.6	13.2	5.9	68
614	Barred Wren-Warbler	<i>Calamonastes fasciolatus</i>	10.4	13.4	20.9	21.4	17.9	15.9	201
615	Stierling's Wren-Warbler	<i>Calamonastes stierlingi</i>	16.9	9.9	12.7	18.3	22.5	19.7	71
616	Broad-tailed Warbler	<i>Schoenicola brevirostris</i>	4.6	12.3	30.0	17.7	26.9	8.5	130
618	Cape Grassbird	<i>Sphenoeacus afer</i>	10.8	8.1	19.2	19.8	16.1	26.0	582
619	Rufous-eared Warbler	<i>Malcorus pectoralis</i>	5.8	13.9	20.6	19.5	20.8	19.4	568
621	Long-billed Crombec	<i>Sylvietta rufescens</i>	8.9	12.8	21.3	20.1	18.5	18.5	1176
622	Bar-throated Apalis	<i>Apalis thoracica</i>	7.2	7.8	15.8	19.2	19.2	30.8	792
625	Yellow-breasted Apalis	<i>Apalis flava</i>	8.0	8.6	19.1	14.0	20.1	30.3	314
626	Karoo Eremomela	<i>Eremomela gregalis</i>	7.9	18.8	27.3	23.0	15.1	7.9	165
627	Green-backed Camaroptera	<i>Camaroptera brachyura</i>	15.5	13.1	16.1	14.7	11.6	29.1	498
629	Zitting Cisticola	<i>Cisticola juncidis</i>	6.6	10.9	15.6	18.5	17.3	31.1	1203
630	Desert Cisticola	<i>Cisticola aridulus</i>	5.3	9.7	19.6	19.0	22.5	23.8	730
631	Cloud Cisticola	<i>Cisticola textrix</i>	2.8	11.5	19.9	19.4	16.7	29.7	687



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
634	Wing-snapping Cisticola	<i>Cisticola ayresii</i>	5.5	10.1	21.1	18.4	16.9	28.1	474
635	Pale-crowned Cisticola	<i>Cisticola cinnamomeus</i>	3.0	7.2	18.0	20.4	24.0	27.5	167
637	Neddicky Neddicky	<i>Cisticola fulvicapilla</i>	7.3	7.8	13.4	18.8	17.7	35.0	1227
638	Grey-backed Cisticola	<i>Cisticola subruficapilla</i>	4.3	7.1	14.1	21.9	22.4	30.2	580
639	Wailing Cisticola	<i>Cisticola lais</i>	7.7	13.4	21.8	17.9	20.6	18.6	441
641	Tinkling Cisticola	<i>Cisticola rufilatus</i>	1.6	11.3	24.2	32.3	21.0	9.7	62
642	Rattling Cisticola	<i>Cisticola chiniana</i>	6.4	8.3	10.2	18.3	19.5	37.4	519
644	Red-faced Cisticola	<i>Cisticola erythrops</i>	8.0	12.8	23.0	13.9	13.4	28.9	187
646	Levaillant's Cisticola	<i>Cisticola tinniens</i>	9.2	9.6	18.7	18.1	14.9	29.6	1113
647	Croaking Cisticola	<i>Cisticola natalensis</i>	6.4	10.8	15.5	15.5	21.1	30.7	251
648	Lazy Cisticola	<i>Cisticola aberrans</i>	9.9	11.2	19.9	15.7	17.4	25.9	483
649	Tawny-flanked Prinia	<i>Prinia subflava</i>	6.0	5.5	13.9	15.1	16.6	43.0	604
650	Black-chested Prinia	<i>Prinia flavicans</i>	5.8	7.4	15.5	22.4	18.6	30.4	705
653	Namaqua Warbler	<i>Phragmacia substriata</i>	15.3	12.5	26.3	22.6	15.6	7.7	327
654	Spotted Flycatcher	<i>Muscicapa striata</i>	4.1	11.7	24.3	25.1	18.2	16.7	1060
655	African Dusky Flycatcher	<i>Muscicapa adusta</i>	13.9	15.3	22.5	20.5	13.1	14.7	511
656	Ashy Flycatcher	<i>Muscicapa caerulescens</i>	14.9	11.8	21.0	20.5	19.6	12.2	229
657	Grey Tit-Flycatcher	<i>Myioparus plumbeus</i>	6.9	8.8	25.5	20.4	21.8	16.7	216
658	Chestnut-vented Tit-Babbler	<i>Parisoma subcaeruleum</i>	7.0	8.6	20.3	21.7	19.6	22.9	1037
659	Layard's Tit-Babbler	<i>Parisoma layardi</i>	6.3	13.0	25.1	27.8	16.9	10.9	431
661	Marico Flycatcher	<i>Bradornis mariquensis</i>	5.9	12.0	23.8	23.8	19.0	15.5	374
662	Pale Flycatcher	<i>Bradornis pallidus</i>	14.7	18.1	23.5	23.1	13.9	6.7	238
663	Chat Flycatcher	<i>Bradornis infuscatus</i>	14.1	21.3	27.3	19.7	10.4	7.3	483
664	Southern Black Flycatcher	<i>Melaenornis pammelaina</i>	10.4	13.0	19.7	17.4	14.7	24.8	483
665	Fiscal Flycatcher	<i>Sigelus silens</i>	11.1	13.2	20.4	20.8	15.0	19.5	1238
666	Dark-capped Yellow Warbler	<i>Chloropeta natalensis</i>	2.5	11.8	20.4	15.5	22.5	27.4	245
671	Yellow-throated Woodland-Warbler	<i>Phylloscopus ruficapilla</i>	9.8	15.5	30.0	15.0	14.0	15.5	193
672	Cape Batis	<i>Batis capensis</i>	11.5	12.2	21.0	21.2	16.3	17.8	523
673	Chinspot Batis	<i>Batis molitor</i>	12.8	9.9	18.0	17.6	18.6	23.1	585
674	Pirit Batis	<i>Batis pririt</i>	6.6	13.8	21.4	24.9	19.7	13.6	543



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
678	Fairy Flycatcher	<i>Stenostira scita</i>	14.1	18.1	30.4	18.6	11.3	7.5	829
680	Blue-mantled Crested-Flycatcher	<i>Trochocercus cyanomelas</i>	12.3	12.3	25.5	14.5	20.0	15.3	235
682	African Paradise-Flycatcher	<i>Terpsiphone viridis</i>	12.6	13.2	25.2	19.5	16.6	12.9	914
685	African Pied Wagtail	<i>Motacilla aguimp</i>	18.7	17.8	26.3	12.7	12.5	12.0	551
686	Cape Wagtail	<i>Motacilla capensis</i>	14.8	13.7	19.4	20.7	13.4	18.0	1362
688	Mountain Wagtail	<i>Motacilla clara</i>	12.6	25.2	30.4	17.3	7.9	6.5	214
689	Yellow Wagtail	<i>Motacilla flava</i>	8.0	22.7	28.0	20.0	16.0	5.3	75
692	African Pipit	<i>Anthus cinnamomeus</i>	7.1	8.6	16.7	19.0	17.9	30.7	1400
693	Long-billed Pipit	<i>Anthus similis</i>	6.9	11.1	25.0	21.8	19.5	15.7	827
694	Plain-backed Pipit	<i>Anthus leucophrys</i>	6.5	10.8	23.3	23.1	19.3	17.1	772
695	Buffy Pipit	<i>Anthus vaalensis</i>	3.5	13.3	28.8	26.6	20.3	7.5	518
696	Striped Pipit	<i>Anthus lineiventris</i>	11.8	14.1	23.6	22.0	16.7	11.8	263
697	African Rock Pipit	<i>Anthus crenatus</i>	6.0	10.9	27.9	23.7	18.7	12.7	283
699	Bushveld Pipit	<i>Anthus caffer</i>	16.8	17.8	31.4	17.8	10.5	5.8	191
701	Yellow-breasted Pipit	<i>Anthus chloris</i>	3.5	15.5	37.9	13.8	17.2	12.1	58
703	Cape Longclaw	<i>Macronyx capensis</i>	12.8	10.5	15.7	19.1	16.1	25.7	921
704	Yellow-throated Longclaw	<i>Macronyx croceus</i>	20.6	12.6	19.2	13.6	15.9	18.2	214
706	Lesser Grey Shrike	<i>Lanius minor</i>	4.6	14.0	24.1	25.5	18.8	12.9	627
707	Common Fiscal	<i>Lanius collaris</i>	20.2	13.6	21.4	21.1	13.8	10.0	1414
708	Red-backed Shrike	<i>Lanius collurio</i>	3.6	13.7	24.4	23.3	19.4	15.6	922
709	Southern Boubou	<i>Laniarius ferrugineus</i>	10.7	7.8	16.2	19.0	15.9	30.4	825
711	Crimson-breasted Shrike	<i>Laniarius atrococcineus</i>	7.1	10.9	23.8	22.1	16.5	19.5	411
712	Black-backed Puffback	<i>Dryoscopus cubla</i>	15.6	10.6	19.7	18.8	15.7	19.7	585
713	Southern Tchagra	<i>Tchagra tchagra</i>	12.9	12.0	24.6	19.6	15.8	15.2	342
714	Brown-crowned Tchagra	<i>Tchagra australis</i>	9.9	9.9	20.2	21.8	17.2	21.1	588
715	Black-crowned Tchagra	<i>Tchagra senegalus</i>	15.2	14.6	20.8	15.6	15.6	18.3	520
717	Olive Bush-Shrike	<i>Telophorus olivaceus</i>	6.2	10.3	17.6	19.4	18.8	27.9	341
719	Orange-breasted Bush-Shrike	<i>Telophorus sulfureopectus</i>	7.7	7.9	16.0	20.5	18.3	29.6	443
721	Gorgeous Bush-Shrike	<i>Telophorus quadricolor</i>	14.1	14.1	20.1	16.9	15.2	19.6	184
722	Bokmakierie	<i>Telophorus zeylonus</i>	16.0	11.7	17.8	20.4	15.5	18.6	1202



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
723	Grey-headed Bush-Shrike	<i>Malaconotus blanchoti</i>	11.8	11.8	20.8	19.2	18.3	18.1	442
724	Magpie Shrike	<i>Corvinella melanoleuca</i>	16.1	14.2	23.8	17.6	14.9	13.4	261
725	Eastern Nicator	<i>Nicator gularis</i>	3.6	8.4	8.4	18.1	26.5	34.9	83
727	White-crested Helmet-Shrike	<i>Prionops plumatus</i>	31.0	20.1	25.1	14.1	8.1	1.6	319
728	Retz's Helmet-Shrike	<i>Prionops retzii</i>	16.9	15.7	20.5	22.9	13.3	10.8	83
730	Southern White-crowned Shrike	<i>Eurocephalus anguitemens</i>	17.4	21.6	26.3	19.0	11.6	4.2	190
731	Brubru	<i>Nilaus afer</i>	9.1	10.2	22.5	21.2	18.7	18.2	636
733	Common Starling	<i>Sturnus vulgaris</i>	13.6	12.4	16.4	17.4	16.0	24.3	581
734	Common Myna	<i>Acridotheres tristis</i>	8.0	2.4	3.9	9.1	19.6	57.0	663
735	Wattled Starling	<i>Creatophora cinerea</i>	14.9	18.7	26.1	18.4	13.3	8.7	1082
736	Violet-backed Starling	<i>Cinnyricinclus leucogaster</i>	8.2	14.4	23.2	21.9	20.5	11.9	453
737	Cape Glossy Starling	<i>Lamprotornis nitens</i>	11.2	10.2	19.3	19.6	15.8	23.9	1121
738	Greater Blue-eared Starling	<i>Lamprotornis chalybaeus</i>	26.4	15.1	24.5	16.0	8.5	9.4	106
740	Black-bellied Starling	<i>Lamprotornis corruscus</i>	4.9	8.6	16.2	20.0	16.8	33.5	185
743	Burchell's Starling	<i>Lamprotornis australis</i>	21.9	15.0	23.8	16.9	11.9	10.6	160
744	Pale-winged Starling	<i>Onychognathus nabouroup</i>	18.6	22.6	29.1	17.1	9.7	2.9	381
745	Red-winged Starling	<i>Onychognathus morio</i>	23.8	13.9	20.8	17.9	11.0	12.6	1036
746	Pied Starling	<i>Spreo bicolor</i>	27.0	20.2	22.3	13.3	10.1	7.0	995
748	Red-billed Oxpecker	<i>Buphagus erythrorhynchus</i>	4.8	4.1	7.9	18.4	25.6	39.2	316
749	Cape Sugarbird	<i>Promerops cafer</i>	19.1	18.5	24.2	15.2	9.0	14.0	178
750	Gurney's Sugarbird	<i>Promerops gurneyi</i>	17.0	22.0	34.0	13.0	7.0	7.0	100
751	Malachite Sunbird	<i>Nectarinia famosa</i>	19.4	15.4	23.9	19.6	13.7	8.1	878
753	Orange-breasted Sunbird	<i>Anthobaphes violacea</i>	26.3	15.0	21.3	13.8	15.6	8.1	160
755	Marico Sunbird	<i>Cinnyris mariquensis</i>	12.9	16.9	19.5	18.9	17.8	14.0	349
756	Purple-banded Sunbird	<i>Cinnyris bifasciatus</i>	0.0	2.7	8.1	21.6	24.3	43.2	74
758	Greater Double-collared Sunbird	<i>Cinnyris afer</i>	14.5	12.8	19.4	19.0	15.8	18.5	525
760	Southern Double-collared Sunbird	<i>Cinnyris chalybeus</i>	13.8	15.4	21.2	19.0	17.4	13.1	631
763	White-bellied Sunbird	<i>Cinnyris talatala</i>	11.6	9.6	17.9	18.7	17.4	24.7	603
764	Dusky Sunbird	<i>Cinnyris fuscus</i>	6.3	16.0	21.4	24.4	18.1	13.9	426
765	Grey Sunbird	<i>Cyanomitra veroxii</i>	8.0	8.6	16.7	16.0	16.0	34.6	162



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
766	Olive Sunbird	<i>Cyanomitra olivacea</i>	7.1	7.9	18.1	17.3	16.5	33.1	127
771	Collared Sunbird	<i>Hedydipna collaris</i>	12.1	11.4	20.0	14.1	17.2	25.2	290
772	Amethyst Sunbird	<i>Chalcomitra amethystina</i>	13.6	8.7	18.8	20.9	15.9	22.1	750
774	Scarlet-chested Sunbird	<i>Chalcomitra senegalensis</i>	18.5	14.0	25.0	16.0	10.5	16.0	200
779	Red-billed Buffalo-Weaver	<i>Bubalornis niger</i>	19.0	17.9	20.0	14.7	19.0	9.5	190
780	White-browed Sparrow-Weaver	<i>Plocepasser mahali</i>	10.7	10.5	15.7	18.8	17.0	27.3	675
783	Sociable Weaver	<i>Philetairus socius</i>	7.3	14.1	22.0	24.9	19.8	11.9	177
784	House Sparrow	<i>Passer domesticus</i>	27.1	14.6	19.1	16.9	9.9	12.3	1420
785	Great Sparrow	<i>Passer motitensis</i>	12.5	19.4	27.8	20.8	12.5	6.9	216
786	Cape Sparrow	<i>Passer melanurus</i>	15.4	13.4	18.2	21.9	16.1	15.0	1349
788	Yellow-throated Petronia	<i>Petronia supercilialis</i>	11.9	15.1	22.3	18.4	17.9	14.4	564
789	Scaly-feathered Finch	<i>Sporopipes squamifrons</i>	11.8	9.3	19.8	19.6	15.1	24.5	551
790	Dark-backed Weaver	<i>Ploceus bicolor</i>	17.9	11.3	20.2	15.5	13.7	21.4	168
791	Spectacled Weaver	<i>Ploceus ocularis</i>	7.0	9.1	14.7	18.0	17.1	34.1	416
792	Lesser Masked-Weaver	<i>Ploceus intermedius</i>	5.4	14.9	12.6	26.4	21.8	18.8	261
793	Red-headed Weaver	<i>Anaplectes rubriceps</i>	13.2	13.7	22.0	23.6	13.7	13.7	182
797	Village Weaver	<i>Ploceus cucullatus</i>	9.4	7.2	14.4	18.5	16.8	33.8	542
799	Cape Weaver	<i>Ploceus capensis</i>	14.1	12.1	23.2	19.9	14.7	16.1	932
800	Yellow Weaver	<i>Ploceus subaureus</i>	12.1	6.4	15.3	21.0	11.3	33.9	124
801	Golden Weaver	<i>Ploceus xanthops</i>	5.2	14.8	23.5	18.3	15.6	22.6	115
803	Southern Masked-Weaver	<i>Ploceus velatus</i>	5.2	6.5	13.5	19.8	22.5	32.5	1381
804	Thick-billed Weaver	<i>Amblyospiza albifrons</i>	5.3	4.8	15.9	19.6	18.8	35.7	378
805	Red-billed Quelea	<i>Quelea quelea</i>	2.6	3.7	12.3	18.7	23.4	39.3	1135
806	Red-headed Quelea	<i>Quelea erythrops</i>	1.9	11.1	7.4	29.6	22.2	27.8	54
808	Southern Red Bishop	<i>Euplectes orix</i>	8.9	11.1	16.5	19.8	16.7	26.9	1296
810	Yellow Bishop	<i>Euplectes capensis</i>	16.9	17.3	23.3	17.9	14.0	10.6	463
812	Yellow-crowned Bishop	<i>Euplectes afer</i>	8.0	15.9	27.9	21.7	14.6	11.8	659
813	Red-collared Widowbird	<i>Euplectes ardens</i>	10.2	11.8	21.8	24.9	12.8	18.6	570
814	White-winged Widowbird	<i>Euplectes albonotatus</i>	11.0	10.3	20.4	17.5	18.8	22.1	565
816	Fan-tailed Widowbird	<i>Euplectes axillaris</i>	6.0	6.9	21.3	17.9	14.1	33.8	403



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
818	Long-tailed Widowbird	<i>Euplectes progne</i>	13.1	14.3	21.4	18.6	17.0	15.6	700
820	Red-headed Finch	<i>Amadina erythrocephala</i>	24.3	17.1	25.1	18.0	9.3	6.3	778
821	Cut-throat Finch	<i>Amadina fasciata</i>	19.6	18.7	19.1	18.2	15.3	9.1	209
823	Bronze Mannikin	<i>Spermestes cucullatus</i>	24.6	16.4	20.5	14.4	11.2	12.9	464
824	Red-backed Mannikin	<i>Spermestes bicolor</i>	14.1	20.3	23.4	14.1	10.9	17.2	128
825	Swee Waxbill	<i>Coccopygia melanotis</i>	13.3	22.2	26.8	16.7	11.0	10.1	437
827	Green Twinspot	<i>Mandingoa nitidula</i>	7.3	16.4	22.7	19.1	19.1	15.4	110
830	Green-winged Pytilia	<i>Pytilia melba</i>	14.2	16.0	19.6	20.6	17.6	12.2	501
833	African Firefinch	<i>Lagonosticta rubricata</i>	13.7	11.3	23.2	20.4	14.6	16.8	548
835	Jameson's Firefinch	<i>Lagonosticta rhodopareia</i>	9.5	12.4	17.1	25.4	20.6	14.9	315
837	Red-billed Firefinch	<i>Lagonosticta senegala</i>	11.1	14.1	20.5	21.7	17.7	14.9	623
838	Orange-breasted Waxbill	<i>Amandava subflava</i>	21.1	23.8	29.0	15.1	6.7	4.3	445
839	Blue Waxbill	<i>Uraeginthus angolensis</i>	15.4	16.4	19.3	20.1	13.0	15.9	592
840	Violet-eared Waxbill	<i>Granatina granatina</i>	11.4	19.0	22.8	19.4	14.4	13.0	422
841	Black-faced Waxbill	<i>Estrilda erythronotos</i>	10.4	12.3	23.0	19.5	19.8	15.0	374
843	Common Waxbill	<i>Estrilda astrild</i>	12.4	11.7	18.8	17.8	16.3	23.1	1285
844	African Quailfinch	<i>Ortygospiza atricollis</i>	13.0	13.4	21.7	18.7	17.0	16.2	934
846	Pin-tailed Whydah	<i>Vidua macroura</i>	13.7	14.1	21.9	23.4	14.5	12.3	1226
847	Shaft-tailed Whydah	<i>Vidua regia</i>	12.1	15.2	27.3	22.0	15.8	7.6	381
849	Dusky Indigobird	<i>Vidua funerea</i>	13.2	19.8	29.8	19.1	11.9	6.2	439
850	Purple Indigobird	<i>Vidua purpurascens</i>	1.5	10.1	11.6	24.8	34.9	17.0	129
851	Village Indigobird	<i>Vidua chalybeata</i>	6.3	15.5	21.5	21.0	22.6	13.1	381
852	Long-tailed Paradise-Whydah	<i>Vidua paradisaea</i>	22.8	17.2	25.0	18.5	9.8	6.7	448
854	Cuckoo Finch	<i>Anomalospiza imberbis</i>	1.3	12.5	33.1	26.3	20.6	6.3	160
855	Cape Siskin	<i>Crithagra totta</i>	16.1	20.1	24.8	18.1	10.7	10.1	149
857	Cape Canary	<i>Serinus canicollis</i>	17.9	15.1	19.5	18.9	13.6	14.9	825
858	Forest Canary	<i>Crithagra scotops</i>	15.7	14.1	25.6	20.7	10.3	13.6	242
859	Yellow-fronted Canary	<i>Crithagra mozambicus</i>	11.4	10.6	15.1	20.4	17.5	25.0	716
860	Black-throated Canary	<i>Crithagra atrogularis</i>	8.4	10.0	15.5	19.6	22.0	24.5	892
861	Black-headed Canary	<i>Serinus alario</i>	12.8	20.5	30.2	20.3	10.8	5.4	444



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
863	Brimstone Canary	<i>Crithagra sulphuratus</i>	11.7	10.7	20.2	19.6	17.2	20.6	495
865	White-throated Canary	<i>Crithagra albogularis</i>	9.9	14.3	28.8	19.3	15.5	12.3	659
866	Yellow Canary	<i>Crithagra flaviventris</i>	8.5	11.4	19.9	20.1	18.3	21.8	1015
867	Streaky-headed Seedeater	<i>Crithagra gularis</i>	9.8	11.1	16.8	20.2	15.5	26.5	885
869	Protea Seedeater	<i>Crithagra leucopterus</i>	16.7	24.0	31.3	16.7	8.3	3.1	96
871	Lark-like Bunting	<i>Emberiza impetuani</i>	5.6	14.7	23.9	24.5	18.8	12.5	702
872	Cinnamon-breasted Bunting	<i>Emberiza tahapisi</i>	10.2	13.8	21.5	22.4	18.9	13.2	918
873	Cape Bunting	<i>Emberiza capensis</i>	14.1	15.0	23.2	20.9	15.8	11.0	935
874	Golden-breasted Bunting	<i>Emberiza flaviventris</i>	15.3	12.5	21.3	19.5	15.6	15.8	799



Table 2. An ordered list of the 125 species in Table 1 with the most severe Major decreases. All conventions as given in Table 1.

No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
48	Cape Cormorant	<i>Phalacrocorax capensis</i>	39.0	11.8	20.6	8.1	8.8	11.8	136
291	Common Tern	<i>Sterna hirundo</i>	38.5	16.1	23.1	9.8	6.3	6.3	143
72	Hamerkop	<i>Scopus umbretta</i>	37.6	20.8	23.5	10.5	5.4	2.2	1266
109	White-headed Vulture	<i>Trigonoceps occipitalis</i>	37.3	16.9	30.1	8.4	7.2	0.0	83
61	Cattle Egret	<i>Bubulcus ibis</i>	36.6	19.9	18.5	13.5	6.4	5.1	1287
130	Black-shouldered Kite	<i>Elanus caeruleus</i>	36.2	19.6	19.3	14.2	6.6	4.0	1341
422	Trumpeter Hornbill	<i>Bycanistes bucinator</i>	35.5	20.7	17.0	13.4	7.8	5.5	217
289	Hartlaub's Gull	<i>Larus hartlaubii</i>	34.2	10.1	15.2	16.5	6.3	17.7	79
328	Brown-headed Parrot	<i>Poicephalus cryptoxanthus</i>	33.8	18.2	23.4	15.6	6.5	2.6	77
173	Coqui Francolin	<i>Peliperdix coqui</i>	32.7	20.8	18.9	12.9	9.4	5.3	318
235	White-fronted Plover	<i>Charadrius marginatus</i>	32.6	12.0	21.7	17.1	6.9	9.7	175
294	Arctic Tern	<i>Sterna paradisaea</i>	32.5	24.1	33.7	4.8	3.6	1.2	83
177	Shelley's Francolin	<i>Scleroptila shelleyi</i>	32.4	20.2	26.7	9.9	6.9	3.8	262
430	Southern Ground-Hornbill	<i>Bucorvus leadbeateri</i>	32.2	26.2	27.6	10.8	2.8	0.5	214
2	African Penguin	<i>Spheniscus demersus</i>	31.3	31.3	28.8	1.3	1.3	6.3	80
255	Sanderling	<i>Calidris alba</i>	31.2	17.7	24.8	14.9	8.5	2.8	141
727	White-crested Helmet-Shrike	<i>Prionops plumatus</i>	31.0	20.1	25.1	14.1	8.1	1.6	319
327	Meyer's Parrot	<i>Poicephalus meyeri</i>	29.4	19.1	10.3	17.6	19.1	4.4	68
44	Cape Gannet	<i>Morus capensis</i>	29.0	14.5	14.5	10.5	12.1	19.4	124
92	African Pygmy-Goose	<i>Nettapus auritus</i>	29.0	23.7	25.0	6.6	7.9	7.9	76
323	African Green-Pigeon	<i>Treron calvus</i>	29.0	13.9	18.8	13.3	10.4	14.5	345
394	Pied Kingfisher	<i>Ceryle rudis</i>	28.8	18.5	23.4	14.6	9.0	5.7	1033
54	Grey Heron	<i>Ardea cinerea</i>	28.5	17.4	20.5	15.8	9.7	8.2	1301
304	White-winged Tern	<i>Chlidonias leucopterus</i>	28.5	26.0	30.6	8.8	5.1	1.1	628
232	Ruddy Turnstone	<i>Arenaria interpres</i>	28.3	15.1	28.3	10.5	9.9	7.9	152
75	Saddle-billed Stork	<i>Ephippiorhynchus senegalensis</i>	28.1	14.6	34.4	14.6	5.2	3.1	96
176	Grey-winged Francolin	<i>Scleroptila africanus</i>	27.8	16.1	23.7	17.5	8.4	6.4	497
373	Fiery-necked Nightjar	<i>Caprimulgus pectoralis</i>	27.8	18.9	22.5	13.2	12.1	5.5	672
123	Rock Kestrel	<i>Falco rupicolus</i>	27.7	26.1	25.2	11.5	5.3	4.2	1296



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
151	Bateleur	<i>Terathopius ecaudatus</i>	27.3	22.4	29.2	14.9	5.0	1.2	161
163	Dark Chanting Goshawk	<i>Melierax metabates</i>	27.2	14.8	34.6	16.0	2.5	4.9	81
275	Spotted Thick-knee	<i>Burhinus capensis</i>	27.2	19.7	20.0	16.1	11.9	5.2	1263
231	African Black Oystercatcher	<i>Haematopus moquini</i>	27.1	3.4	14.4	13.6	11.9	29.7	118
784	House Sparrow	<i>Passer domesticus</i>	27.1	14.6	19.1	16.9	9.9	12.3	1420
746	Pied Starling	<i>Spreo bicolor</i>	27.0	20.2	22.3	13.3	10.1	7.0	995
105	Secretarybird	<i>Sagittarius serpentarius</i>	26.9	19.9	27.2	14.3	9.0	2.7	1088
418	African Hoopoe	<i>Upupa africana</i>	26.9	15.3	19.8	16.2	12.0	9.8	1351
55	Black-headed Heron	<i>Ardea melanocephala</i>	26.7	16.3	23.5	16.4	8.9	8.2	1334
287	Kelp Gull	<i>Larus dominicanus</i>	26.7	8.9	18.9	10.0	12.2	23.3	180
133	Verreaux's Eagle	<i>Aquila verreauxii</i>	26.6	19.3	26.1	15.6	8.9	3.7	836
395	Giant Kingfisher	<i>Megaceryle maximus</i>	26.4	19.3	23.2	18.3	7.7	5.2	964
738	Greater Blue-eared Starling	<i>Lamprotornis chalybaeus</i>	26.4	15.1	24.5	16.0	8.5	9.4	106
753	Orange-breasted Sunbird	<i>Anthobaphes violacea</i>	26.3	15.0	21.3	13.8	15.6	8.1	160
268	Common Whimbrel	<i>Numenius phaeopus</i>	26.1	13.9	24.6	9.2	13.1	13.1	130
296	Sandwich Tern	<i>Sterna sandvicensis</i>	26.1	17.7	23.1	6.9	11.5	14.6	130
317	Laughing Dove	<i>Streptopelia senegalensis</i>	25.7	15.7	21.5	17.4	10.9	8.7	1435
227	Black-bellied Bustard	<i>Lissotis melanogaster</i>	25.5	18.6	29.3	17.5	5.3	3.7	188
403	Striped Kingfisher	<i>Halcyon chelicuti</i>	25.3	21.1	22.1	12.8	11.5	7.1	312
445	Ground Woodpecker	<i>Geocolaptes olivaceus</i>	25.3	22.5	28.7	12.5	7.6	3.4	471
365	Pearl-spotted Owlet	<i>Glaucidium perlatum</i>	25.1	14.7	21.5	16.3	12.4	10.1	307
427	Crowned Hornbill	<i>Tockus alboterminatus</i>	24.9	16.6	24.5	18.9	7.6	7.6	265
108	Lappet-faced Vulture	<i>Torgos tracheliotus</i>	24.8	18.8	22.8	16.8	15.4	1.5	202
368	Spotted Eagle-Owl	<i>Bubo africanus</i>	24.6	20.4	25.9	15.8	9.0	4.3	1193
823	Bronze Mannikin	<i>Spermestes cucullatus</i>	24.6	16.4	20.5	14.4	11.2	12.9	464
258	Common Sandpiper	<i>Actitis hypoleucos</i>	24.3	25.4	29.1	11.7	7.2	2.2	983
820	Red-headed Finch	<i>Amadina erythrocephala</i>	24.3	17.1	25.1	18.0	9.3	6.3	778
337	Purple-crested Turaco	<i>Gallirex porphyreolophus</i>	24.1	8.5	13.7	17.9	11.3	24.5	212
362	African Wood-Owl	<i>Strix woodfordii</i>	24.1	15.4	31.1	16.2	10.1	3.1	228
407	Southern Carmine Bee-eater	<i>Merops nubicoides</i>	24.1	27.7	28.4	12.8	5.0	2.1	141



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
745	Red-winged Starling	<i>Onychognathus morio</i>	23.8	13.9	20.8	17.9	11.0	12.6	1036
376	Square-tailed Nightjar	<i>Caprimulgus fossii</i>	23.7	24.7	30.9	9.3	7.2	4.1	97
552	Kurrichane Thrush	<i>Turdus libonyanus</i>	23.6	15.0	21.9	14.4	12.4	12.7	466
42	Great White Pelican	<i>Pelecanus onocrotalus</i>	23.5	18.8	30.2	10.7	8.1	8.7	149
267	Eurasian Curlew	<i>Numenius arquata</i>	23.5	11.1	50.6	8.6	4.9	1.2	81
128	Black Kite	<i>Milvus migrans</i>	23.4	31.9	39.3	3.5	1.9	0.0	521
143	African Crowned Eagle	<i>Stephanoaetus coronatus</i>	23.3	16.1	28.3	17.2	7.9	7.2	279
557	Groundscraper Thrush	<i>Psophocichla litsipsirupa</i>	23.3	16.6	20.5	15.4	10.8	13.4	566
318	Namaqua Dove	<i>Oena capensis</i>	23.1	18.9	25.9	17.5	8.8	6.0	1300
85	African Spoonbill	<i>Platalea alba</i>	23.0	21.1	24.9	15.2	10.0	5.8	1126
241	Grey Plover	<i>Pluvialis squatarola</i>	23.0	21.0	26.3	13.2	9.2	7.2	152
251	Curlew Sandpiper	<i>Calidris ferruginea</i>	23.0	24.1	32.7	10.7	5.6	3.9	569
426	Southern Yellow-billed Hornbill	<i>Tockus leucomelas</i>	23.0	17.4	23.3	21.1	11.3	3.9	408
540	Cape Rock-jumper	<i>Chaetops frenatus</i>	22.9	20.0	28.6	11.4	8.6	8.6	70
29	Sooty Shearwater	<i>Puffinus griseus</i>	22.8	22.8	29.8	12.3	7.0	5.3	57
852	Long-tailed Paradise-Whydah	<i>Vidua paradisaea</i>	22.8	17.2	25.0	18.5	9.8	6.7	448
564	Mountain Wheatear	<i>Oenanthe monticola</i>	22.6	17.8	27.8	16.5	9.3	6.0	970
413	Lilac-breasted Roller	<i>Coracias caudatus</i>	22.4	20.4	26.8	15.6	11.0	4.0	501
58	Great Egret	<i>Egretta alba</i>	22.2	18.8	28.2	18.8	7.8	4.2	744
215	Wattled Crane	<i>Bugeranus carunculatus</i>	22.2	22.2	27.2	9.9	11.1	7.4	81
242	Crowned Lapwing	<i>Vanellus coronatus</i>	22.1	13.5	20.5	20.0	13.4	10.5	1311
254	Red Knot	<i>Calidris canutus</i>	21.9	25.0	37.5	9.4	6.3	0.0	64
743	Burchell's Starling	<i>Lamprotornis australis</i>	21.9	15.0	23.8	16.9	11.9	10.6	160
81	African Sacred Ibis	<i>Threskiornis aethiopicus</i>	21.7	17.4	22.9	18.0	7.9	12.1	1195
212	Red-knobbed Coot	<i>Fulica cristata</i>	21.7	14.7	19.5	18.7	10.6	14.8	1181
410	Little Bee-eater	<i>Merops pusillus</i>	21.7	19.0	19.7	17.2	13.4	8.9	447
321	Emerald-spotted Wood-Dove	<i>Turtur chalcospilos</i>	21.6	17.6	20.7	17.0	12.7	10.4	518
523	Cape Crow	<i>Corvus capensis</i>	21.5	21.4	24.4	14.7	9.0	9.0	1027
60	Yellow-billed Egret	<i>Egretta intermedia</i>	21.4	21.9	26.4	17.0	9.1	4.1	734
106	Cape Vulture	<i>Gyps coprotheres</i>	21.3	22.0	29.9	13.6	9.2	4.2	546



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
216	Blue Crane	<i>Anthropoides paradiseus</i>	21.3	18.2	23.8	12.8	9.6	14.3	757
424	African Grey Hornbill	<i>Tockus nasutus</i>	21.3	18.6	24.1	15.6	12.2	8.2	403
41	Pink-backed Pelican	<i>Pelecanus rufescens</i>	21.2	29.3	24.2	6.1	9.1	10.1	99
359	Barn Owl	<i>Tyto alba</i>	21.2	18.3	24.7	16.7	12.6	6.6	953
402	Brown-hooded Kingfisher	<i>Halcyon albiventris</i>	21.2	13.7	20.1	16.4	13.6	14.9	876
47	White-breasted Cormorant	<i>Phalacrocorax carbo</i>	21.1	15.2	22.2	19.1	11.8	10.5	1140
369	Verreaux's Eagle-Owl	<i>Bubo lacteus</i>	21.1	18.4	26.0	17.3	14.6	2.7	185
838	Orange-breasted Waxbill	<i>Amandava subflava</i>	21.1	23.8	29.0	15.1	6.7	4.3	445
52	African Darter	<i>Anhinga rufa</i>	20.9	17.4	20.5	17.7	11.8	11.7	1034
217	Kori Bustard	<i>Ardeotis kori</i>	20.9	22.4	24.7	17.7	12.2	2.0	344
223	Blue Korhaan	<i>Eupodotis caerulescens</i>	20.9	15.6	23.6	19.8	10.3	9.7	339
214	Grey Crowned Crane	<i>Balearica regulorum</i>	20.8	19.8	24.0	16.7	9.0	9.7	288
704	Yellow-throated Longclaw	<i>Macronyx croceus</i>	20.6	12.6	19.2	13.6	15.9	18.2	214
141	African Hawk-Eagle	<i>Aquila spilogaster</i>	20.5	19.2	23.2	22.3	11.6	3.1	224
80	White Stork	<i>Ciconia ciconia</i>	20.4	28.1	30.6	13.1	5.8	2.0	1046
415	Purple Roller	<i>Coracias naevius</i>	20.2	27.2	29.5	15.1	5.4	2.6	312
707	Common Fiscal	<i>Lanius collaris</i>	20.2	13.6	21.4	21.1	13.8	10.0	1414
73	Marabou Stork	<i>Leptoptilos crumeniferus</i>	20.0	15.1	25.5	18.2	13.3	7.9	165
192	Helmeted Guineafowl	<i>Numida meleagris</i>	19.9	12.4	17.8	15.8	13.7	20.5	1340
245	Blacksmith Lapwing	<i>Vanellus armatus</i>	19.6	13.1	21.4	17.5	10.2	18.2	1379
821	Cut-throat Finch	<i>Amadina fasciata</i>	19.6	18.7	19.1	18.2	15.3	9.1	209
122	Greater Kestrel	<i>Falco rupicoloides</i>	19.4	20.7	29.0	16.6	9.6	4.6	782
751	Malachite Sunbird	<i>Nectarinia famosa</i>	19.4	15.4	23.9	19.6	13.7	8.1	878
262	Marsh Sandpiper	<i>Tringa stagnatilis</i>	19.2	26.5	35.7	11.4	4.7	2.6	661
219	Denham's Bustard	<i>Neotis denhami</i>	19.1	18.8	27.5	16.2	8.1	10.1	345
363	African Scops-Owl	<i>Otus senegalensis</i>	19.1	21.8	30.7	14.2	9.3	4.9	225
749	Cape Sugarbird	<i>Promerops cafer</i>	19.1	18.5	24.2	15.2	9.0	14.0	178
6	Little Grebe	<i>Tachybaptus ruficollis</i>	19.0	13.5	18.7	20.4	13.3	15.1	1260
96	Yellow-billed Duck	<i>Anas undulata</i>	19.0	15.1	20.6	16.8	12.5	15.9	1229
144	Lizard Buzzard	<i>Kaupifalco monogrammicus</i>	19.0	26.0	29.3	14.9	8.7	2.1	242



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
779	Red-billed Buffalo-Weaver	<i>Bubalornis niger</i>	19.0	17.9	20.0	14.7	19.0	9.5	190
257	Terek Sandpiper	<i>Xenus cinereus</i>	18.8	21.7	30.4	10.1	8.7	10.1	69
361	Marsh Owl	<i>Asio capensis</i>	18.8	23.8	31.1	13.1	9.2	4.0	479
238	Three-banded Plover	<i>Charadrius tricollaris</i>	18.7	16.4	21.0	19.2	12.1	12.7	1351
685	African Pied Wagtail	<i>Motacilla aguimp</i>	18.7	17.8	26.3	12.7	12.5	12.0	551
78	Abdim's Stork	<i>Ciconia abdimii</i>	18.6	29.5	35.0	9.7	5.3	1.9	414



Table 3. An ordered list of the 125 species in Table 1 with the largest Major increases. All conventions as given in Table 1.

No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
734	Common Myna	<i>Acridotheres tristis</i>	8.0	2.4	3.9	9.1	19.6	57.0	663
756	Purple-banded Sunbird	<i>Cinnyris bifasciatus</i>	0.0	2.7	8.1	21.6	24.3	43.2	74
649	Tawny-flanked Prinia	<i>Prinia subflava</i>	6.0	5.5	13.9	15.1	16.6	43.0	604
387	African Palm-Swift	<i>Cypsiurus parvus</i>	4.0	3.0	8.2	19.2	24.2	41.3	693
805	Red-billed Quelea	<i>Quelea quelea</i>	2.6	3.7	12.3	18.7	23.4	39.3	1135
448	Knysna Woodpecker	<i>Campethera notata</i>	0.7	11.4	17.9	10.7	20.0	39.3	140
748	Red-billed Oxpecker	<i>Buphagus erythrorhynchus</i>	4.8	4.1	7.9	18.4	25.6	39.2	316
642	Rattling Cisticola	<i>Cisticola chiniana</i>	6.4	8.3	10.2	18.3	19.5	37.4	519
588	White-browed Scrub-Robin	<i>Cercotrichas leucophrys</i>	5.3	5.4	13.9	19.5	19.1	36.8	570
804	Thick-billed Weaver	<i>Amblyospiza albifrons</i>	5.3	4.8	15.9	19.6	18.8	35.7	378
551	Sombre Greenbul	<i>Andropadus importunus</i>	7.4	7.7	13.8	17.8	18.0	35.4	557
314	Red-eyed Dove	<i>Streptopelia semitorquata</i>	7.6	7.9	15.4	17.0	17.0	35.2	1336
637	Neddicky Neddicky	<i>Cisticola fulvicapilla</i>	7.3	7.8	13.4	18.8	17.7	35.0	1227
725	Eastern Nicator	<i>Nicator gularis</i>	3.6	8.4	8.4	18.1	26.5	34.9	83
765	Grey Sunbird	<i>Cyanomitra veroxii</i>	8.0	8.6	16.7	16.0	16.0	34.6	162
791	Spectacled Weaver	<i>Ploceus ocularis</i>	7.0	9.1	14.7	18.0	17.1	34.1	416
800	Yellow Weaver	<i>Ploceus subaureus</i>	12.1	6.4	15.3	21.0	11.3	33.9	124
797	Village Weaver	<i>Ploceus cucullatus</i>	9.4	7.2	14.4	18.5	16.8	33.8	542
816	Fan-tailed Widowbird	<i>Euplectes axillaris</i>	6.0	6.9	21.3	17.9	14.1	33.8	403
740	Black-bellied Starling	<i>Lamprotornis corruscus</i>	4.9	8.6	16.2	20.0	16.8	33.5	185
766	Olive Sunbird	<i>Cyanomitra olivacea</i>	7.1	7.9	18.1	17.3	16.5	33.1	127
438	Yellow-rumped Tinkerbird	<i>Pogoniulus bilineatus</i>	14.3	8.9	9.8	15.2	18.8	33.0	112
803	Southern Masked-Weaver	<i>Ploceus velatus</i>	5.2	6.5	13.5	19.8	22.5	32.5	1381
119	Amur Falcon	<i>Falco amurensis</i>	1.5	5.5	14.3	19.7	26.7	32.3	742
433	White-eared Barbet	<i>Stactolaema leucotis</i>	16.7	5.6	11.1	20.4	14.8	31.5	54
439	Crested Barbet	<i>Trachyphonus vaillantii</i>	12.2	9.1	14.4	16.3	16.5	31.5	822
1016	Mallard Duck	<i>Anas platyrhynchos</i>	1.7	3.9	7.3	25.7	30.2	31.3	179
550	Yellow-bellied Greenbul	<i>Chlorocichla flaviventris</i>	6.7	6.2	9.6	23.9	22.5	31.1	209



No.	Common name	Scientific name	<<<	<<	<	>	>>	>>>	QDGCs
629	Zitting Cisticola	<i>Cisticola juncidis</i>	6.6	10.9	15.6	18.5	17.3	31.1	1203
543	Cape Bulbul	<i>Pycnonotus capensis</i>	7.9	6.8	15.8	17.3	21.2	30.9	278
622	Bar-throated Apalis	<i>Apalis thoracica</i>	7.2	7.8	15.8	19.2	19.2	30.8	792
692	African Pipit	<i>Anthus cinnamomeus</i>	7.1	8.6	16.7	19.0	17.9	30.7	1400
647	Croaking Cisticola	<i>Cisticola natalensis</i>	6.4	10.8	15.5	15.5	21.1	30.7	251
709	Southern Boubou	<i>Laniarius ferrugineus</i>	10.7	7.8	16.2	19.0	15.9	30.4	825
650	Black-chested Prinia	<i>Prinia flavicans</i>	5.8	7.4	15.5	22.4	18.6	30.4	705
625	Yellow-breasted Apalis	<i>Apalis flavida</i>	8.0	8.6	19.1	14.0	20.1	30.3	314
638	Grey-backed Cisticola	<i>Cisticola subruficapilla</i>	4.3	7.1	14.1	21.9	22.4	30.2	580
585	Bearded Scrub-Robin	<i>Cercotrichas quadrivirgata</i>	7.5	4.3	18.3	11.8	28.0	30.1	93
231	African Black Oystercatcher	<i>Haematopus moquini</i>	27.1	3.4	14.4	13.6	11.9	29.7	118
631	Cloud Cisticola	<i>Cisticola textrix</i>	2.8	11.5	19.9	19.4	16.7	29.7	687
84	Hadeda Ibis	<i>Bostrychia hagedash</i>	11.5	8.9	15.1	19.4	15.4	29.6	1353
646	Levaillant's Cisticola	<i>Cisticola tinniens</i>	9.2	9.6	18.7	18.1	14.9	29.6	1113
719	Orange-breasted Bush-Shrike	<i>Telophorus sulfureopectus</i>	7.7	7.9	16.0	20.5	18.3	29.6	443
611	Knysna Warbler	<i>Bradypterus sylvaticus</i>	5.2	8.6	32.8	15.5	8.6	29.3	58
627	Green-backed Camaroptera	<i>Camaroptera brachyura</i>	15.5	13.1	16.1	14.7	11.6	29.1	498
298	Swift Tern	<i>Sterna bergii</i>	14.5	7.3	15.2	19.6	14.5	29.0	138
644	Red-faced Cisticola	<i>Cisticola erythrops</i>	8.0	12.8	23.0	13.9	13.4	28.9	187
185	Swainson's Spurfowl	<i>Pternistis swainsonii</i>	11.9	8.8	17.3	16.0	17.5	28.6	707
183	Natal Spurfowl	<i>Pternistis natalensis</i>	8.2	9.0	19.0	18.8	16.4	28.5	536
634	Wing-snapping Cisticola	<i>Cisticola ayresii</i>	5.5	10.1	21.1	18.4	16.9	28.1	474
717	Olive Bush-Shrike	<i>Telophorus olivaceus</i>	6.2	10.3	17.6	19.4	18.8	27.9	341
806	Red-headed Quelea	<i>Quelea erythrops</i>	1.9	11.1	7.4	29.6	22.2	27.8	54
431	Black-collared Barbet	<i>Lybius torquatus</i>	17.0	10.1	14.0	14.5	16.9	27.5	759
635	Pale-crowned Cisticola	<i>Cisticola cinnamomeus</i>	3.0	7.2	18.0	20.4	24.0	27.5	167
458	Rufous-naped Lark	<i>Mirafra africana</i>	7.7	11.1	18.3	19.9	15.7	27.4	874
666	Dark-capped Yellow Warbler	<i>Chloropeta natalensis</i>	2.5	11.8	20.4	15.5	22.5	27.4	245
780	White-browed Sparrow-Weaver	<i>Plocepasser mahali</i>	10.7	10.5	15.7	18.8	17.0	27.3	675
808	Southern Red Bishop	<i>Euplectes orix</i>	8.9	11.1	16.5	19.8	16.7	26.9	1296



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511	Black Saw-wing	<i>Psalidoprocne holomelaena</i>	6.8	8.1	17.5	21.4	19.4	26.9	458
609	Little Rush-Warbler	<i>Bradypterus baboecala</i>	8.6	9.6	20.4	18.1	16.5	26.8	686
867	Streaky-headed Seedeater	<i>Crithagra gularis</i>	9.8	11.1	16.8	20.2	15.5	26.5	885
502	Greater Striped Swallow	<i>Hirundo cucullata</i>	4.8	8.9	17.1	23.1	19.5	26.4	1300
453	Red-throated Wryneck	<i>Jynx ruficollis</i>	10.9	9.9	18.3	14.8	19.9	26.2	553
522	Pied Crow	<i>Corvus albus</i>	14.7	9.5	14.1	18.2	17.5	26.0	1341
618	Cape Grassbird	<i>Sphenoeacus afer</i>	10.8	8.1	19.2	19.8	16.1	26.0	582
648	Lazy Cisticola	<i>Cisticola aberrans</i>	9.9	11.2	19.9	15.7	17.4	25.9	483
703	Cape Longclaw	<i>Macronyx capensis</i>	12.8	10.5	15.7	19.1	16.1	25.7	921
138	Long-crested Eagle	<i>Lophaetus occipitalis</i>	8.9	11.0	19.0	14.7	20.8	25.7	327
771	Collared Sunbird	<i>Hedypipna collaris</i>	12.1	11.4	20.0	14.1	17.2	25.2	290
447	Golden-tailed Woodpecker	<i>Campethera abingoni</i>	7.3	9.8	15.4	23.0	19.3	25.2	560
859	Yellow-fronted Canary	<i>Crithagra mozambicus</i>	11.4	10.6	15.1	20.4	17.5	25.0	716
89	Egyptian Goose	<i>Alopochen aegyptiacus</i>	10.4	10.9	15.8	20.8	17.1	25.0	1369
586	Kalahari Scrub-Robin	<i>Cercotrichas paena</i>	8.3	8.3	15.5	22.3	20.7	25.0	497
664	Southern Black Flycatcher	<i>Melaenornis pammelaina</i>	10.4	13.0	19.7	17.4	14.7	24.8	483
763	White-bellied Sunbird	<i>Cinnyris talatala</i>	11.6	9.6	17.9	18.7	17.4	24.7	603
409	White-fronted Bee-eater	<i>Merops bullockoides</i>	9.9	8.0	15.5	18.9	23.1	24.7	477
436	Red-fronted Tinkerbird	<i>Pogoniulus pusillus</i>	17.7	11.7	18.1	13.3	14.5	24.6	248
337	Purple-crested Turaco	<i>Gallirex porphyreolophus</i>	24.1	8.5	13.7	17.9	11.3	24.5	212
789	Scaly-feathered Finch	<i>Sporopipes squamifrons</i>	11.8	9.3	19.8	19.6	15.1	24.5	551
860	Black-throated Canary	<i>Crithagra atrogularis</i>	8.4	10.0	15.5	19.6	22.0	24.5	892
459	Fawn-coloured Lark	<i>Calendulauda africanoides</i>	2.1	9.9	20.2	20.9	22.3	24.5	282
733	Common Starling	<i>Sturnus vulgaris</i>	13.6	12.4	16.4	17.4	16.0	24.3	581
545	Dark-capped Bulbul	<i>Pycnonotus tricolor</i>	11.0	7.1	15.3	23.4	19.2	24.0	672
579	Red-capped Robin-Chat	<i>Cossypha natalensis</i>	12.8	13.8	13.3	23.9	12.4	23.9	218
737	Cape Glossy Starling	<i>Lamprotornis nitens</i>	11.2	10.2	19.3	19.6	15.8	23.9	1121
630	Desert Cisticola	<i>Cisticola aridulus</i>	5.3	9.7	19.6	19.0	22.5	23.8	730
496	Wire-tailed Swallow	<i>Hirundo smithii</i>	12.9	8.8	20.1	18.6	16.0	23.7	194
576	African Stonechat	<i>Saxicola torquatus</i>	11.8	13.1	18.9	18.5	14.2	23.5	1215



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287	Kelp Gull	<i>Larus dominicanus</i>	26.7	8.9	18.9	10.0	12.2	23.3	180
673	Chinspot Batis	<i>Batis molitor</i>	12.8	9.9	18.0	17.6	18.6	23.1	585
843	Common Waxbill	<i>Estrilda astrild</i>	12.4	11.7	18.8	17.8	16.3	23.1	1285
77	Woolly-necked Stork	<i>Ciconia episcopus</i>	11.9	12.7	20.1	16.4	15.7	23.1	134
311	Speckled Pigeon	<i>Columba guinea</i>	13.9	11.3	16.8	20.2	14.7	23.0	1384
658	Chestnut-vented Tit-Babbler	<i>Parisoma subcaeruleum</i>	7.0	8.6	20.3	21.7	19.6	22.9	1037
604	Lesser Swamp-Warbler	<i>Acrocephalus gracilirostris</i>	10.4	11.4	21.8	18.0	15.7	22.6	1014
383	White-rumped Swift	<i>Apus caffer</i>	6.8	10.6	19.6	21.2	19.0	22.6	1328
801	Golden Weaver	<i>Ploceus xanthops</i>	5.2	14.8	23.5	18.3	15.6	22.6	115
299	Little Tern	<i>Sterna albifrons</i>	18.3	9.9	23.9	8.4	16.9	22.5	71
174	Crested Francolin	<i>Dendroperdix sephaena</i>	13.4	13.7	21.4	15.3	13.7	22.4	313
772	Amethyst Sunbird	<i>Chalcomitra amethystina</i>	13.6	8.7	18.8	20.9	15.9	22.1	750
814	White-winged Widowbird	<i>Euplectes albonotatus</i>	11.0	10.3	20.4	17.5	18.8	22.1	565
581	Cape Robin-Chat	<i>Cossypha caffra</i>	11.1	11.2	18.7	21.2	15.9	21.9	1217
510	Banded Martin	<i>Riparia cincta</i>	5.5	10.5	22.3	19.3	20.5	21.9	638
305	Whiskered Tern	<i>Chlidonias hybrida</i>	5.4	12.2	22.5	20.9	17.1	21.9	590
866	Yellow Canary	<i>Crithagra flaviventris</i>	8.5	11.4	19.9	20.1	18.3	21.8	1015
203	Black Crake	<i>Amaurornis flavirostris</i>	14.0	12.3	19.0	15.8	17.4	21.5	657
286	Subantarctic Skua	<i>Catharacta antarctica</i>	10.8	12.3	27.7	15.4	12.3	21.5	65
495	White-throated Swallow	<i>Hirundo albigularis</i>	7.7	12.3	20.0	21.0	17.5	21.5	1197
790	Dark-backed Weaver	<i>Ploceus bicolor</i>	17.9	11.3	20.2	15.5	13.7	21.4	168
607	Marsh Warbler	<i>Acrocephalus palustris</i>	3.2	9.1	21.0	19.0	26.3	21.4	342
1	Common Ostrich	<i>Struthio camelus</i>	16.0	11.6	17.9	16.3	17.0	21.3	1034
714	Brown-crowned Tchagra	<i>Tchagra australis</i>	9.9	9.9	20.2	21.8	17.2	21.1	588
546	Terrestrial Brownbul	<i>Phyllastrephus terrestris</i>	6.9	12.4	20.2	22.1	17.4	21.0	362
113	Peregrine Falcon	<i>Falco peregrinus</i>	1.4	4.8	17.2	22.6	33.0	20.9	354
100	White-faced Duck	<i>Dendrocygna viduata</i>	12.7	12.8	20.4	17.0	16.6	20.6	899
863	Brimstone Canary	<i>Crithagra sulphuratus</i>	11.7	10.7	20.2	19.6	17.2	20.6	495
509	Brown-throated Martin	<i>Riparia paludicola</i>	9.5	12.6	20.0	19.6	17.6	20.6	1228
192	Helmeted Guineafowl	<i>Numida meleagris</i>	19.9	12.4	17.8	15.8	13.7	20.5	1340



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210	Common Moorhen	<i>Gallinula chloropus</i>	11.8	11.6	19.8	19.4	17.0	20.4	1049
290	Caspian Tern	<i>Sterna caspia</i>	12.4	9.5	20.7	17.8	19.4	20.3	242
181	Cape Spurfowl	<i>Pternistis capensis</i>	15.7	11.7	17.5	20.6	14.4	20.2	223
452	Olive Woodpecker	<i>Dendropicos griseocephalus</i>	12.5	11.9	22.0	18.4	15.0	20.2	327
392	Red-faced Mousebird	<i>Urocolius indicus</i>	9.8	11.4	21.0	22.8	15.2	19.9	1284
533	Arrow-marked Babbler	<i>Turdoides jardineii</i>	12.7	12.4	20.0	14.3	20.8	19.8	379
615	Stierling's Wren-Warbler	<i>Calamonastes stierlingi</i>	16.9	9.9	12.7	18.3	22.5	19.7	71