CHAPTER 8

BIRDS OF THE WATERBERG BIOSPHERE RESERVE AND THEIR HABITAT TYPES

8.1 Introduction

In the past few years birdwatching or "birding" as it is commonly referred to, has become one of the fastest developing pastimes throughout the western world (Sinclair, 1990). Fennel & Weaver (1997) noted that birds were the most important category of wildlife viewing in Canada, while preferences of tourists visiting three South African Nature Reserves in Kwazulu Natal also showed birdwatching to be a high priority ecotourist attraction.

In the area that comprises the ornithological region of southern Africa, nearly 900 species of birds are known to occur (Sinclair, 1990). Of these 108 species are included by Brooke (1984) in the red data list of southern African birds. Newman (1994) noted that each bird species has its habitat preference and utilizes a specialized niche in this habitat. The destruction or damage of the habitats might cause several bird species to disappear since they cannot adapt to their new, changed environment. The conservation of these habitat types to conserve the rare and endemic bird species therefore needs top priority in southern Africa.

Some of the most obvious patterns in bird communities are those relating species to habitats. Although, many studies have been done and models constructed to get a better understanding of bird-habitat relationships, the large array of factors (e. g. competition, habitat gradients, environmental factors, vegetation structure etc.) playing a role in determining a specific habitat of a bird species, are complex (Wiens, 1989) and were subsequently not included in the study. The TWINSPAN analysis was done to clearly identify specific bird communities associated to certain habitat types.

The aim of the chapter was therefore to identify and classify the habitat types of the more common and red data list birds (Hilton-Taylor, 2000) within the Waterberg Biosphere Reserve. Descriptions of the habitat types are done according to habitat preferences of bird species as described by Harrison *et al.* (1997). Different birds of

importance to tourists and birdwatchers are emphasized in the descriptions, giving birders some information on species associated with specific habitat types. The importance of the conservation of certain sensitive habitats such as wetlands is also discussed.

8.2 Methods

8.2.1 Bird Database

A database of the birds occurring throughout the many diverse habitats within the Waterberg Biosphere Reserve was created. Data sets were obtained from the Avian Demography Unit and the data was collated from the South African Bird Atlas Project (Harrison, 1992; Harrison *et al.* 1997). Information consisted of avian distribution at a quarter degree grid cell (15' X 15' ~ 700 km^2). From the quarter degree lists, a single list of the birds occurring within the Biosphere Reserve was created. The list was edited in the following way. Birds described by Newman (1984) as being rare, yet not included in the Red Data list of Southern African Birds (Hilton-Taylor, 2000), were discarded, since the possibility for tourists of seeing these birds is minimal. However, the bird species with a high conservation priority (Hilton-Taylor, 2000) were included as important attractions for keen birders visiting the area.

The list with the individual conservation status of birds is included in Appendix 8.1. Appendix 7.2 in the previous chapter gives a description of the different meanings of the conservation status categories used by the IUCN in their red data list of threatened animal species (Hilton-Taylor, 2000). Migratory birds, only to be seen in the warmer summer months are marked with an asterisk. The list includes conspicuous and less conspicuous birds, since all tourists (from starters to keen birders) interested in birdwatching were included.

7.2.2 Habitat preferences of birds

Habitat preferences of birds occurring within the Waterberg Biosphere Reserve were obtained from Harrison *et al.* (1997). These preferences were included in Appendix 8.1. The habitat preferences were linked to the 12 major plant communities identified

in the Waterberg Biosphere Reserve (Chapter 4) by comparing the description of the plant communities (Chapter 4) to the description by Harrison *et al.* (1997).

7.2.3 Habitat Classification and Identification

The identification of the major habitat types within which birds occur was done similar to the way mammal habitats were identified. A Two-Way-Species-Indicator-Analysis (TWINSPAN) (Hill, 1979) was done, using the following parameters for classification:

- ◊ Cutlevels for cover abundance: 0 - 2 - 10 - 25 - 50
- ◊ Maximum level of divisions: 3
- ◊ Other parameters were left default although the option to visualize the cluster hierarchy was selected

The classification produced 6 major habitat types, although the habitat type representing low-lying woodlands were given another level of division to separate the dense woodland and open woodlands (Edwards, 1983). The TWINSPAN classification was done using the plant communities similar to synrelevés in the classification of large vegetation datasets (Bredenkamp & Bezuidenhout, 1995). No abundance values were used, however, the presence of a bird species in a plant community was indicated as 1. The TWINSPAN classification revealed 7 different habitat types for birds within the Waterberg Biosphere Reserve, from which a classification table similar to a Braun-Blanquet table (Kent & Coker, 1996) for vegetation classification was created. From this table a synoptic table was created (Table 8.1) which show the diagnostic bird species for the habitat types and the habitat types within which bird communities occur.

The habitat types identified by TWINSPAN were described according to bird species composition (bird communities) and habitat characteristics (e. g. vegetation valuable for foraging / shelter / breeding within habitat).

7.3 Results and Discussion

7.3.1 Classification Hierarchy

The classification hierarchy of the different bird habitats of the bird occurring within the Waterberg Biosphere Reserve is presented in Figure 8.1 and is as follows:

- The first level of division for bird habitat types separates the birds inhabiting land as their dominant habitat type and the typical water-inhabiting mammals, similar to the mammals although the water-inhabiting birds do not live permanently in water.
- The water-inhabiting birds are divided on a second level into specialized birds occurring within the sponges of the Marakele National Park, and typical waterbirds associated with vleilands, pans and dams within the Waterberg Biosphere Reserve.
- The land-inhabiting birds are divided on a second level into birds occurring within the typical mountainous terrain of the Waterberg area, and birds occurring on the low-lying plains and bushveld woodlands.
- The bird species associated with the mountainous terrain are divided on a third level into typical evergreen afromontane forest-inhabiting birds living in kloofs and ravines, and bird species associated with rocky slopes and escarpments.
- The bird species of the low-lying areas are separated on a third level based primarily on differences in vegetation communities. The first group represents the grassland plains of the vertic clay floodplains (Nylsvley Nature Reserve) and old fields areas within the Waterberg Biosphere Reserve, while the second group represents all low-lying woodlands within the Waterberg Biosphere Reserve.
- Bird species associated with the low-lying woodlands were further divided on a fourth level into species associated with dense woodlands (e. g. termitaria, riverine vegetation along diabase / dolerite dykes) and species associated with open woodlands (deep sandy lowlands; terraces, foothills and plateaus; savanna plains)

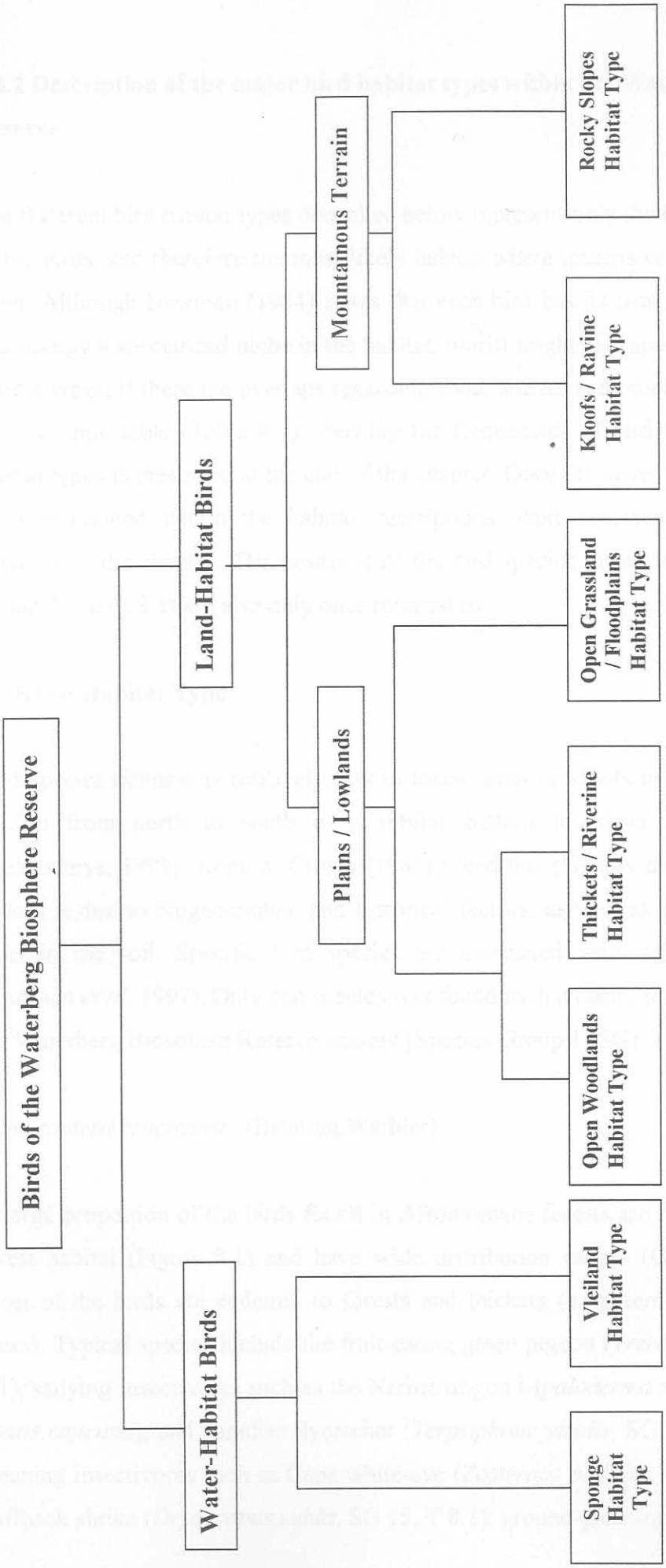

Figure 8.1 Dendrogram presenting TWINSPAN hierarchy of Waterberg Biosphere Reserve bird habitat types

7.3.2 Description of the major bird habitat types within the Waterberg Biosphere Reserve

The different bird habitat types described below represent only the habitat preferences of the birds, and therefore the most likely habitat where tourists or birders may view them. Although Newman (1984) states that each bird has its own habitat preference and occupy a specialized niche in the habitat, tourist might also spot the birds in other habitat types, if there are overlaps regarding food, shelter and breeding requirements. The synoptic table (Table 8.1), showing the frequencies of bird species within the habitat types is presented at the end of the chapter. Once the scientific names of birds were mentioned within the habitat descriptions, their common names are used onwards in the chapter. The positions of the bird species in the table (e. g. Species Group 2, Table 8.1) are also only once referred to.

1. Kloof Habitat Type

Bird species richness is relatively low in forest areas of kloofs in South Africa, and decline from north to south in a similar pattern found in the plant species (Geldenhuys, 1999). Koen & Crowe (1987) noted that this low diversity of birds in forests is due to biogeographic and historical factors, as well as the low nutritional level in the soil. Specific bird species are associated with Afromontane forests (Harrison *et al.* 1997). Only one species was found to diagnostic to kloof areas within the Waterberg Biosphere Reserve namely [Species Group 1 (SG), Table (T) 8.1):

Camaroptera brachyura (Bleating Warbler)

A large proportion of the birds found in Afromontane forests are not confined to the forest habitat (Figure 8.1) and have wide distribution ranges (Geldenhuys, 1999). Most of the birds are endemic to forests and thickets (e. g. termitaria, encroached areas). Typical species include the fruit-eating green pigeon (*Treron calva*, SG 10, T 8.1), sallying insectivores such as the Narina trogon (*Apaloderma narina*), Cape batis (*Batis capensis*), and paradise flycatcher (*Terpsiphone viridis*, SG 10, T 8.1); foliage gleaning insectivores such as Cape white-eye (*Zosterops pallidus*, SG 10, T 8.1) and puffback shrike (*Dryoscopus cubla*, SG 15, T 8.1); ground-gleaning insect-eaters such

as the olive thrush (*Turdus olivaceus*) and the terrestrial bulbul (*Phyllastrephus terrestris*, SG 10, T. 8.1); ground-feeding seedeaters, for example the redeyed dove (*Streptopelia semitorquata*, SG 15, T 8.1); and nectar feeding species such as the malachite sunbird (*Nectarinia famosa*, SG 6, T 8.1). Some of the raptor species include the booted eagle (*Hieraaetus pennatus*, SG 6, T 8.1), gymnogene (*Polyboroides typus*), African Goshawk (*Accipiter tachiro*, SG 10, T 8.1) and Longcrested Eagle (*Lophaetus occipitalis*, SG 15, T 8.1).

Similarity in species composition of the Kloof Habitat Type and Dense Vegetation Habitat Type (SG 10, T 8.1) occur due to similar habitat requirements of birds (Harrison *et al.* 1997). The vegetation structure (closed canopy, figure 8.1) seems to play a major role in determining the bird communities of this habitat types, and Koen & Crowe (1987) concluded from a study in the Knysna Forest that floristics and vegetation structure, have a minor influence on bird community structure.

Forests are utilized heavily worldwide for their timber, and afforestation in Mpumalanga Province, South Africa is likely to contribute substantially to the potential extinction of many bird species, including several globally threatened species (Allan *et al.* 1996). Therefore the conservation of afromontane forests cannot be underestimated and its inclusion in any reserve network is necessary for the full representation of forest diversity (Eeley *et al.* 2001). The kloofs occurring within the Waterberg Biosphere Reserve have been well preserve until now and are presented in the Marakele National Park, Entabeni Game Reserve and several other areas along the escarpment.

The birds occurring within the kloof forests of the Waterberg Biosphere Reserve are rare, and mostly endemic to dense closed canopy vegetation. Birdwatchers can use this opportunity to view the birds in their natural habitat and the low diversity of bird species makes the identification easier, although the dense areas will hinder tourists from getting clear sights of birds.

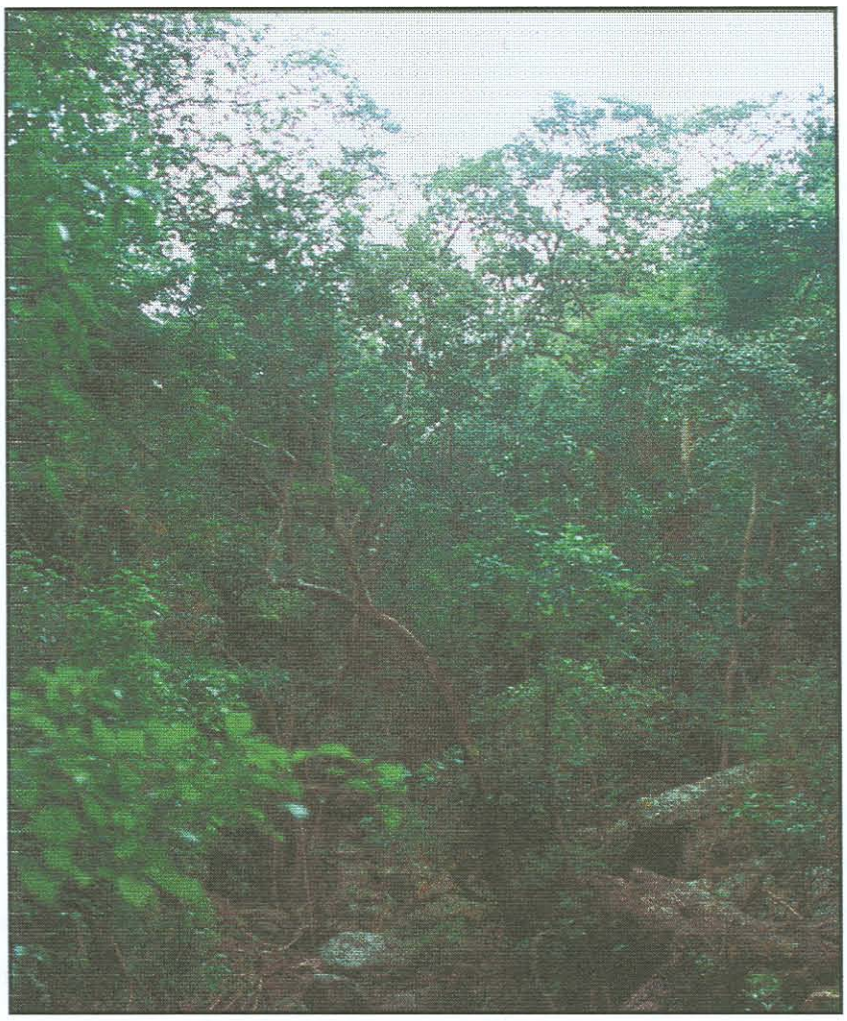

Figure 8.1 Typical kloof forest bird habitat in the Emaweni Game Lodge

2. Rocky Slopes Habitat Type

The typical rocky slopes and escarpment cliffs (figure 8.2) of the Waterberg area provide habitats to typical bird species associated with rocky habitats. Not many ornithologists have studied birds in mountainous areas of southern Africa. Two different major plant communities are represented in this habitat type namely the warm, rocky slopes (*Diplorhynchus-Englerophytum* community) and cool southern slopes and escarpment crest (*Protea caffra-Loudetia simplex* community). Diagnostic species of this habitat type include the following (SG 2, T 8.1):

Columba guinea	(Rock Pigeon)
Apus melba	(Alpine Swift)
Gyps coprotheres	(Cape Vulture)
Promerops gurneyi	(Gurney's Sugarbird)
Emberiza impetuani	(Larklike Bunting)

The cape vulture is the only vulture endemic to southern Africa and is listed in the red data list of southern African birds as being vulnerable (Hilton-Taylor, 2000). The largest colony (about 800 breeding pairs) in the world are found in the Marakele National Park (NPTB, 1999). Steyn (1982) noted that most large birds of prey are seriously threatened as a rule. However, species like the martial eagle (SG 13, T 8.1) and bateleur (SG 4, T 8.1) previously included in the red data list of birds (Brooke, 1984), have been discarded as threatened due to the many conservation areas available to the species in the savanna biome.

Typical birds preferring the high altitude mountainous grassland and escarpment areas to be viewed by tourists and birdwatchers include the following: Mountain chat (*Oenanthe monticola*), mocking chat (*Thamnolaea cinnamomeiventris*), rock martin (*Horundo fuligula*), redwinged starling (*Onychognathus morio*, SG 5, T 8.1), orangethroated longclaw (*Macronyx capensis*) and stonechat (*Saxicola torquata*, SG 19, T 8.1). The low-lying rocky mountainous terrain forms a mosaic with the woodlands of the lowlands and therefore many of the bird species occur in more than one habitat type. The bird species diversity on these ecotones between lowlands and rugged, rocky areas are subsequently high, making these areas highly suitable for birdwatching. The mountainous areas further provide an important food source (e. g.

hares, rock dassies, lizards) for raptor species such as black eagles (exclusive rock dassie feeder) (*Aquila verreauxii*), barn owls (*Tyto alba*, SG 5, T 8.1), booted eagle, spotted eagle owl (*Bubo africanus*) and African hawk eagle (*Hieraaetus spilogaster*, SG 14, T 8.1).

Although the bird diversity in this habitat type is not as high as other habitat types discussed in the following sections, several interesting endemic birds may be viewed by tourists or birdwatchers in these rocky areas. The many hiking trials meandering through the mountainous terrain within the Waterberg area brings tourists to unspoilt areas where these birds can be seen in their natural environment.

Figure 8.2 Typical cape vulture breeding area along the cliffs of the Kransberg Mountains in the Marakele National Park

3. Open Woodland Habitat Type

This habitat type is represented by three different plant communities and is the same as the Open Woodland Habitat Type for larger mammals as discussed in Chapter 7. The three different plant communities that provide habitats to bird species are the following: *Terminalia sericea-Eragrostis pallens* deep sand community, *Burkea africana-Setaria sphacelata* community of foothills, undulating plains and terraces, and the *Acacia nigrescens-Grewia flava* plains community (Chapter 4). More bird species can be seen in this habitat type than any other and the diversity is high. The more open terrain means that most of these bushveld birds are easier to observe than those inhabiting forests and marshes (Bredenkamp, 1999[b]). The following species are diagnostic to this habitat type (SG 4, T 8.1):

Milvus migrans migrans	(Black Kite*)
Milvus migrans parasitus	(Yellow billed Kite*)
Emberiza flaviventris	(Goldenbreasted Bunting)
Vidua paradisaea	(Paradise Whydah)
Amadina fasciata	(Cutthroat Finch)
Nilaus afer	(Brubru)
Batis molitor	(Chinspot Batis)
Muscicapa striata	(Spotted Flycatcher*)
Cisticola rufilata	(Tinkling Cisticola)
Sylvietta rufescens	(Longbilled Crombec)
Turdus litsitsirupa	(Groundscraper Thrush)
Mirafra rufocinnamomea	(Flappet Lark)
Indicator indicator	(Greater Honeyguide)
Tockus leucomelas	(Southern Yellowbilled Hornbill)
Lamprotornis nitens	(Glossy Starling)
Buphagus erythrorhynchus	(Redbilled Oxpecker)
Coracias naevia	(Purple Roller)
Caprimulgus rufigena	(Rufouscheeked Nightjar)
Otus senegalensis	(African Scops Owl)
Clamator jacobinus	(Jacobin Cuckoo*)
Eupodotis ruficrista	(Redcrested Korhaan)
Terathopius ecaudatus	(Bateleur)
Circeatus pectoralis	(Blackbreasted Snake Eagle)
Aquila nipalensis	(Steppe Eagle*)
Aquila rapax	(Tawny Eagle)
Thripias namaquus	(Bearded Woodpecker)
Gyps africanus	(Whitebacked Vulture)
Circaetus cinereus	(Brown Snake Eagle)
Torgos tracheliotus	(Lappetfaced Vulture)
Serinus atrogularis	(Blackthroated Canary)
Bubalornis niger	(Redbilled Buffalo Weaver)

The only bird species classified in the red list of South African birds is the lappetfaced vulture, a vulnerable species (Hilton-Taylor, 2000). Some of the typical savanna birds are specialists in terms of diet and habitat whilst other are generalists (Bredenkamp, 1999[b]). However, Harrison *et al.* (1997) noted that the avifauna of moist woodland (such as the Waterberg) as being a depauperate subset of that in Miombo Woodland. Although the avifauna of Miombo Woodlands seem to particularly species rich, several widespread woodland birds appear to avoid this vegetation type, e. g. redcrested korhaan, pearlspotted owl (*Glaucidium perlatum*) and violeteared waxbill (*Uraeginthus granatinus*) (SG 13, T 8.1). These species and several others seem to prefer drier woodlands occurring on the northern and eastern low-lying plains of the Biosphere Reserve (*Acacia nigrescens-Grewia flava* plains community, Chapter 4 in the Arid Sweet Low Mountains and Plains Ecozone and Mosaic Plains Ecozone, Chapter 5). The moist woodlands of the Waterberg Biosphere Reserve seem to have a lower diversity of birds, although most of the species will occur there in the drier season when food on the plains is scarce.

The open woodland habitat type supports many seedeaters such as doves, sparrows, weavers, waxbills, buntings and canaries. The majority of these find their food on the ground, however, the smaller seed-eaters may harvest seed whilst clinging to the grass stems. Fruit-bearing plants account for the presence of barbets species (e. g. blackcollared barbet, SG 12, T 8.1; pied barbet, SG 13, T 8.1) and grey louries (*Corythaixoides concolor*) (SG 13, T 8.1), which find most of their food in the canopies of trees and shrubs. Insectivores constitute a very large component of the avifauna, and there is an abundance of francolins, hoopoes, larks, hornbills, shrikes and robins, to name a few major groups that find their prey in every conceivable niche in this rich habitat. Shrikes, rollers (figure 8.4) and kingfishers hunt by swooping down from vantage point of trees to take their prey on the ground, while woodpeckers and woodhoopoes find their insect prey mainly on or under bark of tree trunks and thicker branches. Other bird groups foraging among the leaves and branches include shrikes, tits, warblers, white-eyes, batises, cuckoos, orioles and cuckoos. Some of the bee-eaters, flycatchers, and nightjars, as well as the forktailed drongo (*Dicrurus adsimilis*) (SG 15, T 8.1), "hawk" their prey from perches, while swifts, swallows and some raptors hunt "on the wing" (Bredenkamp, 1999[b]). Many colourful birds also occur in these groups discussed and are of particular interest to tourists visiting the

area for the first time. Species like glossy starlings, yellowbilled hornbills (SG 4, T 8.1), Meyer's parrot (*Poicephalus meyeri*), crimsonbrested shrike (*Laniarius artococcineus*), lilacbreasted roller (*Coracias caudata*) (SG 13, T 8.1, figure 8.4) and blackheaded oriole (*Ardea melanocephala*) (SG 14, T 8.1) are quite conspicuous and may attract the attention of tourists interested in birds. Some of the species are however summer visitors (marked with *) and can only be seen during the warm summer months, such as the two kite species, spotted flycatcher, steppe eagle and Jacobin cuckoo.

However, the high diversity and populations of avifauna, as well as the presence of many small mammal species and reptiles make the presence of raptors and other birds of prey highly likely (figure 8.3). Species like yellowbilled kite, bateleur, booted eagle, giant eagle owl (*Bubo lacteus*) (SG 8, T 8.1) and martial eagle (*Polemaetus bellicosus*) (SG 13, T 8.1) are common when prey abound, while the availability of carrion will certainly cause vultures like the lappetfaced vulture and whitebacked vulture to be present (Bredenkamp, 1999[b]).

This habitat type has a huge potential for birdwatching as a tourist activity. Not only are the area an constant delight for experienced birders, but they are also arguably the first "hunting ground" of the budding birdwatcher (Bredenkamp, 1999[b]). The mostly open vegetation structure provides easy identification and walking through. Furthermore, the high diversity of bird groups that occur makes the identification quite a challenge and even more exciting to keen birdwatchers.

Figure 8.3 Raptor species like bateleurs (top) and tawny eagles (bottom) often use large dry trees as vantagepoints to rest and hunt from.

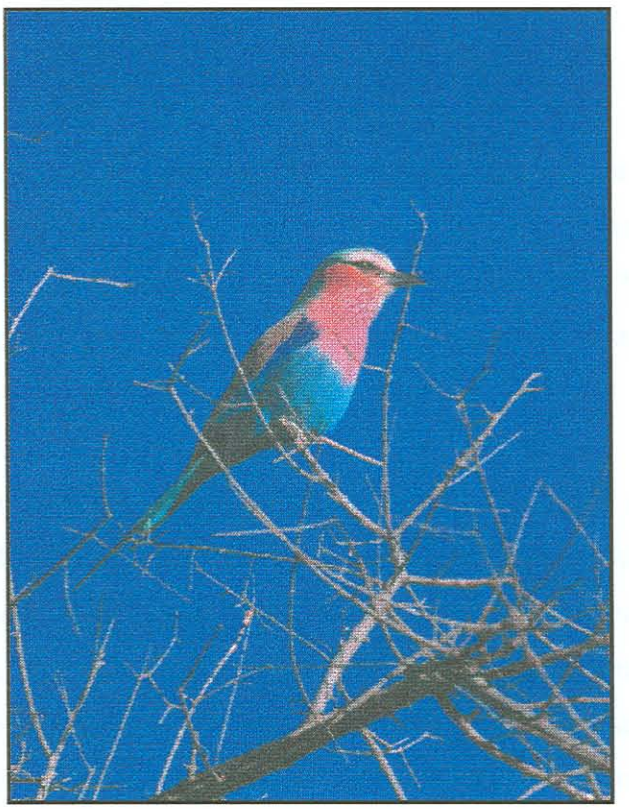

Figure 8.4 The beautiful lilacbreated roller is an insectivorous bird that occur throughout savanna woodlands in southern Africa

4. Dense Woodland Habitat Type

Many birds associated to this habitat type are also associated to similar dense vegetation like forests. However, specific bird species occur specifically in this habitat type which are represented by two major plant communities namely the *Dombeya rotundifolia-Panicum maximum* sweet rocky dykes and the *Acacia tortilis-Panicum maximum-Ziziphus mucronata* termitaria and encroached areas community (Chapter 4). The following species are diagnostic to this habitat type.

Eupodotis afra	Black Korhaan
Cypsiurus parvus	Palm Swift
Urocolius indicus	Redfaced Mousebird
Parisoma subcaeruleum	Titbabbler
Acrocephalus palustris	European Marsh Warbler*
Laniarius ferrugineus	Southern Boubou
Laniarius aethiopicus	Tropical Boubou
Tockus erythrorhynchus	Redbilled Hornbill
Podica senegalensis	African Finfoot
Colius colius	Whitebacked Mousebird
Sylvia borin	Garden Warbler*

The warbler species (European marsh warbler and garden warbler) are both summer visitors and occur along the riverine thickets associated with diabase and dolerite dykes as seen in figure 8.5. Although the diversity of species are not as high in this habitat type compared to the open woodland habitat type, several interesting species occur within it.

The termitaria thickets of this habitat type usually occur as the result of a bird's perch site such as an anthill or thorn tree. The birds drop the seeds, and shrubs and bushes grow up around the perch site (Lubke, 1999). As more and more species invade so the thicket bush clumps, as seen in the Nylsvley Nature Reserve and described by Coetzee *et al.* (1976). Dean *et al.* (1999) noted that large trees scattered through sparse grassy vegetation (such as the case of the termitaria thickets on the floodplains of the Nylsvley Nature Reserve) of arid savanna are focal points for bird activity because they supply nest sites, shade and food resources. The many fruit-bearing species occurring within termitaria bushclumps and riverine vegetation thicket such as *Pappea capensis* and several *Grewia* species provide food to frugivores such as mousebirds [e. g. speckled mousebird (*Collius striatus*), Grey hornbill (*Tockus*

nasutus), crested barbet (*Trachyphonus vaillantii*), (SG 8, T 8.1); blackeyed bulbul (*Pycnonotus barbatus*) and green pigeon (SG 10, T 8.1). The large trees further supply large birds such as owls (e. g. giant eagle owl; SG 8, T 8.1) and raptors [e. g. Wahlberg's eagle (*Aquila wahlbergi*), SG 13, T 8.1) with nesting-, roosting- and perch-hunitng sites (Maclean, 1970). Many waterbirds [e. g. hamerkop (*Scopus umbretta*), malachite kingfisher (*Alcedo cristata*), burchell's coucal (*Centropus burchellii*) and threebanded plover (*Charadrius tricollaris*), SG 24, T 8.1) also occur along the riverine vegetation associated with diabase and dolerite dykes, especially when streams have fresh flowing water. Other birds typical of encroached thickets include thrushes [e. g. kurrichane thrush (*Turdus libonyana*), SG 8, T 8.1; olive thrush (*Turdus olivaceus*) SG 10, T 8.1), the summer visitor flycatchers [e. g. bluegrey flycatcher (*Muscicapa caerulescens*), paradise flycatcher (*Terpsiphone viridis*), SG 10, T 8.1] and sunbirds [e. g. whitebellied sunbird (*Nectarinia talatala*), SG 8, T 8.1].

Although birders will find that watching birds in the thickets is easy in the lower canopy, the vegetation is often impenetrable and difficult to move in. Subsequently this habitat type is not very suitable for birdwatching, especially in the encroached areas on the eastern plains of the biosphere reserve. However, the termitaria vegetation and riverine areas are more suitable for birdwatching and a high diversity of birds, also from adjacent plant communities, may utilize the enriched soil bushclumps for nesting or feeding sites in the wetter summer months (Dean *et al.* 1999).

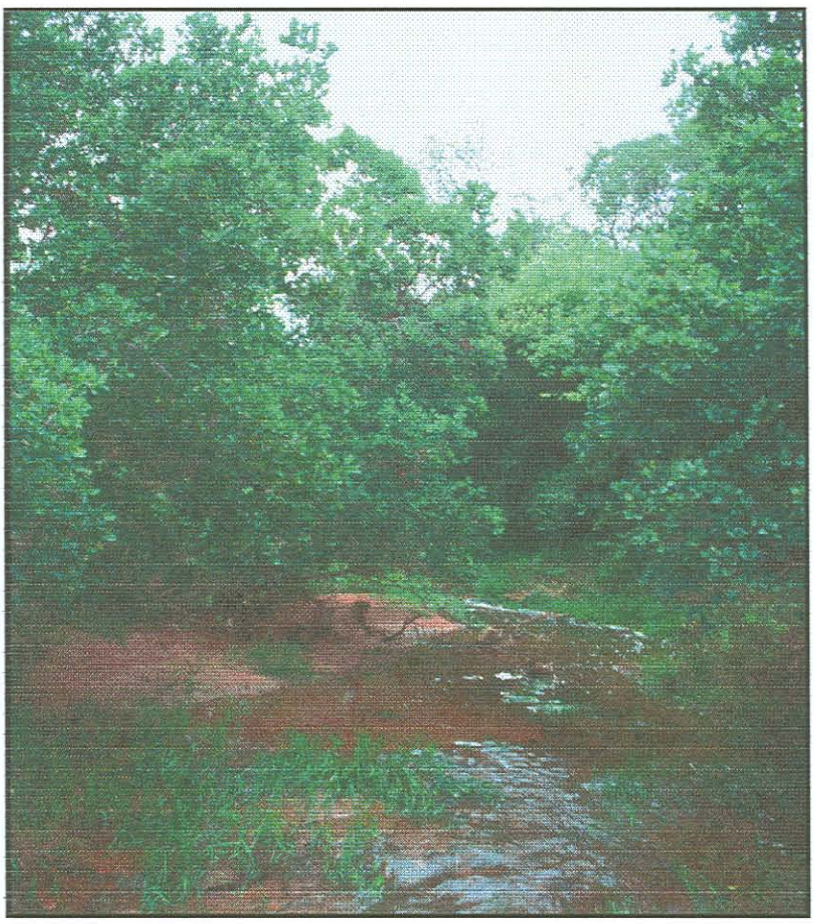

Figure 8.5 Many different bird species utilize the typical riverine vegetation along diabase or dolerite dykes as food source and cover

5. Grassland Habitat Type

The grassland habitat type is well represented on the many old fields (*Cynodon dactylon-Dichrostachys cinerea* old fields community) in the Waterberg, as well as on the floodplains in the Nylsvley Nature Reserve (*Setaria incrassata-Aristida bipartita* vertic clay community). The open grassland provides ideal nesting sites, food and shelter to many non-passerine birds. The following species was found diagnostic in this habitat type (SG 11, T 8.1):

Elanus caeruleus	Blackshouldered Kite
Falco naumanni	Lesser Kestrel*
Pterocles gutturalis	Yellowthroated Sandgrouse
Vidua funerea	Black Widowfinch
Estrilda erythronotos	Blackcheeked Waxbill
Vanellus coronatus	Crowned Plover
Calandrella cinerea	Redcapped Lark
Cisticola aridula	Desert Cisticola
Cisticola textrix	Cloud Cisticola
Motacilla capensis	Cape Wagtail
Erythropygia paena	Kalahari Robin

Most species occur throughout the year in the grassland habitat although the lesser kestrel is a summer visitor and classified as vulnerable by Hilton-Taylor (2000). The only other threatened southern African bird endemic to, but not restricted to the grassland biome, occurring in this habitat type is the blue crane (*Anthropoides paradisea*), South Africa's national bird, being classified as vulnerable (Hilton-Taylor, 2000). The importance to conserve these species in these wet (floodplains) and dry grasslands (old fields) in the Waterberg Biosphere Reserve cannot be underestimated, since these areas have been subjected to great ecological stress (Bredenkamp, 1999[a]).

The old fields and often overgrazed floodplains as disturbed habitats play an important role in increasing biodiversity of avifauna in the Biosphere Reserve. Natural ecological disturbance creates habitats that are used by a diverse group of birds. The disturbance and successional processes might play a direct role in structuring in structuring avian habitats and communities (Brawn *et al.* 2001). Maclean (1985) stated that old fields and the secondary growth that often springs up at the edges of disturbed ground are often utilized by many kinds of birds. Species like yellowthroated sandgrouse, crowned plover, spotted dikkop (*Burhinus capensis*)

(SG 13, T 8.1) and hadeda ibis (*Bostrychia hagedash*) and blue crane (SG 16, T 8.1) prefer the short open grassland encountered on the old fields, while the tall closed grasslands of the floodplains is preferred by a diverse group of seedeaters [blackcheeked waxbill, black widofinch, laughing dove (SG 13, T 8.1), grassveld pipit (*Anthus cinamomeus*) and longtailed widow (*Euplectus progne*, figure 8.6) (SG 16, T 8.1)], insect feeders [hoopoe (*Upupa epops*), european roller (*Coracias garrulus*) (SG 13, T 8.1) and little bee-eater (*Merops pusillus*) (SG 14, T 8.1)], waterbirds associated to the adjacent vleilands [water dikkop (*Burhinus vermiculatus*), blacksmith plover (*Vanellus armatus*), rare yellowbilled stork (*Myctera ibis*) ((SG 23, T 8.1) and rare summer visitor the white stork (*Ciconia ciconia*) (SG 25, T 8.1) and large specialized birds like the ostrich (*Struthio camelus*), the vulnerable (Brooke, 1984) kori bustard (*Ardeotis kori*) (SG 13, T 8.1) and secretary bird (*Sagittarius serpentarius*) (SG 14, T 8.1). The great variety of common birds and small mammals like shrews and mice provides food to many raptors and owls like the blackshouldered kite, pearlspotted owl (*Glaucidium perlatum*) (SG 13, T 8.1), longcrested eagle (SG 15, T 8.1) and marsh owl (*Asio capensis*) (SG 23, T 8.1).

Brawn *et al.* (2001) noted that the disturbed grasslands and floodplains of North America need conservation strategies involving the management of disturbance through some combination of flooding or fire application to potentially diversify avian habitats. The red data list birds like rare white stork and yellowbilled stork (Brooke, 1984) make the conservation of these areas (especially the floodplains in the Nylsvley Nature Reserve) important, strategies need to be implemented in the management plan of reserves where these habitats occur.

The potential of this habitat type as a birdwatching site holds great potential, since areas like floodplains form an ecotone between woodlands and wetlands, providing an added habitat to many bird species. Furthermore, the open areas on old fields make the viewing and identification of certain non-passerine species easy. People (tourists) starting to do birdwatching as a hobby might find this habitat type the best for quick and easy identification, since the diversity stretches from the largest ostrich to the smallest waxbill species.

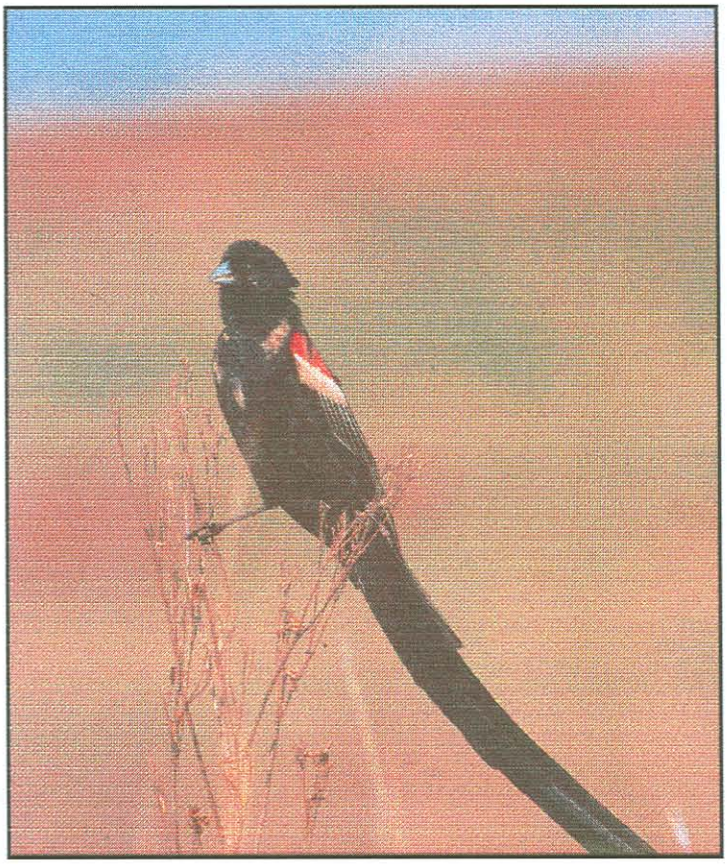

Figure 8.6 The longtailed widow is a common grassland biome bird that prefers tall grasslands like those on floodplains

6. Sponge Habitat Type

This is a very specialized wetland habitat type and occurs only in the high altitude mountainous areas of the Marakele National Park. The vegetation structure is the same as the floodplains area (tall closed grassland) in the Nylsvley Nature Reserve as classified by Van Staden (in prep.), although the species composition is different and shallow water is present for longer periods of the year compared to the seasonally flooded floodplains. No specific diagnostic bird species are found although many species are found communal to the grassland habitat type and vleiland habitat type (Species Groups 16, 22 and 23). Waterbirds preferring shallower water of marshes and floodplains are often encountered in this habitat type [African sedge warbler, cape shoveller (SG 22, T 8.1), great white egret (*Egretta alba*), moorhen (*Gallinula chloropus*), grey heron (*Ardea cinerea*) and woolynecked stork (*Ciconia episcopus*) (SG 23, T 8.1)]. However, other grassland birds like the golden bishop (*Euplectus afer*) and cape weaver (*Ploceus capensis*) (SG 23, T 8.1) also use the tall grass as nesting and feeding sites. The sponges further provide an important nesting site for the endemic blue crane and the conservation of these sites is therefore important. Morrison & Bothma (1998) also showed that wetland sites provide important nesting sites to crane species like the wattled and crowned cranes. The many red data list bird species (Appendix 8.1 and Table 8.1) occurring within this sensitive habitat type increase the importance of proper management strategies as emphasized by Van Staden (in prep.) for the sponges in the Marakele National Park.

Unfortunately for birdwatchers, the sponge habitat type is difficult to reach from the tourist road for easy bird identification and in future, bird hides could possibly be build closer to the sponges under strict conservation strategies. However, the sponges still remain one of the most sensitive plant communities (Chapter 4) in the Waterberg Biosphere Reserve and any tourist activities through the area should rather be guided by an experienced nature guide to prevent erosion and damage to the soil and vegetation. The many rare and interesting birds that may be seen in the sponges make this habitat type an absolute must for experienced birders, especially during the wet summer months.

7. Vleiland Habitat Type

This water-associated habitat type includes most aquatic bird species. The inland waters in the Waterberg Biosphere Reserve are highly varied in character, ranging from rivers, to lakes, pans, dams, marshes and vleis. The birdlife at these aquatic areas will vary according to size, the nature of its shoreline (steep, shelving, bare, dense vegetated etc.), the composition of its water (fresh, saline, brackish etc.) and whether or not it has emergent or floating vegetation (reeds, rushes, waterlilies etc.) (Maclean, 1985). Froneman *et al.* (2001) further concluded that structural diversity of vegetation in and around water ponds in the Western Cape, are especially important in determining their usage by waterbirds. The following species are diagnostic to this diverse, aquatic habitat type:

Ceryle rudis	Pied Kingfisher
Rynchops flavirostris	African Skimmer
Himantopus himantopus	Blackwinged Stilt
Recurvirostra avosetta	Avocet*
Microparra capensis	Lesser Jacana
Actophilornis africanus	African Jacana
Porphyrio porphyrio	Purple Gallinule
Oxyura maccoa	Maccoa Duck
Nettapus auritus	Pygmy Goose
Netta erythrophthalma	Southern Pochard
Anas capensis	Cape Teal
Alopochen aegyptiacus	Egyptian Goose
Dendrocygna viduata	Whitefaced Duck
Phoeniconaias minor	Lesser Flamingo*
Botaurus stellaris	Bittern*
Ixobrychus minutus	Little Bittern*
Anhinga melanogaster	Darter
Phalacrocorax africanus	Reed Cormorant
Phalacrocorax carbo	Whitebreasted Cormorant
Tachybaptus ruficollis	Dabchick

The lesser flamingo and African skimmer are classified as lower risk, near threatened species (Hilton-Taylor, 2000). Turpie (1995) emphasized the importance of prioritizing South African estuaries for the conservation of waterbirds. Species richness, conservation status, total numbers, and percentage of the regional population were considered the most important criteria for ranking wetlands in terms of their value to waterbirds. Wetland areas constitute some of the most threatened habitat in South Africa. The floodplains and Nile River ecosystem in the Nylsvley Nature

Reserve has been designated as a Ramsar Site and is of extraordinary importance for the maintenance of biological diversity. The area remains one of the most important South African breeding sites of common and rare waterbird species, especially in years of floods. The importance to create awareness among landowners in the Waterberg Biosphere Reserve of the importance of such wetlands should be a major conservation priority, and would ensure the conservation of smaller wetland areas in the Biosphere Reserve (Walmsley & Walmsley, 1999).

Typical of more open stretches of water are duck species [maccoa duck, cape teal, whitefaced duck (figure 8.8)], cormorants (reed cormorant, whitebreasted cormorant) and darter. Plovers [whitefronted plover (*Charadrius marginatus*) (SG 22, T 8.1), wattled plover (*Vanellus senegallus*) (SG 23, T 8.1)], sandpipers [curlew sandpiper (*Calidris ferruginea*), marsh sandpiper (*Tringa stagnatilis*) (SG 22, T 8.1), herons [Grey heron, purple heron (*Ardea purpurea*) (SG 23, T 8.1)] and loafing waterfowl (egyptian goose, pygmy goose) use bare shorelines. Reedbeds and marshes are the home of rails [African rail (*Rallus caerulescens*) (SG 23, T 8.1)], crakes [Baillon's crake (*Porzana pusilla*), black crake (SG 22, T 8.1)], moorhens, reed and marsh warblers [Cape reed warbler (*Acrocephalus gracilirostris*) (SG 22, T 8.1), African marsh warbler)] and some waxbills [common waxbill (*Estrilda astrild*) (SG 23, T 8.1)]. Floating vegetation usually supports jacanas and various crakes. Other birds like the beautiful African fish eagle (*Haliaeetus vocifer*) (SG 23, T 8.1) and kingfisher species [pied kingfisher, malachite kingfisher (SG 24, T 8.1, figure 8.7)] are dependent on the availability of fish and frogs for food (Harrison *et al.* 1997).

This bird group is excellent for the beginning birdwatcher, because many species are easy to identify. The habitat type is amongst the easiest to watch birds from the shorelines or even from a boat (Maclean, 1985). However, the high diversity of bird species also attracts the keen, experienced birders. Localities such as the Nylsvley Nature Reserve provide bird-hides to birdwatchers and this make the identification much easier. Other reserves in the Waterberg Biosphere Reserve could only benefit from constructing such hides along the many dams, rivers and wetlands in the Biosphere Reserve. However several of the waterbirds are summer visitors (indicated in Appendix 8.1) and the best time of year to see these birds are the wet summer months when they are most active.

Figure 8.7 Kingfisher species like the colourful malachite kingfisher, are easily identified and are popular among beginning birders

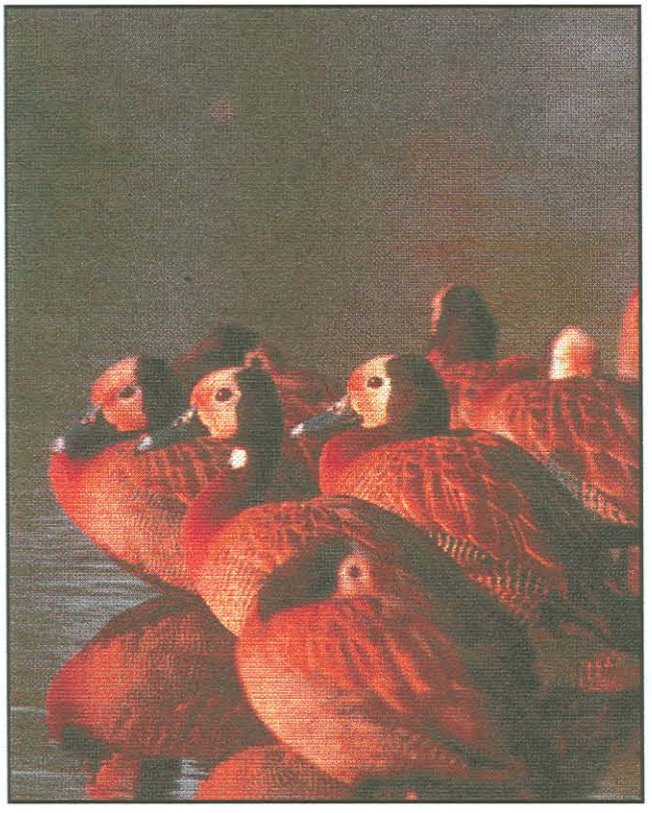

Figure 8.8 Duck species like whitefaced ducks prefer open water habitat associated with vleilands

8.4 Conclusion

Birdwatching is becoming more and more a popular ecotourist activity in South Africa, and the Waterberg area with its diverse landscapes and plant communities provides the ideal habitat to accommodate many different bird communities and individual species. Vegetation structure has been shown as one of the most important factors determining bird distribution patterns (Hauge, 1983), since vegetation type and structure reflect and integrate numerous climatic factors and non-climatic factors (e. g. latitude, altitude, topography, atmospheric circulation) (Harrison *et al.* 1997). The following 7 major habitat types were identified based on habitat preferences linked to the major plant communities (Chapter 4) in the Waterberg Biosphere Reserve:

- Kloof Habitat Type
- Rocky Slopes Habitat Type
- Open Woodland Habitat Type
- Dense Woodland Habitat Type
- Grassland Habitat Type
- Sponge Habitat Type
- Vleiland Habitat Type

From this study it becomes clear that birds utilize a far narrower habitat compared to mammal species, since certain plant communities like sponges, vleilands and kloofs were identified as specialized bird habitats. However, the diversity of birds in habitats like the open woodland habitat type varies from place to place according to climatic conditions and food source availability. For example, the arid woodlands on the eastern and northern plains of the Biosphere Reserve seem to have a higher diversity of birds than the lowland woodlands in the main Waterberg basin.

Tourists and birders can use the habitat types as references to identify and view most of the birds associated with them. Different bird species might be seen at different times of the day (e. g. nocturnal birds like owls and nightjars) and within different vegetation communities. Feeding and nesting sites often differ (Harrison *et al.* 1997)

and therefore the bird species might be seen in other habitats, although the habitat types identified represent their preferences.

Of the total 383 bird chosen for the analysis, Hilton-Taylor (2000) listed only 6 in the red data list of South African birds. Of these 4 species, the blue crane, cape vulture, lappetfaced vulture and lesser kestrel were classified as vulnerable and 2 as lower risk species, namely the lesser flamingo and African skimmer. This emphasizes the important role the Waterberg Biosphere Reserve plays in the conservation of these threatened species. Reyers *et al.* (2002) showed the potential avifauna conservation areas of the Limpopo Province, by using data from the avifauna database of the Bird Atlas Project (Harrison, 1992). It was concluded that the inclusion of species assemblage structure as well as the underlying environmental gradients ensures a conservation area network that strives to maintain both biodiversity pattern and process. The representation of the different plant communities as bird habitat types in the Waterberg Biosphere Reserve plays an important role in the conservation of these diverse avifauna communities. Conservation strategies for certain sensitive habitat types like wetlands also need to be emphasized in future to prevent damage to the habitat of threatened bird species like saddlebilled stork and lesser jacana.

Smaller reserves occur throughout the Biosphere Reserve, and although they usually do not have the capacity to host the big game species, the potential for these reserves to promote birdwatching is huge. Not only can they provide tourists with bird checklists, the tourists can easily identify the birds by simply sitting in one place (at a bird hide or even at their chalet / camping site), taking a walking trial or a game drive with experienced birding guides. The potential for birdwatching in the Waterberg as a specialized activity still needs promotion, in the vast and unexplored areas of the Waterberg.

Table 8.1 Synoptic table of the habitat types of birds of theWaterberg Biosphere Reserve

Habitat Type	Kloofs	Rocky slopes	Open woodland	Dense woodland	Grassland	Sponges	Vleis
Number of Plant Communities	1	2	3	2	2	1	1
Species Group 1							
Bleating Warbler	100						
Species Group 2							
Rock Pigeon		100					
Alpine Swift		100					
Cape Vulture		100					
Gurney's Sugarbird		100					
Larklike Bunting		50					
Species Group 3							
Cape Robin	100	50					
Species Group 4							
Black Kite			100				
Yellowbilled Kite			100				
Goldenbreasted Bunting			100				
Paradise Whydah			100				
Cutthroat Finch			100				
Brubru			100				
Chinspot Batis			100				
Spotted Flycatcher			100				
Tinkling Cisticola			100				
Longbilled Crombec			100				
Groundscraper Thrush			100				
Flappet Lark			100				
Greater Honeyguide			100				
Southern Yellowbilled Hornbill			100				
Glossy Starling			100				
Redbilled Oxpecker			100				
Purple Roller			100				
Rufouscheeked Nightjar			100				
African Scops Owl			100				
Jacobin Cuckoo			100				
Redcrested Korhaan			100				
Bateleur			100				
Blackbreated Snake Eagle			100				
Steppe Eagle			100				
Tawny Eagle			100				
Bearded Woodpecker			67				
Whitebacked Vulture			67				
Brown Snake Eagle			33				
Lappetfaced Vulture			33				
Blackthroated Canary			33				
Redbilled Buffalo Weaver			33				

Species group 5

Cape Bunting	50	100
Rock Kestrel	100	100
Little Banded Goshawk	100	100
House Martin	100	67
Barn Owl	100	67
Black Eagle	100	33
Rock Bunting	100	33
Streakyheaded Canary	100	33
Redwinged Starling	100	33
Longbilled Pipit	100	33
Mocking Chat	100	33
Buffstreaked Chat	100	33
Mountain Chat	100	33
Whitenecked Raven	100	33
Rock Martin	100	33
Freckled Nightjar	100	33
Lanner Falcon	100	33
Jackal Buzzard	100	33

Species Group 6

Booted Eagle	100	100	100
Cape Rock Thrush	100	100	67
Malachite Sunbird	100	100	33
Black Swift	100	100	33

Species group 7

Black Korhaan	100
Palm Swift	100
Redfaced Mousebird	100
Titbabbler	100
European Marsh Warbler	100
Southern Boubou	100
Tropical Boubou	100
Redbilled Hornbill	100
African Finfoot	50
Whitebacked Mousebird	50
Garden Warbler	50

Species Group 8

Speckled Mousebird	33	100
Kurrichane thrush	33	100
Arrowmarked Babbler	33	100
Greyhooded Kingfisher	33	100
Crested Francolin	33	100
Grey Hornbill	67	100
Whitebrowed Robin	100	100
Shafttailed Whydah	100	100
Whitebellied Sunbird	100	100
Blackcrowned Tchagra	100	100
Threestreaked Tchagra	100	100
Yellowbellied Eremomela	100	100
Crested Barbet	67	100
Swallowtailed Bee-eater	100	100
Whitefaced Owl	100	100

Barred Warbler			33	50
Cape Penduline Tit			33	50
Greenspotted Dove			33	50
Icterine Warbler			33	50
Spectacled Weaver			67	50
Bennet's Woodpecker			67	50
Greater Blue-eared Starling			67	50
White Helmetshrike			100	50
Yelloweyed Canary			100	50
Scimitarbilled Woodhoopoe			100	50
Woodland Kingfisher			100	50
Giant Eagle Owl			100	50

Species group 9

Redheaded Weaver	50		67	50
Grey Penduline Tit	50		67	50
Southern Black Tit	50		67	50
Yellowthroated Sparrow	100		67	50
Black Sunbird	100		67	50
Lazy Cisticola	100		33	50
Familiar Chat	100		33	50
Yellowfronted Tinker Barbet	100		67	50
Lizzard Buzzard	100		67	50

Species Group 10

Cape White-Eye	100			100
Cape Batis	100			100
Bluegrey Flycatcher	100			100
Yellowbellied Bulbul	100			100
Terrestrial Bulbul	100			100
Blackeyed Bulbul	100			100
Pygmy Kingfisher	100			100
Klaas's Cuckoo	100	100	33	100
Redchested Cuckoo	100			100
Green Pigeon	100			100
Gymnogene	100			100
African Goshawk	100			100
Black Sparrowhawk	100			100
Little Sparrowhawk	100			100
Cuckoo Hawk	100			100
Natal Francolin	100	100	67	100
Striped Pipit	100	100	33	50
Longtailed Wagtail	100			50
Paradise Flycatcher	100		67	50
Olive Thrush	100			50
Narina Trogon	100			50

Species Group 11

Blackshouldered Kite	100
Lesser Kestrel	100
Yellowhtroated Sandgrouse	100
Black Widowfinch	50
Blackcheeked Waxbill	50
Crowned Plover	50
Redcapped Lark	50

Desert Cisticola			50
Cloud Cisticola			50
Cape Wagtail			50
Kalahari Robin			50
Species Group 12			
Blackcollared Barbet		50	50
Whitefronted Bee-eater		50	50
Black Flycatcher		50	50
Bronze Mannikin		50	50
Redheaded Finch		50	50
Species Group 13			
Redcollared Widow	33	50	100
Namaqua Dove	33	50	100
Whitebellied Korhaan	33		100
Pintailed Whydah	33		100
Fiscal Shrike	33		100
Bushveld Pipit	67	50	100
Rattling Cisticola	33	50	100
Black Crow	33	50	100
Martial Eagle	67		100
Ostrich	67		100
Violeteared Waxbill	100	50	100
Redbilled Quelea	100	100	100
Greybacked Finchlark	33		100
Chestnutbacked Finchlark	67		100
Sabota Lark	100	100	100
Diederik's Cuckoo	100	50	100
African Cuckoo	100	50	100
Meyer's Parrot	100	100	100
Laughing Dove	100		100
Helmeted Guineafowl	100		100
Marico Sunbird	33		50
Redbacked Shrike	33		50
Lesser Grey Shrike	33		50
European Bee-eater	33		50
Burchell's Sandgrouse	33		50
Pale Chanting Goshawk	33		50
Gabar Goshawk	33		50
Scalyfeathered Finch	33	50	50
Pied Babbler	33	50	50
Lilacbreasted Roller	33	50	50
Spottedbacked Weaver	33	50	50
Redeyed Bulbul	33	100	50
Fierynecked Nightjar	33	100	50
Whitecrowned Shrike	33		50
European Swift	33		50
Kori Bustard	33		50
Redbilled Firefinch	33	100	50
Lesser Masked Weaver	33		50
Ayres' Cisticola	33		50
Burntnecked Eremomela	67	100	50
Shorttoed Rock Thrush	67		50
Pied Barbet	67		50

Mozambique Nightjar		67	100	50
Bronzewinged Courser		67		50
Coqui Francolin		67	50	50
Steelblue Widowfinch		100	50	50
Purple Widowfinch		100		50
Whitebrowed Sparrowweaver		100		50
Burchell's Starling		100	100	50
Plumcoloured Starling		100		50
Greyheaded Bush Shrike		100		50
Orangebreasted Bush Shrike		67	100	50
Crimsonbreasted Shrike		100	50	50
Longtailed Shrike		100		50
Fairy Flycatcher		100	100	50
Fiscal Flycatcher		100		50
Marico Flycatcher		100	50	50
Blackchested Prinia		67	50	50
Whitethroated Robin		100	100	50
Ashy Tit		100	100	50
Fawncoloured Lark		100		50
Rufousnaped Lark		33	50	50
Monotonous Lark		100		50
Redthroated Wryneck		100		50
Cardinal Woodpecker		100	100	50
Goldentailed Woodpecker		100	100	50
Redbilled Woodhoopoe		100	100	50
Hoopoe		100	50	50
European Roller		100		50
Striped Kingfisher		100		50
European Nightjar		100		50
Pearlspotted Owl		100	50	50
Great Spotted Cuckoo		100	100	50
Black Cuckoo		100		50
Grey Lourie		100	100	50
Spotted Dikkop		67		50
Kurrichane Buttonquail		100		50
Ovambo Sparrowhawk		100	50	50
Wahlberg's Eagle		100	50	50

Species Group 14

Little Bee-eater	50	67		100
Pied Crow	100	100	100	100
Cape Turtle Dove	100	100	100	100
Stanley's Bustard	50	33		100
Secretarybird	100	100		100
Blackheaded Oriole	50	67	50	50
Black Cuckooshrike	50	100		50
Dark Chanting Goshawk	50	67	50	50
Yellow Canary	50	33		50
Greater Doublecollared Sunbird	100	100	50	50
Neddicky	100	33		50
South African Cliff Swallow	50	33		50
Clapper Lark	50			50
Spotted Eagle Owl	100	33		50
Doublebanded Sandgrouse	100	67		50
African Hawk Eagle	100	100		50

Species Group 15

Swee Waxbill	100			100	100
Lesser Honeyguide	100		100	100	50
Willow Warbler	100	100	100	100	50
Forktailed Drongo	100		100	50	50
Bluebilled Firefinch	100			50	50
Puffback	100	100	100	100	50
Bartthroated Apalis	100	100	100	100	50
Brownhooded Kingfisher	100		100	50	50
Redeyed Dove	100		67	100	50
Longcrested Eagle	100		100		50

Species Group 16

Orangebreasted Waxbill	100	100
Longtailed Widow	100	100
Whitewinged Widow	50	100
Red Bishop	100	100
Greyheaded Sparrow	100	100
Capped Wheatear	50	100
Pinkbilled Lark	100	100
Greyrumped Swallow	100	100
Grassveld Pipit	100	100
Cattle Egret	100	100
Abdim's Stork	100	100
Sacred Ibis	100	100
Hadeda Ibis	100	100
Blue Crane	100	100
Temminck's Courser	50	100
Grass Owl	50	100

Species Group 17

Plainbacked Pipit	50	50	100

Species Group 18

Greater Kestrel	67		50	100
Redbreasted Swallow	100		50	100
Great Reed Warbler	33	100	50	100
Grassbird	67		50	100
Eastern Redfooted Kestrel	33		100	100
Common Quail	33		100	100
Anteating Chat	33		100	100
Masked Weaver	33	50	100	100
Melba Finch	33	50	100	100
Jameson's Firefinch	67	50	100	100
Lesser Striped Swallow	100		100	100
Greater Striped Swallow	100		100	100
Swainson's Francolin	33		50	100
Cape Sparrow	33		50	100

Species Group 19

Orangethroated Longclaw	50				100
Stonechat	50			50	100
Brownthroated Martin	50			50	100
Blue Waxbill	100	100	100	50	100

Carmine Bee-eater		50	100		100	100
Little Swift		50			50	100

Species Group 20

Whiterumped Swift	100	100	100	100	100	100
European Swallow	100	100	100	100	100	100

Species Group 21

Pied Kingfisher	100
African Skimmer	100
Blackwinged Stilt	100
Avocet	100
Lesser Jacana	100
African Jacana	100
Purple Gallinule	100
Maccoa Duck	100
Pygmy Goose	100
Souhtern Pochard	100
Cape Teal	100
Egyptian Goose	100
Whitefaced Duck	100
Lesser Flamingo	100
Bittern	100
Little Bittern	100
Darter	100
Reed Cormorant	100
Whitebreasted Cormorant	100
Dabchick	100

Species Group 22

African Sedge Warbler	100	100
Cape reed Warbler	100	100
Whitewinged Tern	100	100
Greyheaded Gull	100	100
Curlew Sandpiper	100	100
Greenshank	100	100
Marsh Sandpiper	100	100
Whitefronted Plover	100	100
Baillon's Crake	100	100
Black Crake	100	100
Cape Shoveller	100	100
Little Egret	100	100

Species Group 23

Great White Egret	50	100	100
Blackheaded Heron	100	100	100
Rufousbellied Heron	50	100	100
Dwarf Bittern	50	100	100
Blackcrowned Night Heron	50	100	100
Greenbacked Heron	50	100	100
Yellowbilled Egret	50	100	100
Marsh Owl	50	100	100
Water Dikkop	50	100	100
Ethiopian Snipe	50	100	100
Ruff	100	100	100

Little Stint			50	100	100
Wood Sandpiper			50	100	100
Common Sandpiper			50		100
Wattled Plover			50		100
Blacksmith Plover			50		100
African Fish Eagle			50		100
Yellowbilled Duck			50		100
Fulvous Duck			50		100
Saddlebilled Stork			50		100
Squacco Heron			50		100
Purple Heron			50		100
Kittlitz's Plover			100	100	100
Grey Plover			50	100	100
Redknobbed Coot			50	100	100
Moorhen			50	100	100
African Rail			50	100	100
African Marsh Harrier			50	100	100
Spurwinged Goose			50	100	100
Redbilled Teal			50	100	100
Hottentot Teal			50	100	100
African Spoonbill			50	100	100
Glossy Ibis			50	100	100
Yellowbilled Stork			50	100	100
Woolynecked Stork			50	100	100
Black Stork			50	100	100
Grey Heron			50	100	100
Levaillant's Cisticola			50	100	100
Redfaced Cisticola			50	100	100
Cuckoo Finch			50	100	100
Cape Weaver			100	100	100
Golden Bishop			50	100	100
Quail Finch			100	100	100
Common Waxbill			100	100	100
Fantailed Cisticola			50	100	100

Species Group 24

Hamerkop			50		100
Whitebacked Night Heron			50		100
African Black Duck			50		100
Malachite Kingfisher			50		100
Giant Kingfisher			50		100
Burchell's Coucal			50	50	100
Threebanded Plover			50		100
African Marsh Warbler			100	50	100	100
Whitethroated Swallow			50	50	100	100

Species Group 25

Steppe Buzzard	67	100	50		100
Marabou Stork	100		50		100
White Stork	67		100	100	100
Tawnyflanked Prinia	33	50	50	100	100

Species Group 26

Pearlbreasted Swallow	100	100		50	100	100
African Pied Wagtail	100		50	50		100

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Appendix 8.1 Bird list of the Waterberg Biosphere Reserve showing the conservation status of birds, migratory birds (*) and habitat preferences

Species number	Species name	Common name	Status	Habitat preference
1	*Struthio camelus*	Ostrich	Common	Bushveld to desert
8	*Tachybaptus ruficollis*	Dabchick	Common	Dams, lakes, slow-flowing streams, rarely marine on West coast
55	*Phalacrocorax carbo*	Whitebreasted Cormorant	Common	Marine and inland waters, usually larger dams and pans
58	*Phalacrocorax africanus*	Reed Cormorant	Common	Inland waters of any size, down to tiny dams and ponds
60	*Anhinga melanogaster*	Darter	Common	Inland water, quiet lakes, pans and slow-flowing rivers. Occasional on estuaries and lagoons
62	*Ardea cinerea*	Grey Heron	Common	Bodies of shallow open water. Wetlands such as rivers, dams, marshes and estuaries. Intertidal rock pools. Tall trees for breeding and roosting, also in reedbeds and on cliffs.
63	*Ardea melanocephala*	Blackheaded Heron	Common	Open habitats, grasslands, pastures and fields of "stubble". Areas close to wetlands. Tall trees or reedbeds are required for breeding and roosting. Adapted to urbanisation.
65	*Ardea purpurea*	Purple Heron	Common	Dense emergent vegetation in shallow fresh or estuarine waters. Reed beds, marshes, reed-fringed rivers and lakes and flooded areas with tall grass and sedges.
66	*Egretta alba*	Great White Egret	Common	Shallow open waters at lakes, rivers, floodplains, flooded grasslands, marshes, saltpans and estuaries. Also artificial wetlands (e.g. dams and sewerage works)
67	*Egretta garzetta*	Little Egret	Common	Open areas of shallow water, margins of lakes, dams, rivers, marshes, irrigated land and sewerage works. Also saltpans, estuaries and mangrove swamps along open coastline, especially rocky shores.
68	*Egretta intermedia*	Yellowbilled Egret	Common	Suitable bodies of shallow water or wet grasslands. Avoids mountainous regions, forest and desert. Favours the margins of lakes, rivers, saltpans and estuaries, especially seasonal waterbodies, marshes and flooded grasslands with short emergent vegetation
71	*Bubulcus ibis*	Cattle Egret	Common	Open short grasslands, pastures and cultivated fields. Usually in flocks accompanying cattle or large game. Requires water for drinking. Roosts on the shorelines of inland waters and in trees. Nests in trees and reedbeds.
72	*Ardeoal ralloides*	Squacco Heron	Common	Freshwater habitats, preferring emergent vegetation in the quiet backwaters of ponds and the edges of slow flowing rivers and streams. Adequate reed

				cover and bushes and trees are prerequisites.
74	*Butorides striatus*	Greenbacked Heron	Common	Variety of aquatic habitats, both fresh and salt water. Densely vegetated rivers, streams, estuaries, lakes, ponds, swamps and mangroves. Occasionally in open waters and floodplains.
75	*Butorides rufiventris*	Rufousbellied Heron*	Common	It occurs in tropical and subtropical rivers well vegetated with aquatic grasses, sedges, papyrus and reeds, also floodplains, pans and coastal lakes in woodland regions. Occasional found at dams and sewerage works.
76	*Nycticorax nycticorax*	Blackcrowned Night Heron*	Common	Dense vegetation along the edges of shallow, still or slow moving water such as lakes, pans, rivers, marshes or seasonal floodplains and estuaries.
77	*Gorsachius leuconotus*	Whitebacked Night Heron	Common	Tree-lined rivers and streams, mangroves, less commonly in reedbeds along rivers and in marshes
78	*Ixobrychus minutus*	Little Bittern*	Common	Reedbeds in standing water (Typha and Phragmites)
79	*Ixobrychus sturmii*	Dwarf Bittern*	Common	Seasonal freshwater wetlands (pans, floodplains and pools) with dense overhanging foliage along the margins. Reed marshes and mangroves.
80	*Botaurus stellaris*	Bittern*	Common	Tall, dense emergent vegetation (reed beds and sedge) at large wetlands.
81	*Scopus umbretta*	Hamerkop	Common	Most inland waters, occasional on seashore
83	*Ciconia ciconia*	White Stork*	Common	Open woodland, grassland, grassy Karoo and wetland areas, also agricultural fields and pastures.
84	*Ciconia nigra*	Black Stork	Common	Shallow water (and occasionally dryland) in streams and rivers, marshes, floodplains, coastal estuaries, large and small dams.
85	*Ciconia abdimii*	Abdim's Stork*	Common	Most commonly found in grassland, pastures and cultivated fields.
86	*Ciconia episcopus*	Woollynecked Stork*	Common	Around wetlands, such as rivers, pans, swamp forests, mangrove swamps, estuaries, dams and tidal mudflats. Short grass close to the water.
88	*Ephippiorhynchus senegalensis*	Saddlebilled Stork	Common	Larger inland waters, rivers, dams, floodplains, swamps, usually in open or lightly wooded country
89	*Leptoptilos crumeniferus*	Marabou Stork*	Common	Aquatic and terrestrial habitats, open and semi-arid areas. Associates with humans near fishing villages, refuse dumps, abattoirs. Woodland vegetation.
90	*Mycteria ibis*	Yellowbilled Stork*	Common	Diverse habitat, dams, large marshes, swamps, estuaries, margins of lakes or rivers, seasonal wetlands, small ponds.
91	*Threskiornis aethiopicus*	Sacred Ibis	Common	Grassland habitat associated with freshwater habitats, especially marshes, but also forages in dryland grasslands and in intertidal salt marshes at estuaries. Farm dams, sewerage works and cultivated fields.
93	*Plegadis falcinellus*	Glossy Ibis*	Common	Wetlands in grasslands and floodplains. Prefers freshwater habitat. Favours shallow inland waters.
94	*Bostrychia hagedash*	Hadeda Ibis	Common	Open, moist grasslands and savannas, especially along well vegetated river

				courses, but also marshes, flooded grasslands, edges of large wetlands, irrigated agricultural lands and lawns in gardens.
95	*Platalea alba*	African Spoonbill	Common	Forager in shallow aquatic habitats. Freshwater wetlands, marshes pans, temporary flooded grasslands, floodplains, rivers, sewerage ponds and dams. Less frequent in saltwater habitats including estuaries and coastal lagoons.
97	*Phoeniconaias minor*	Lesser Flamingo*	Lower risk (nt)	Larger brackish or saline inland and coastal waters
99	*Dendrocygna viduata*	Whitefaced Duck	Common	Wide variety of waterbodies, favours large expanses of shallow water. Nests in grassland and woodland.
100	*Dendrocygna bicolor*	Fulvous Duck	Common	Large inland waters floodplains with plentiful aquatic vegetation. Wetlands.
102	*Alopochen aegyptiacus*	Egyptian Goose	Common	Inland water: rivers, pans, dams, lakes, estuaries, sewerage pans, preferably with some exposed shoreline. Often foraging in farmlands.
104	*Anas undulata*	Yellowbilled Duck	Common	Inland waters, especially farm dams, also on estuaries mostly with marginal vegetation, especially reeds. Occurs in mostly freshwater, but may also be found in brackish water, prefers slow flowing streams.
105	*Anas sparsa*	African Black Duck	Common	Associated mainly with rivers, especially with running water, pools and wooded banks. May roost on farm dams at night.
106	*Anas capensis*	Cape Teal	Common	Saltpans, estuaries and coastal lagoons. Inland it favours brackish or saline pans and dams, adapted to sewerage works.
107	*Anas hottentota*	Hottentot Teal	Common	Permanent and semi-permanent quiet inland waters with emergent vegetation. Floodplains, vleis, marshes and sewerage ponds.
108	*Anas erythrorhyncha*	Redbilled Teal	Common	Prefers permanent or temporary eutrophic fresh waters, usually with grassy surrounds for nesting.
112	*Anas smithii*	Cape Shoveller	Common	Shallow lowland plankton filled freshwaters. Shallow pans (especially with salt water) and dams in open grasslands
113	*Netta erythrophthalma*	Southern Pochard	Common	Deeper inland waters, flooded vleis, dams, sewerage ponds, prefers clear water
114	*Nettapus auritus*	Pygmy Goose	Common	Clear still inland waters with surface or emergent vegetation. Open waters and coastal lagoons.
116	*Plectropterus gambensis*	Spurwinged Goose	Common	Any inland waters and prefers larger bodies of water on which to gather for moulting. It forages in croplands and on floating Potamogeton pectinatus.
117	*Oxyura maccoa*	Maccoa Duck	Common	Deep, highly eutrophic inland waters, small dams, lakes, sewerage ponds
118	*Sagittarius serpentarius*	Secretarybird	Common	Semi-desert, grassland, savanna, open woodland, farmland, mountain slopes
122	*Gyps coprotheres*	Cape Vulture	Vulnerable	Mountainous country, open country with inselbergs and escarpments, less commonly in savanna or desert

123	*Gyps africanus*	Whitebacked Vulture	Common	Wide variety of vegetation types, preferring drier woodlands.
124	*Torgos tracheliotus*	Lappetfaced Vulture	Common	Hot, dry woodlands, Mopane and arid mixed woodlands. Usually low altitudes, except the higher lying Kalahari basin.
127	*Elanus caeruleus*	Blackshouldered Kite	Common	In a variety of habitats. Most abundant in grasslands and fynbos, especially where cultivated areas are interspersed with these habitats.
128	*Aviceda cuculoides*	Cuckoo Hawk	Common	
131	*Aquila verreauxii*	Black Eagle	Common	Rocky habitat in hills and mountains, with dense and dependable source of prey (Dassie)
132	*Aquila rapax*	Tawny Eagle	Common	Woodlands, including lightly wooded areas
133	*Aquila nipalensis*	Steppe Eagle*	Common	Woodland and open savanna, including semi-arid savanna
135	*Aquila wahlbergi*	Wahlberg's Eagle*	Common	Most woodland types. Higher rainfall areas. Riverlines and floodplains with riparian vegetation.
136	*Hieraaetus pennatus*	Booted Eagle*	Common	Hilly and open country, breeds on cliffs in ravines and gorges. Wide variety of habitats.
137	*Hieraaetus spilogaster*	African Hawk Eagle	Common	Range of woodland habitats. Favours Mopane habitat. Nests on hill slopes or along water courses in flat terrain
139	*Lophaetus occipitalis*	Longcrested Eagle	Common	Woodland, exotic plantations, forest edge, cultivate land with orchards, woodland, grassland and vleis
140	*Polemaetus bellicosus*	Martial Eagle	Common	Open grassland and scrub and woodland. Typically in flat country
142	*Circaetus cinereus*	Brown Snake Eagle	Common	Prefers moderately arid woodland
143	*Circeatus pectoralis*	Blackbreasted Snake Eagle	Common	Open country mostly in savanna woodlands, dwarf shrublands and semi-desert
146	*Terathopius ecaudatus*	Bateleur	Common	Variety of woodlands from open semi-arid to mesic
148	*Haliaeetus vocifer*	African Fish Eagle	Common	Estuaries, coastal and inland lakes, larger rivers and pans, floodplains and artificial impoundments.
149	*Buteo buteo*	Steppe Buzzard*	Common	Open country, favouring mainly dwarf shrubland, grassland, savanna, open woodland, thornveld and fynbos. It can also be found in dense woodland and forests, including exotic plantations. Croplands, especially wheatlands where food is abundant.
152	*Buteo rufofuscus*	Jackal Buzzard	Common	Mountainous or hilly areas, especially covered by grass and other short vegetation. Nests on cliffs and trees.
154	*Kaupifalco monogrammicus*	Lizard Buzzard	Common	Broadleaved woodland.
156	*Accipiter ovampensis*	Ovambo Sparrowhawk	Common	Mosaic of tall woodland and open areas. Tall alien trees for breeding. Ecotone between woodland and grassland biomes.

157	*Accipiter minullus*	Little Sparrowhawk	Common	Dense vegetation of forest, riparian bush and thickets
158	*Accipiter melanoleucus*	Black Sparrowhawk	Common	Tall, dense vegetation, forest, riparian growth and well developed woodlands.
159	*Accipiter badius*	Little Banded Goshawk	Common	All woodland types.
160	*Accipiter tachiro*	African Goshawk	Common	Areas of dense vegetation, forest, well-developed woodland, riparian growth and thickets
161	*Micronisus gabar*	Gabar Goshawk	Common	Open woodland, especially Acacia woodland
162	*Melierax canorus*	Pale Chanting Goshawk	Common	All arid areas, Kalahari and Karoo vegetation types especially. Drier woodland and grassland types. Open scrub and wooded drainage lines.
163	*Melierax metabates*	Dark Chanting Goshawk	Common	Variety of woodland habitat, but tends to avoid both arid and forested areas. Preference for tall, well-developed woodland.
165	*Circus ranivorus*	African Marsh Harrier	Common	Nests in extensive reedbeds, short sedges areas.
169	*Polyboroides typus*	Gymnogene	Common	Forests, dense woodland, riparian vegetation and well-wooded ravines. Often inhabit cliff faces in mountainous terrain, but also inhabits flat plains.
172	*Falco biarmicus*	Lanner Falcon	Common	Cliff-nester, also trees and electricity pylons. Open habitats
180	*Falco amurensis*	Eastern Redfooted Kestrel*	Common	Open and high rainfall grasslands, also open woodland.
181	*Falco tinnunculus*	Rock Kestrel	Common	Wide variety of habitats. Capable of inhabiting the entire span of mesic to arid conditions. Distribution is strongly influence by mountainous areas for breeding.
182	*Falco rupicoloides*	Greater Kestrel	Common	Open, arid and grassland habitats
183	*Falco naumanni*	Lesser Kestrel*	Vulnerable	Open grassveld, mainly on highveld, usually near towns or farms
188	*Francolinus coqui*	Coqui Francolin	Common	Savanna or well grassed woodlands, or sandy areas with good bush cover.
189	*Francolinus sephaena*	Crested Francolin	Common	Woodland with a dense scrub component. Favours areas with bush encroachment in savannas, and tolerates poor grass cover
196	*Francolinus natalensis*	Natal Francolin	Common	Ranges from savanna with a scrub understorey, especially along watercourses, to thickets and coastal forest. Dry riparian vegetation and wooded hills, and edges of montane forest, edges of agricultural fields adjacent to dense vegetation.
199	*Francolinus swainsonii*	Swainson's Francolin	Common	Tall grass, open country or woodland. Usually close to water (except in the arid west).
200	*Coturnix coturnix*	Common Quail*	Common	Open grassland, lightly wooded savanna, cultivated fields, non breeding birds also occur in the karoo, Kalahari sandveld and semi-desert
203	*Numida meleagris*	Helmeted Guineafowl	Common	Open grassland, vleis, savanna, cultivated lands, edge of karoo scrub, bushveld
205	*Turnix sylvatica*	Kurrichane Buttonquail	Common	Drier grasslands, fallow lands, light savanna or woodland

208	*Anthropoides paradiseus*	Blue Crane	Vulnerable	Midland and highland grassveld, edge of karoo, cultivated lands, edges of vleis
210	*Rallus caerulescens*	African Rail	Common	Reedbeds and dense rank growth in permanent or seasonal swamps and marshes, and besides rivers, streams, pools and lakes.
213	*Amaurornis flavirostris*	Black Crake	Common	Freshwater and estuarine wetland vegetation.
215	*Porzana pusilla*	Baillon's Crake*	Common	Reedbeds, marshes, vleis
223	*Porphyrio porphyrio*	Purple Gallinule	Common	Fresh-brackish, sheltered, still-slow flowing waters fringed or overgrown by reeds, rushes, sedges etc.
226	*Gallinula chloropus*	Moorhen	Common	Wide range of natural and artificial wetlands, with fringing vegetation.
228	*Fulica cristata*	Redknobbed Coot	Common	Predominantly open fresh water of lakes, lagoons, ponds, permanent and temporary pans, dams and vleis, floodplains, reedy swamps and sewerage ponds, sometimes on rivers and tidal lagoons, but prefers still water. Submerged aquatic vegetation for food.
229	*Podica senegalensis*	African Finfoot	Common	Quiet reaches of streams, rivers, pans and lakes, fringed with dense trees and bush dropping into water
230	*Ardeotis kori*	Kori Bustard	Common	Dry savanna, not closed canopy woodland
231	*Neotis denhami*	Stanley's Bustard	Common	Montane and highland grassveld, savanna, karoo scrub
233	*Eupodotis cafra*	Whitebellied Korhaan	Common	Open grassland, sometimes in sparse Acacia thornveld
237	*Eupodotis ruficrista*	Redcrested Korhaan	Common	Bushveld and scrub within woodland biomes
239	*Eupodotis afra*	Black Korhaan	Common	Shrublands of the fynbos and Karoo biomes, grass and tree cover virtually absent.
240	*Actophilornis africanus*	African Jacana	Common	Lagoons, lakes, pans, vleis, river backwaters
241	*Microparra capensis*	Lesser Jacana	Common	Shallow lagoons, vleis, dams, lakes
246	*Charadrius marginatus*	Whitefronted Plover	Common	Along sandy rivers, wetlands, muddy and sandy substrates
248	*Charadrius pecuarius*	Kittlitz's Plover	Common	Natural pans, dried mud and short grass. Adapted to dams and open mowed areas. Salt marshes, saltpans and estuaries
249	*Charadrius tricollaris*	Threebanded Plover	Common	Widest range of aquatic habitats may be seen at any freshwater habitat with an open shoreline. Artificial waterbodies, e.g. farm dams.
254	*Pluvialis squatarola*	Grey Plover*	Common	Tidal flats on coast and estuaries, open sandy beaches, rocky shores, less commonly on larger shallow inland waters
255	*Vanellus coronatus*	Crowned Plover	Common	Dry, short and overgrazed or burnt grassland, as well as sports fields, golf courses and airports. Breeding sites in open habitats, with a commanding view in all directions.
258	*Vanellus armatus*	Blacksmith Plover	Common	Moist short grassland and mudflats on the edges of dams, pans, lakes, rivers and estuaries. Natural and irrigated grasslands, sports fields, golfcourses,

				airports.
260	*Vanellus senegallus*	Wattled Plover	Common	Wet short grassland and marshes, near to vleis, stream and river floodplains.
264	*Actitis hypoleucos*	Common Sandpiper*	Common	Open wet edges, streams, rivers, marshes, dams, sewerage works, vleis, lagoons, estuaries
266	*Tringa glareola*	Wood Sandpiper*	Common	Marshy shorelines of pans, vleis, dams, stream, floodplains.
269	*Tringa stagnatilis*	Marsh Sandpiper*	Common	Wide variety of freshwater wetlands, also slat works, lagoons and tidal estuaries.
270	*Tringa nebularia*	Greenshank*	Common	Wide variety of aquatic habitat. Coastal sites and inland wetlands.
272	*Calidris ferruginea*	Curlew Sandpiper*	Common	Wetlands along the coast and in highveld pans
274	*Calidris minuta*	Little Stint*	Common	Muddy edges of wetlands
284	*Philomachus pugnax*	Ruff(m), Reeve(f)*	Common	Shallow water, muddy margins and short emergent vegetation
286	*Gallinago nigripennis*	Ethiopian Snipe	Common	Temporary and permanent wetlands with short emergent vegetation, grass or reeds and exposed soft mud
294	*Recurvirostra avosetta*	Avocet*	Common	Saline waters
295	*Himantopus himantopus*	Blackwinged Stilt	Common	Extensive open shallow waters
297	*Burhinus capensis*	Spotted Dikkop	Common	Open grassland and savanna, edges of woodland, semi-desert with scrub, stoney slopes of low hills. Cultivated and overgrazed land, large lawns and playing fields. Marine beaches.
298	*Burhinus vermiculatus*	Water Dikkop	Common	Rivers, dams, lakes, pans, estuaries, mangrove swamps, beaches
300	*Cursorius temminckii*	Temminck's Courser	Common	Bare or recently burnt grass in open woodland or at the edges of vleis, grassy plains, bare or overgrazed veld, fallow land and airfields.
303	*Rhinoptilus chalcopterus*	Bronzewinged Courser*	Common	Frequent in Mopane woodland. Open woodland. Feed on dirt roads at night.
315	*Larus cirrocephalus*	Greyheaded Gull	Common	Shallow open water
339	*Childonias leucopterus*	Whitewinged Tern*	Common	Inland and coastal wetlands
343	*Rynchops flavirostris*	African Skimmer	Lower Risk (nt)	Lowveld rivers on bare, open sandbanks. May have been displaced to highveld dams.
345	*Pterocles burchelli*	Burchell's Sandgrouse	Common	Arid sweet bushveld, dry savanna
346	*Pterocles gutturalis*	Yellowthroated Sandgrouse	Common	Short-grass plains, usually not far from water, also recently burnt ground, cultivated fields, especially on black clay soils.
347	*Pterocles bicinctus*	Doublebanded Sandgrouse	Common	Acacia and other savanna, dry bushveld, mopane woodland, stony and eroded areas, rocky desert hills with scrub and tussocky hills
348	*Columba livia*	Feral Pigeon	Common	Central urban and industrial areas
349	*Columba guinea*	Rock Pigeon	Common	Formerly mainly an inhabitant of cliffs and crags. Now inhabits artificial structures and exotic trees for nesting and roosting.

352	*Streptopelia semitorquata*	Redeyed Dove	Common	Tall trees in the vicinity of water. Suburban parks and gardens. Riparian woodland, forest verges and other well wooded country including alien tree plantations.
354	*Streptopelia capicola*	Cape Turtle Dove	Common	Inhabits all areas, avoiding forest.
355	*Streptopelia senegalensis*	Laughing Dove	Common	Open savanna and Acacia thornveld. Cultivated fields.
356	*Oena capensis*	Namaqua Dove	Common	Dry bushveld, Acacia thornveld, arid scrub, semidesert, riverine bush in desert, rural gardens, farmyards, fallow lands
358	*Turtur chalcospilos*	Greenspotted Dove	Common	Most woodland, Acacia scrub, gardens, not forest (except dry sand forest in Thongaland) or arid savanna
361	*Treron calva*	Green Pigeon	Common	Woodland, especially riverine fig forest, also edges of evergreen forest
364	*Poicephalus meyeri*	Meyer's Parrot	Common	Savanna woodland, riverine forest, secondary growth around cultivation, dry Acacia scrub with taller trees (especially Baobabs), usually near water
373	*Corythaixoides concolor*	Grey Lourie	Common	Bushveld, savanna, riverine woodland in arid country
375	*Cuculus gularis*	African Cuckoo*	Common	Variety of woodlands.
377	*Cuculus solitarius*	Redchested Cuckoo*	Common	Range of forest and well-wooded habitat. Trees around habitation in drier areas
378	*Cuculus clamosus*	Black Cuckoo*	Common	Plantations, human habitation, bushveld, woodland and thornveld
380	*Clamator glandarius*	Great Spotted Cuckoo*	Common	Woodland and savanna
382	*Clamator jacobinus*	Jacobin Cuckoo*	Common	Dry open savannas
385	*Chrysococcyx klaas*	Klaas's Cuckoo*	Common	Edges of riverine forest, thickets, dense woodland and savanna, wooded rocky hills
386	*Chrysococcyx caprius*	Diederik Cuckoo*	Common	Woodland, savanna, riverine bush, gardens, parks, farmlands, exotic plantations, semi-arid scrub
391	*Centropus burchellii*	Burchell's Coucal	Common	Riverine and coastal bush, rank growth around streams and marshes, reedbeds, gardens, parks
392	*Tyto alba*	Barn Owl	Common	Varied, but always near suitable nesting cavity in cliff, building, deep well, mine shaft, Sociable Weaver or Hammerkop nest, hole in tree, base of palm frond; from woodland to desert, but not forest
393	*Tyto capensis*	Grass Owl	Common	Long grass, usually near water, vleis or marshes
395	*Asio capensis*	Marsh Owl	Common	Grassland, vleis, edges of marshes
396	*Otus senegalensis*	African Scops Owl	Common	Range of woodland types, where trees are relatively tall and scattered. Forests are avoided. Nests in cavities in trees.
397	*Otus leucotis*	Whitefaced Owl	Common	Range of woodland vegetation types. Moist and open habitats are avoided.
398	*Glaucidium perlatum*	Pearlspotted Owl	Common	Bushveld, woodland, Acacia savanna

401	*Bubo africanus*	Spotted Eagle Owl	Common	Man made habitats roosting and nesting in gardens, quarries and buildings.. Great variety of nest sites; scrapes on the ground, cavities and stick nests in trees, and cavities and ledges on cliffs and buildings
402	*Bubo lacteus*	Giant Eagle Owl	Common	Roosts and nests in large trees, in open savanna woodlands or riparian woodlands adjacent to floodplains.
404	*Caprimulgus europaeus*	European Nightjar*	Common	Woodland, savanna, tree lined watercourses, plantations, gardens
405	*Caprimulgus pectoralis*	Fierynecked Nightjar	Common	Dense woodland, plantations, gardens, thornveld, bushveld
406	*Caprimulgus rufigena*	Rufouscheeked Nightjar	Common	Open woodland, savanna, exotic plantations, semi-arid scrub, shrubby semidesert
408	*Caprimulgus trstigma*	Freckled Nightjar	Common	Wooded and bushy rocky hills, koppies, outcrops, escarpments
409	*Caprimulgus fossii*	Mozambique Nightjar	Common	Scrub with open sandy ground in savanna, riverine bush, coastal dunes
411	*Apus apus*	European Swift*	Common	Open often semi-arid country. Sleeps on the wing
412	*Apus barbatus*	Black Swift	Common	Montane areas. Breeds in dry horizontal cracks under overhangs of cliffs or in caves. Forages over open country.
415	*Apus caffer*	Whiterumped Swift*	Common	Forager on aerial invertebrates and can be found anywhere. More common in the more humid areas.
417	*Apus affinis*	Little Swift	Common	Forager on aerial invertebrates and can be found anywhere. Prefers the more open grasslands and Karoo. Nest in dry overhangs, cliff faces and human constructions (bridges, silos).
418	*Apus melba*	Alpine Swift	Common	Alpine grasslands and Fynbos. Breeds in dry vertical cracks in overhanging cliffs, sometimes horizontal ones. Tall buildings and grain silos.
421	*Cypsiurus parvus*	Palm Swift	Common	Palm trees, both indigenous and exotic, mostly at lower elevations, gardens and parks
424	*Colius striatus*	Speckled Mousebird	Common	Bushveld, tangled thickets, edges of dense vegetation, gardens, orchards
425	*Colius colius*	Whitebacked Mousebird	Common	Arid to semi-arid scrub, riverine bush, farmyards, gardens, orchards
426	*Urocolius indicus*	Redfaced Mousebird	Common	Savanna with thickets, riverine bush, gardens, orchards
427	*Apaloderma narina*	Narina Trogon	Common	Evergreen, lowland or montane forest. Riverine forests in savanna, closed woodlands, and forest-woodland mosaics.
428	*Ceryle rudis*	Pied Kingfisher	Common	Closely associated with aquatic environments, entirely dependent on the availability of fish. Large rivers and perennial streams, estuaries, man-made canals, lakes and reservoirs, intertidal zone of the coast.
429	*Megaceryle maxima*	Giant Kingfisher	Common	Large rivers and their major tributaries, particularly with well wooded steep banks, may also be found in small streams. Estuaries and the intertidal zone. Lakes and reservoirs.
431	*Alcedo cristata*	Malachite Kingfisher	Common	River and stream banks, sluggish water and overhung with trees and

				riverine grass and weedy vegetation
432	*Ispidina picta*	Pygmy Kingfisher*	Common	Edges and clearing in dense woodland, coastal bush and forest, also riverine forest, edges of cultivated land in forests, dry savanna in old Transvaal
433	*Halcyon senegalensis*	Woodland Kingfisher*	Common	Well-developed woodland, especially where the grass understorey is well grazed.
435	*Halcyon albiventris*	Brownhooded Kingfisher	Common	Edges of evergreen forest and plantations. Woodland and riverine woodland. Degraded areas with sparse tree cover.
436	*Halcyon leucocephala*	Greyhooded Kingfisher*	Common	Well developed woodland, Acacia, Mesic woodland
437	*Halcyon chelicuti*	Striped Kingfisher	Common	Open woodland in mesic and arid conditions
438	*Merops apiaster*	European Bee-eater*	Common	Woodland and shrubby habitats, avoids mesic and arid areas
441	*Merops nubicoides*	Carmine Bee-eater*	Common	Frequents open woodland and savannas, floodplains and Acacia steppe. For nesting it favours high, fresh-cut sand cliffs, preferably free of vegetation, large meandering rivers. Open grassy places in a variety of woodland types. Sandy flats for breeding
443	*Merops bullockoides*	Whitefronted Bee-eater	Common	Watercourses in woodland and wooded grassland
444	*Merops pusillus*	Little Bee-eater	Common	Semi-arid to high rainfall areas. Low and high altitudes. Open spaces (foraging) with low bushes or reeds (perching), low sandbanks or Aardvark burrows (nesting).
445	*Merops hirundineus*	Swallowtailed Bee-eater	Common	Well-developed woodland. Variety of woodland types.
446	*Coracias garrulus*	European Roller*	Common	Woodland, bushveld and grassland habitats. Avoids open arid region in the west
447	*Coracias caudata*	Lilacbreasted Roller	Common	Prefers the ecotone between light-woodland and open grassy areas. Tends to avoid rocky areas
449	*Coracias naevia*	Purple Roller	Common	Low preference for woodland-grassland ecotone, prefers more uniform bushveld and woodland. Absent in high altitudes and in forests.
451	*Upupa epops*	Hoopoe	Common	Savanna, open woodland, gardens, parks, Kalahari thornveld, riverine woodland in arid areas
452	*Phoeniculus purpureus*	Redbilled Woodhoopoe	Common	Most woodland types, excluding the montane forests of the east.
454	*Rhinopomastus cyanomelas*	Scimitarbilled Woodhoopoe	Common	Found in tropical and sub-tropical arid woodland. Not in woodlands with a completely closed canopy.
457	*Tockus nasutus*	Grey Hornbill	Common	Tall woodland in dry to humid savannas
458	*Tockus erythrorhynchus*	Redbilled Hornbill	Common	Woodland with sparse ground cover.
459	*Tockus leucomelas*	Southern Yellowbilled Hornbill	Common	Dry, open savanna woodlands
464	*Lybius torquatus*	Blackcollared Barbet	Common	Moist woodland areas and riverine vegetation in drier savannas and grassland. Human habitations

465	*Tricholaema leucomelas*	Pied Barbet	Common	Varied ecological conditions. Arid savannas with soft-wooded trees. Wooded drainage lines in grasslands and other open habitats.
470	*Pogoniulus chrysoconus*	Yellowfronted Tinker Barbet	Common	Broadleaved woodlands
473	*Trachyphonus vaillantii*	Crested Barbet	Common	Savanna, woodland and thickets, particularly in the broad-leaved woodlands.
474	*Indicator indicator*	Greater Honeyguide	Common	Range of woodland types outside of dense forest.
476	*Indicator minor*	Lesser Honeyguide	Common	Wide range of wooded habitats, from savannas with scattered tree to forest fringes, riverine woodland.
481	*Campethera bennettii*	Bennett's Woodpecker	Common	Mature woodland and parkland dominated by broadleaved trees and Acacia, and woodlands underlain by sandy soils.
483	*Campethera abingoni*	Goldentailed Woodpecker	Common	Wide spectrum of woodland and savanna habitats
486	*Dendropicos fuscescens*	Cardinal Woodpecker	Common	Woodland and savanna habitats.
487	*Thripias namaquus*	Bearded Woodpecker	Common	More arid savanna types. Restricted to savanna and woodland, found in areas with tall tree and park-like settings. Avoids plantations.
489	*Jynx ruficollis*	Redthroated Wryneck	Common	Thornveld, open bushveld, exotic plantations, gardens, farmyards
493	*Mirafra passerina*	Monotonous Lark	Common	Wide variety of fairly dry and open woodlands with bare and stony patches. After rain also occurs in arid open woodland with fairly dense grass cover.
494	*Mirafra africana*	Rufousnaped Lark	Common	Variety of habitats with bare patches, sparse grass cover and perches
495	*Mirafra apiata*	Clapper Lark	Common	Grassland with scattered boulders and bushes
496	*Mirafra rufocinnamomea*	Flappet Lark	Common	Woodland with clearing or drainage lines
497	*Mirafra africanoides*	Fawncoloured Lark	Common	Open savanna, woodlands and shrublands. Forages on bare patches or patches with sparse grass cover.
498	*Mirafra sabota*	Sabota Lark	Common	Wide range of savanna habitats
507	*Calandrella cinerea*	Redcapped Lark	Common	Short grasslands that have been heavily grazed or burned, ploughed lands and fallow fields
508	*Spizocorys conirostris*	Pinkbilled Lark	Common	Open grassland in semi arid and high rainfall regions
515	*Eremopterix leucotis*	Chestnutbacked Finchlark	Common	Open savanna woodlands with bare areas
516	*Eremopterix verticalis*	Greybacked Finchlark	Common	Arid gravelly or stony ground with sparse shrubs and grass, open short grass plains, bare pans, burnt areas, fallow lands
518	*Hirundo rustica*	European Swallow*	Common	Almost every habitat, more common in higher rainfall
520	*Hirundo albigularis*	Whitethroated Swallow*	Common	Vicinity of wetlands, especially rivers and other expanses of open water. More common in open habitat
523	*Hirundo dimidiata*	Pearlbreasted Swallow*	Common	Clearings and woodland edges. Broad-leaved woodlands, wetland sites and open areas.

524	*Hirundo semirufa*	Redbreasted Swallow*	Common	Open savanna and sweet grassveld
526	*Hirundo cucullata*	Greater Striped Swallow*	Common	Wide variety of fairly open habitats
527	*Hirundo abyssinica*	Lesser Striped Swallow*	Common	Woodland and savanna habitats. Also in cultivated and sub urban areas
528	*Hirundo spilodera*	South African Cliff Swallow*	Common	Dry grassland and lightly wooded savanna
529	*Hirundo fuligula*	Rock Martin	Common	Vegetation with frequent rock formations as well as urban and farming areas.
530	*Delichon urbica*	House Martin*	Common	Wide variety of habitats, common in hilly open country
531	*Pseudhirundo griseopyga*	Greyrumped Swallow	Common	Open areas- burnt and cleared areas, floodplains
533	*Riparia paludicola*	Brownthroated Martin	Common	Associated with water near streams, large rivers, dams, estuaries and sewerage works
538	*Campephaga flava*	Black Cuckooshrike*	Common	Canopy of moist woodlands, becoming sparser in drier regions, but occurring in both broadleaves and Acacia woodland
541	*Dicrurus adsimilis*	Forktailed Drongo	Common	Wide range of vegetation types, edges of forest, alien trees.
545	*Oriolus larvatus*	Blackheaded Oriole	Common	Moist woodland preferably evergreen or lightly deciduous.
547	*Corvus capensis*	Black Crow	Common	Open habitat with scattered patches of trees or wooded watercourses
548	*Corvus albus*	Pied Crow	Common	Wide variety of biomes
550	*Corvus albicollis*	Whitenecked Raven	Common	Cliff nesters restricted to hilly and mountainous areas.
552	*Parus cinerascens*	Ashy Tit	Common	Acacia trees and thickets. Wide range of woodland and grassland habitats
554	*Parus niger*	Southern Black Tit	Common	Broad-leaved woodlands. Scarcer in more arid savanna vegetation types.
557	*Anthoscopus minutus*	Cape Penduline Tit	Common	Arid and semi-arid habitat
558	*Anthoscopus caroli*	Grey Penduline Tit	Common	Well-developed broad-leaved woodland.
560	*Turdoides jardeneii*	Arrowmarked Babbler	Common	Thickets or strips of denser vegetation along seasonal drainage lines in drier habitats. Found in a variety of woodland types.
563	*Turdoides bicolor*	Pied Babbler	Common	Thornbush, avoid mesic woodlands
567	*Pycnonotus nigricans*	Redeyed Bulbul	Common	Dry woodland, arid savanna, thickets, scrub, riverine bush, gardens and farmyards. Near water in the dry season
568	*Pycnonotus barbatus*	Blackeyed Bulbul	Common	Moister woodland and savanna, riverine bush, forest edge, dense montane scrub, plantations, gardens, orchards, scrubby vegetation
569	*Phyllastrephus terrestris*	Terrestrial Bulbul	Common	Evergreen forest, dense riparian and thickets
574	*Chlorocichla flaviventris*	Yellowbellied Bulbul	Common	lowland forest, termitaria, thickets, riverine
576	*Turdus libonyana*	Kurrichane Thrush	Common	Woodland and thickets, avoids forest, grassland and savanna. Adapted to plantations and human habitation
577	*Turdus olivaceus*	Olive Thrush	Common	Riverine bush and montane forest. Adapted to human habitations (gardens)
580	*Turdus litsitsirupa*	Groundscraper Thrush	Common	Open "parkland" woodlands, prefers underdeveloped understorey, patches

				of bare ground
581	*Monticola rupesris*	Cape Rock Thrush	Common	Rocky mountainous habitats in high rainfall regions, also in gorges, incised river valleys, foothills and in lowlands adjacent to mountains.
583	*Monticola brevipes*	Shorttoed Rock Thrush	Common	Broken ground with trees or tall scrub in areas of relatively low rainfall
586	*Oenanthe monticola*	Mountain Chat	Common	Rocky habitats in mountains, hills, quarries, scarps, boulder-strewn level ground.
587	*Oenanthe pileata*	Capped Wheatear	Common	Open areas with bare ground, including those resulting from trampling, burning or overgrazing.
588	*Oenanthe bifasciata*	Buffstreaked Chat	Common	Rocky slopes of hills, ridges, escarpments and mountain foothills, with rolling grassland and low scattered bushes
589	*Cercomela familiaris*	Familiar Chat	Common	Broken ground and rocky habitat, open vegetation types, close to water
593	*Thamnolaea cinnamomeiventris*	Mocking Chat	Common	Rocky outcrops in wooded country, relatively open, well-faulted rock faces with scattered trees and shrubs
595	*Myrmecocichla formicivora*	Anteating Chat	Common	Open habitats with some grass and scrub
596	*Saxicola torquata*	Stonechat	Common	Usually high altitude grasslands, moist open country with rank growth of grass and herbs and scattered shrubs.
601	*Cossypha caffra*	Cape Robin	Common	Coastal fynbos, farmstead woodlots, Leucosidea scrub in alpine grassland, bracken-briar fringe of Afromontane forest. Cover loving species.
602	*Cossypha humeralis*	Whitethroated Robin	Common	Thickets lining dry water courses in the bushveld and thornveld. Also open woodland and the fringes of sand forest
613	*Erythropygia leucophrys*	Whitebrowed Robin	Common	Woodland and bushveld habitats in dense undergrowth
615	*Erythropygia paena*	Kalahari Robin	Common	Bare or almost bare ground in Kalahari sandveld
619	*Sylvia borin*	Garden Warbler*	Common	Lush woodlands, rare in dry areas where it is limited to riverine vegetation or human habitation
621	*Parisoma subcaeruleum*	Titbabbler	Common	Scrub and thickets
625	*Hippolais icterina*	Icterine Warbler*	Common	Tall stands of tree in dry woodlands. In drier more shrubby areas it is restricted to taller riverine vegetation
628	*Acrocephalus arundinaceus*	Great Reed Warbler*	Common	In drier areas restricted to taller swamp vegetation. In the more mesic areas found in lush thickets and tall grassy vegetation away from water.
631	*Acrocephalus baeticatus*	African Marsh Warbler*	Common	Reedbeds and other dense vegetation associated with wetlands. Also in dense, lush scrub or tall grass away from water
633	*Acrocephalus palustris*	European Marsh Warbler*	Common	Dense lush thickets, particularly with rank herbaceous undergrowth, usually away from water.
635	*Acrocephalus gracilirostris*	Cape Reed Warbler	Common	Reedbeds and bulrushes in lagoons of standing water, estuaries, rivers, dams, pans, marshes, vleis etc.

638	*Bradypterus baboecala*	African Sedge Warbler	Common	Reedbeds and swamp vegetation
643	*Phylloscopus trochilus*	Willow Warbler*	Common	Any habitat with bushes or trees
645	*Apalis thoracica*	Barthroated Apalis	Common	Any wooded habitats.
651	*Sylvietta rufescens*	Longbilled Crombec	Common	Preference for woodland and scrubland habitat
653	*Eremomela icteropygialis*	Yellowbellied Eremomela	Common	Wide range of habitats from woodland to low scrub
656	*Eremomela usticollis*	Burntnecked Eremomela	Common	Wide range of woodland, especially Acacia woodland, particularly along drainage lines
657	*Camaroptera brachyura*	Bleating Warbler	Common	Evergreen forest, stands of alien trees and other patches of suitable habitats
658	*Calamonastes fasciolatus*	Barred Warbler	Common	Kalahari basin thornveld endemic, restricted to Acacia bushveld. Predominantly broadleaved vegetation.
661	*Sphnoeacus afer*	Grassbird	Common	Rank vegetation with long grasses, restions or ferns, in tangled scrub, low sparse shrublands and in hilly grasslands with scattered bushes. Avoids high dense weedy areas.
664	*Cisticola juncidis*	Fantailed Cisticola	Common	Natural tall grasslands and weedy areas. Edges of waterbodies, and also man made habitats (agricultural fields)
665	*Cisticola aridula*	Desert Cisticola	Common	Mainly in open, dry, short grasslands and savanna with a low basal cover
666	*Cisticola textrix*	Cloud Cisticola	Common	Short grasslands with relatively low basal cover. Open grassland and avoids invasion by scrub and trees.
667	*Cisticola ayresii*	Ayres' Cisticola	Common	Short, moist and relatively dense grasslands in well drained soils
671	*Cisticola rufilata*	Tinkling Cisticola	Common	Scrub in open woodland, arid deciduous woodland on sandy soils. Broad-leaved deciduous savanna or scrub with open areas of rank grass between scattered low trees.
672	*Cisticola chiniana*	Rattling Cisticola	Common	Tree savanna, grassland interspersed with trees and thickets or scrub. Fringes of dense woodland and in coastal scrub patches.
674	*Cisticola erythrops*	Redfaced Cisticola	Common	Rank growth and reeds along the edges of streams, rivers and marshes, or in weeds and long tangled vegetation on damp ground.
677	*Cisticola tinniens*	Levaillant's Cisticola	Common	Rank grass and weeds, sedges and edges of reedbeds on marshy grounds, or emergent vegetation in water
679	*Cisticola aberrans*	Lazy Cisticola	Common	Rocky slopes with grass, dense scrub and occasional trees and thickets, sometimes also along valley bottoms and in gullies
681	*Cisticola fulvicapilla*	Neddicky	Common	Dune scrub, scrub, rank grass on hill slopes and on the edges of woodlands and plantations, in secondary growth and in thornveld
683	*Prinia subflava*	Tawnyflanked Prinia	Common	Higher rainfall areas and taller dense patches of vegetation. Rank grass on the edges of roads or farmlands, drainage lines, the edges of dams and rivers and scrubby patches within woodland savanna, thickets, reeds and sedges of

				wetlands.
685	*Prinia flavicans*	Blackchested Prinia	Common	Scrub, rank grass, low bushes and secondary growth in open woodland and grassland. A wide array of low rainfall vegetation types
689	*Muscicapa striata*	Spotted Flycatcher*	Common	Open woodland or habitat with tree with bare branches
691	*Muscicapa caerulescens*	Bluegrey Flycatcher*	Common	Woodland habitats, coastal forests, riverine strips, dense thickets, seldom uses alien vegetation
694	*Melaenornis pammelaina*	Black Flycatcher	Common	Woodlands near surface water mostly
695	*Melaenornis mariquensis*	Marico Flycatcher	Common	Acacia bushveld and woodland
698	*Sigelus silens*	Fiscal Flycatcher	Common	Fairly open vegetation, with trees or intermittent scrub on which to perch. Watercourses are used on drier areas.
700	*Batis capensis*	Cape Batis	Common	Valley bushveld and dense thornveld. Particularly a bird of evergreen forest, with undergrowth tangles also uses the canopy. Can survive in small forest fragments.
701	*Batis molitor*	Chinspot Batis	Common	All major woodland types
706	*Stenostira scita*	Fairy Flycatcher	Common	A woody component is essential nearly all foraging occurs amongst woody plants. Intermittent scrub, riverine Acacia. Dense thorny tree or bush for nesting.
710	*Terpsiphone viridis*	Paradise Flycatcher*	Common	Woodland habitat, evergreen forests and broadleaved woodlands are preferred
711	*Motacilla aguimp*	African Pied Wagtail	Common	Margins, rocky patches and sandbanks of large rivers, pans, dams, estuaries and sewerage works.
712	*Motacilla clara*	Longtailed Wagtail	Common	Fast-flowing, well-wooded streams and rivers, large forested rivers, sometimes small quiet tributaries or streams in forests with pools and waterfalls,
713	*Motacilla capensis*	Cape Wagtail	Common	Adapted to urban and suburban habitats
716	*Anthus cinamomeus*	Grassveld Pipit	Common	Most grasslands, including open stretches round pans and in lightly wooded savanna, dry floodplains, avoids dense rank undergrowth
717	*Anthus similis*	Longbilled Pipit	Common	Slopes in relatively arid and eroded broken veld
718	*Anthus leucophrys*	Plainbacked Pipit	Common	Relatively mesic grasslands, edges of well-wooded country
720	*Anthus lineiventris*	Striped Pipit	Common	Broadleaved woodland on rocky outcrops and in gorges and along streams
723	*Anthus caffer*	Bushveld Pipit	Common	Bushveld savanna with some bare ground and some tree cover
727	*Macronyx capensis*	Orangethroated Longclaw	Common	Variety of grassveld types at fairly high elevations.
731	*Lanius minor*	Lesser Grey Shrike*	Common	Acacia thornveld, prefers arid open habitat
732	*Lanius collaris*	Fiscal Shrike	Common	Open spaces, exposed perches and short or sparse ground cover with trees

733	*Lanius collurio*	Redbacked Shrike*	Common	Medium dense thornveld
735	*Corvinella melanoleuca*	Longtailed Shrike	Common	Savanna and broadleaved woodland in the lowveld. Open savanna with short grass. Generally not adapted to man-made environments.
736	*Laniarius ferrugineus*	Southern Boubou	Common	Dense, tangled undergrowth and in thickets along watercourses and in a wide range of woodland types, also in gardens
737	*Laniarius aethiopicus*	Tropical Boubou	Common	Dense thickets in woodland
739	*Laniarius artococcineus*	Crimsonbreasted Shrike	Common	Acacia bushveld and woodland
740	*Dryoscopus cubla*	Puffback	Common	All types of indigenous woodland and forest, common in dense woodland
741	*Nilaus afer*	Brubru	Common	Wide variety of savanna woodland
743	*Tchagra australis*	Threestreaked Tchagra	Common	Woodland and scrub where it is limited to the undergrowth
744	*Tchagra senegala*	Blackcrowned Tchagra	Common	Wide range of scrub and woodland habitats and exotic timber plantations, only where there is dense undergrowth
748	*Telophorus sulfureopectus*	Orangebreasted Bush Shrike	Common	All types of woodland with a preference for mixed riparian woodlands
751	*Malaconotus blanchoti*	Greyheaded Bush Shrike	Common	Medium density woodland, less common in savanna and dense woodland
753	*Prionops plumatus*	White Helmetshrike	Common	Deciduous broadleaved woodland and a wider range of habitats in non-breeding season
756	*Eurocephalus anguitimens*	Whitecrowned Shrike	Common	Arid woodland. Trees for perching and nesting, forages in open areas with short ground cover. Not adapted to man-made environments.
761	*Cinnyricinclus leucogaster*	Plumcoloured Starling*	Common	Open woodlands
762	*Lamprotornis australis*	Burchell's Starling	Common	Savanna woodland, large trees and stretches of uncovered ground
764	*Lamprotornis nitens*	Glossy Starling	Common	Woodland species, but found in most vegetation types. Also plantations, and urban areas
765	*Lamprotornis chalybaeus*	Greater Blue-eared Starling	Common	deciduous broadleave or riverine woodland
769	*Onychognathus morio*	Redwinged Starling	Common	Cliffs and rocky areas, adapted to human habitat well
772	*Buphagus erythrorhynchus*	Redbilled Oxpecker	Common	Variety of woodlands, >400mm rainfall. Holes in trees for nesting. Needs wild or domestic ungulates as hosts.
774	*Promerops gurneyi*	Gurney's Sugarbird	Common	Montane scrub with Protea and Aloe, also gardens and Protea nurseries
775	*Nectarinia famosa*	Malachite Sunbird	Common	Fynbos, grassland, Karoo and open savanna. Often associated with scrubby hillsides and forest edge. Dependent on food plants (nectarivorous).
779	*Nectarinia mariquensis*	Marico Sunbird	Common	Acacia thornveld specialist
785	*Nectarinia afra*	Greater Doublecollared Sunbird	Common	Moist habitats with trees or tall scrub, does not frequent the interior of forests, preferring the edges and canopy. Coastal, montane and riverine scrub as well as Protea savanna, parks and gardens.
787	*Nectarinia talatala*	Whitebellied Sunbird	Common	Wide range of woodland and bush types

792	*Nectarinia amethystina*	Black Sunbird	Common	Predominantly broadleaved vegetation types, also gardens and plantations
796	*Zosterops pallidus*	Cape White-eye	Common	Catholic choice of habitat from scrub, through thicket to forest. Arid regions it associates with drainage lines
798	*Bubalornis niger*	Redbilled Buffalo Weaver	Common	Drier savannas preferred, especially Mopane. Heavily grazed woodland with sparse ground cover. Prefers large trees for nesting.
799	*Plocepasser mahali*	Whitebrowed Sparrowweaver	Common	Variety of vegetation types. Dry woodland and savanna areas preferred
801	*Passer domesticus*	House Sparrow	Common	Human dwellings
803	*Passer melanurus*	Cape Sparrow	Common	Relatively arid Karoo and grassland biomes. Prefers woody vegetation along drainage lines. Farms and urban areas
804	*Passer diffusus*	Greyheaded Sparrow	Common	Woodland habitat and in the grassland biome
805	*Petronia superciliaris*	Yellowthroated Sparrow	Common	Broadleaved woodland and savanna.
806	*Sporopipes squamifrons*	Scalyfeathered Finch	Common	Low, open thornbush, interspersed with grassy patches
810	*Ploceus ocularis*	Spectacled Weaver	Common	Tall woodland and other tall vegetation. Edge of forest and in riverine woodland and thickets
811	*Ploceus cucullatus*	Spottedbacked Weaver	Common	Near water in different woodland types along river valleys
813	*Ploceus capensis*	Cape Weaver	Common	Winter rainfall region and Fynbos biome. Prefers agricultural lands. In the Karoo and central interior frequents the cooler, wetter highlands. Nests in reeds or bulrushes along rivers and dams or in trees.
814	*Ploceus velatus*	Masked Weaver	Common	Open country most commonly inhabited, nest along watercourses in vegetation
815	*Ploceus intermedius*	Lesser Masked Weaver	Common	Open woodland and thornveld close to water
819	*Anaplectes rubriceps*	Redheaded Weaver	Common	Broadleaved vegetation in hot, moist areas
820	*Anomalospiza imberbis*	Cuckoo Finch	Common	Open grassland, open heavily vegetated vleis, and lightly wooded savanna.
821	*Quelea quelea*	Redbilled Quelea	Common	Most vegetation types (except the Fynbos). Woodland and grassland preferred
824	*Euplectes orix*	Red Bishop	Common	Grasslands near to water. Also areas cleared for cultivation
826	*Euplectes afer*	Golden Bishop	Common	Grassland, nest in tall grass in water
829	*Euplectes albonotatus*	Whitewinged Widow	Common	Woodland and grassland preferred, also the rank growth on the edges of grassy areas near water
831	*Euplectes ardens*	Redcollared Widow	Common	Mosaic of grass and bush
832	*Euplectes progne*	Longtailed Widow	Common	Open grassland habitat.
834	*Pytilia melba*	Melba Finch	Common	Acacia savanna, open grassland close to cover and mixed thorn and broadleaved savanna with thickets
840	*Lagonosticta rubricata*	Bluebilled Firefinch	Common	Moist wooded habitats

841	*Lagonosticta rhodopareia*	Jameson's Firefinch	Common	Open grassy areas with thickets in broadleaved woodlands
842	*Lagonosticta senegala*	Redbilled Firefinch	Common	Woodland. Savanna, riverine and thicket vegetation, particularly near water
844	*Uraeginthus angolensis*	Blue Waxbill	Common	Near surface water, virtually any non-forested habitat in the savanna areas
845	*Uraeginthus granatinus*	Violeteared Waxbill	Common	Shrubland in open Kalahari and Acacia woodland, also in open broadleaved woodland with thickets, particularly on deep Kalahari sands
846	*Estrilda astrild*	Common Waxbill	Common	Rank grasslands, reedbeds, croplands, coastal estuaries, inland wetlands and dams, gardens, sewerage works
847	*Estrilda erythronotos*	Blackcheeked Waxbill	Common	Thornbelt region near water
850	*Estrilda melanotis*	Swee Waxbill	Common	Habitat edges and transitional habitat. Edges of Afromontane or coastal forest, thick riverine scrub, grassy clearings in moist woodland and gardens.
852	*Ortygospiza atricollis*	Quail Finch	Common	Open areas of short grassland, floodplains, vleis and surrounding sedges. In drier areas grassland near to water is preferred
854	*Sporaeginthus subflavus*	Orangebreasted Waxbill	Common	Moist grasslands, grassy savanna, marshes, cultivated and fallow land
855	*Amadina fasciata*	Cutthroat Finch	Common	Drier broadleaved woodland and savanna types
856	*Amadina erythrocephala*	Redheaded Finch	Common	Dry open grassland areas with scattered trees or bushes
857	*Spermestes cucullatus*	Bronze Mannikin	Common	Edge habitat and dependent on water
860	*Vidua macroura*	Pintailed Whydah	Common	Wide range of open mesic habitats. Urban and cultivated areas
861	*Vidua regia*	Shafttailed Whydah	Common	Dry, grassy thorn and broadleaved savanna, scrub and woodland
862	*Vidua paradisaea*	Paradise Whydah	Common	Variety of semi-arid woodlands and savanna, principally thorn savanna
864	*Vidua funerea*	Black Widowfinch	Common	Edge habitats, prefers moist areas with forest-grassland ecotones
865	*Vidua purpurascens*	Purple Widowfinch	Common	Savannas and open broad-leaved woodlands.
867	*Vidua chalybeata*	Steelblue Widowfinch	Common	Thorn savanna, edges of broadleaved woodland and riverine scrub and woodland. Rural human settlements
869	*Serinus mozambicus*	Yelloweyed Canary	Common	Woodland habitat, in dry areas prefers habitat along river courses
870	*Serinus atrogularis*	Blackthroated Canary	Common	Dry country, including grassland, savanna and lightly wooded areas
878	*Serinus flaviventris*	Yellow Canary	Common	Wide variety of habitats, arid and semi-arid dwarf shrublands, arid savanna, alpine shrublands, dry grasslands and clearings at the edges of forests
881	*Serinus gularis*	Streakyheaded Canary	Common	Mountainous and hilly vegetation. Well-wooded regions preferred
884	*Emberiza flaviventris*	Goldenbreasted Bunting	Common	Open broadleaved and mixed woodland and savanna, gardens, farms, plantations
885	*Emberiza capensis*	Cape Bunting	Common	Variety of habitats and altitudes, from coastal strandveld to shrubland and grasslands of high mountains
886	*Emberiza tahapisi*	Rock Bunting	Common	Rocky ridges and hillsides, eroding stony slopes and gullies, and bare stony areas. Abandoned quarries and borrow pits

887	*Emberiza impetuani*	Larklike Bunting	Common	Arid and semi-arid savanna, sparse shrubland and grassland on rocky hills, particularly in sparse grassland on schists or tilted shales, sparse woodland and shrubland along drainage lines, arid sparse perennial grasslands with scattered shrubs, and dune g
888	*Milvus migrans parasitus*	Yellow billed Kite*	Common	A wide variety of habitat, mostly woodland especially with high levels of rural human habitation
889	*Milvus migrans migrans*	Black Kite*	Common	A wide variety of habitat, mostly woodland especially with high levels of rural human habitation A wide variety of habitats, preferring fairly open woodlands, often frequents rubbish dumps and sewerage works