

## A brief survey of the birds in Kumbira Forest, Gabela, Angola

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In January 2004 we conducted a rapid assessment of the avifauna of the Kumbira Forest, situated in the Gabela Important Bird Area (IBA) of the Angolan Escarpment. We recorded 112 species in the Kumbira Forest, four of them globally threatened, and another 46 species in the surrounding area. We report on the breeding activity of 20 species, including the first description of immature Gabela Akalat *Sheppardia gabela*. We found encouraging numbers of Pulitzer's Longbill *Macrosphenus pulitzeri*, Monteiro's Bushshrike *Malaconotus monteiri*, and Gabela Akalat, which was the second most common species captured in mist nets. The Kumbira Forest is home to most of the endemic and threatened bird species known from the Gabela IBA and deserves immediate official protection, detailed research, and community-based conservation.

### Introduction

Angola is one of the most important and least known countries in Africa for birds (Dean 2000). The ornithological importance of the country is due to Angola's location at the confluence of three very different biomes, namely northern Congo basin lowland forests, eastern Zambesian miombo woodlands and southern Namib Desert, leading to the formation of the Western Angola Endemic Bird Area (EBA), with 14 restricted-range species (eight of which are threatened) (Stattersfield 1998). Of the 19 EBAs in continental Africa, Western Angola ranks fifth in the number of restricted-range species and second (eighth worldwide) in number (five) of Endangered or Critically Endangered restricted-range species confined to an EBA (Stattersfield *et al.* 1998). Even though Dean (2000) has recently provided a comprehensive review of Angolan bird distribution, due to the civil war that ravaged the country between 1974 and 2002, most of what is known is based on the data collected before Angola's independence in 1975 (Dean *et al.* 1998). Ornithologists are now returning to Angola (Ryan *et al.* 2004), but there is a long-term need for more information, especially on the endemic and threatened bird species.

The Gabela Important Bird Area (IBA), situated in the Angolan Escarpment and part of 200 000ha of semi-deciduous moist forest, is the most important of the 23 Angolan IBAs, since it has the highest richness of endemic (seven), restricted-range (eight), and threatened (six), bird species in the country (BirdLife International 2003). Endemic and/or threatened species known from Gabela include Grey-striped Francolin *Francolinus griseostriatus* (Vulnerable), Red-crested Turaco *Tauraco erythrolaphus*, Gabela Akalat *Sheppardia gabela* (Endangered), Pulitzer's Longbill *Macrosphenus*

*pulitzeri* (Endangered), Angola Cave-chat *Xenocopsychus ansorgei* (Near Threatened), White-fronted Wattle-eye *Platysteira albifrons* (Near Threatened), Gabela Bush-shrike *Laniarius amboimensis* (Endangered), Monteiro's Bush-shrike *Malaconotus monteiri* (Data Deficient) and Gabela Helmet-shrike *Prionops gabela* (Endangered). In spite of its conservation importance, the protected area of 50km<sup>2</sup> (the extent of the IBA), recommended by Huntley (1974), has not been established and the area is not under any protection. Clearance of forest vegetation for agriculture is the main threat to native species, and hunting may also be a problem (BirdLife International 2003).

The Gabela IBA, like the rest of Angola, will benefit greatly from any investigation of its unique and threatened bird community. Therefore, the Kumbira Forest — part of this IBA — was the focus of our ornithological expedition to Angola in January 2004. The end of the civil war in Angola has resulted in the resumption of ornithological visits to the country, and some interesting findings from 2003 have been presented by Ryan *et al.* (2004). The authors report on observations conducted in the Angolan Escarpment (including the Kumbira Forest), provide the first sound recordings for five threatened species, and report on range extensions for five others. In contrast to Ryan *et al.* (2004), our visit coincided with the height of the wet, breeding season. As such, we observed 37 additional species (12 in forest, 25 in bordering habitats) and are able to provide breeding records for 20 species from this area. Our assessment of local breeding activity was significantly improved by mist-netting in the Kumbira Forest. Mist-netting also made it possible to assess moult status and wing lengths of some

**Table 1:** Birds mist-netted in the Kumbira Forest. No. refers to the number of unique captures, with number of recaptures in parentheses. F, I and M stand for females, immature birds and males, respectively. Brood patch (BP) is ranked out of a scale of four, with the averages in parantheses. CP stands for birds with cloacal protruberance. Mlt refers to the number of birds showing moult, with body (B), tail (T) and wing (W) moult also shown separately. 'Wing' is the average length of wing chord in mm, with sample sizes in parentheses

	No.	F	I	M	BP	CP	Mlt	B	T	W	Wing
Yellow-rumped Tinkerbird	1	1			1 (3)		1	1	1	1	
Yellow-whiskered Greenbul	3	1	2								94
Yellow-necked (Falkenstein's) Greenbul	18 (1)	2		1	2 (4)	1	6	2	4	4	93.1 (12)
Yellow-throated Nicator	1	1			1 (2)		1	1	1		83
Hartert's Camaroptera	5	2			2 (2.5)		2	1		2	74.3 (4)
Green Crombec	1						1			1	63
Gabela Akalat	10		2				1			1	67 (3)
Red-capped Robin-chat	7 (3)	1	2	2	1 (1)	2	1	1	1	1	99.6 (7)
Blue-headed Crested Flycatcher	2	1		1							
Rufous-vented Paradise-flycatcher	3	1		2	1 (3)						
African Paradise-flycatcher	2			2							92
Brown Illadopsis	3	2			2 (2)		1		1		69.5 (2)
Bannerman's Sunbird	1			1		1					78
Western Olive Sunbird	9	4		5	1 (2)	1					72.4 (9)
Black-necked Weaver	2			2							83
Red-faced Crimson-wing	1			1			1			1	63
Red-headed Bluebill	1			1							
TOTAL	70 (4)	16	6	18	11	5	15	6	8	11	



**Figure 1:** Immature Gabela Akalat, *Sheppardia gabela*

species (Table 1), revealed the relatively common occurrence — in this area — of the elusive Gabela Akalat, and resulted in the first capture and description of an immature individual of this species (Figure 1).

## Methods

We visited Angola in January 2004, to conduct rapid assessments of the bird communities of Caconda, Gabela, Mount Moco and Tundavala IBAs, as well as to examine the potential for developing birdwatching tourism in these areas. We spent 14–17 January in the Kumbira Forest, Gabela, Kwanza Sul Province. The remaining forests around the town of Gabela itself are mostly inaccessible, especially due to the uncertainty of the distribution of landmines, many of which litter the countryside. The topography is hilly with small granitic inselbergs. The native vegetation of the area is semi-deciduous moist forest with Congo Basin affinities, dominated by forest tree genera such as *Albizia*, *Ceiba*, *Celtis*, *Ficus*, *Morus* and *Newtonia*, and wild coffee species *Coffea canephora* and *C. welwitschii* are found in the understory (BirdLife International 2003, Vetter 2003). Most of the area, however, is deforested and covered with scrubby grassland and secondary growth.

Since the 1930s, shade coffee plantations have been developed in the escarpment forest, of which Kumbira is a part. Even though up to 95% of the forest may have been under production in the 1970s (Hawkins 1993), local methods involve the clearing of the understory and leaving the canopy mostly undisturbed, resulting in the so-called 'coffee forest'. In addition, most former plantations have been abandoned since the start of the civil war. The discontinuation of coffee agriculture, hastened by coffee berry disease and the falling of coffee prices worldwide (Vetter 2003) means that currently the main conservation threat is clearing for subsistence agriculture, which possibly affects 30%

of the forest. Uncontrolled hunting has eliminated most Angolan big mammals (Vetter 2003), and game birds such as francolins are prized sources of protein (Hawkins 1993).

Most of the remaining forest around Kumbira is coffee forest, with a largely intact 15–20m high canopy, 25+m emergents and a dense understory of native shrubs and unharvested coffee plants. We camped in the forest and spent the next three days mist-netting and observing birds in the vicinity. We observed birds in the area for a total of 192 person-hours and operated seven 12m x 2.5m, 30mm mesh mist-nets near our campsite for 105 net-hours, between 05h30–18h00 on January 16 and 05h30–08h00 on January 17, 2004.

## Results

In the Kumbira Forest — which in terms of vegetation, can be regarded as typical of the remnant forest in the area, and which also includes bordering secondary growth and agricultural habitats — we recorded 112 species. We heard two flocks of Grey-striped Francolin vocalising regularly for over an hour in secondary growth with bananas adjoining the Kumbira Forest, a few hundred metres from human settlements (a sound recording is available upon request). We saw two pairs of Pulitzer's Longbills, one next to our campsite and another in secondary growth at the junction of two dirt roads outside the village. Other individuals were heard calling elsewhere in the forest and video footage of a vocalising individual has been placed on the Internet Bird Collection website ([www.hbw.com/ibc](http://www.hbw.com/ibc)). In addition to seeing Monteiro's Bushshrike twice, we could hear one or more individuals throughout most of each day. This was also the case for Gabela Bushshrike, which we saw both in the Kumbira Forest and in a dense roadside thicket nearby. We observed most of the other endemic and near-endemic taxa in the area, including Red-crested Turaco, Falkenstein's Greenbul *Chlorocichla falkensteinii falkensteinii*, Pale-olive Greenbul *Phyllastrephus fulviventris*, Hartert's Camaroptera *Camaroptera harterti*, Hall's Alethe *Alethe poliocephala hallae*, and Gabela Akalat (see Appendix).

We caught two immature Red-capped Robin-chat, *Cossypha natalensis* and two immature Yellow-whiskered Greenbul *Andropadus latirostris*. We also captured eight additional species with brood patches and/or cloacal protuberances (Table 1), constituting probable breeding records for the area. We mist-netted 10 Gabela Akalat individuals and observed this species on six other occasions in three days. We captured two immature Gabela Akalat (Figure 1) which, to our knowledge, has not been described and also constitutes the first breeding record for this species. The immature Gabela Akalat is similar to the adult, but is darker overall, especially in the upper half. Crown, mantle and upper breast are dark olive-brown to black, with light olive-brown feathers scattered throughout. The throat is a dusky mixture of light- and dark-brown feathers and the hind collar is a mixture of brown and blackish feathers, which give a speckled appearance. Most of the lower mandible and tip of the upper mandible is horn-coloured. The rest of the mandible is blackish. Dark buff feathers around the eye give a slight impression of an eye-ring. The median and greater covert feathers are partially black; the belly is dirty-white and the flanks are dusky.

## Discussion

Around Kumbira, we found encouraging numbers of Angola's endemic and threatened species, especially Gabela Akalat, Pulitzer's Longbill and Monteiro's Bushshrike. Given these birds' globally Endangered status and reported dependence on forest, they proved to be surprisingly common in degraded forest with abandoned coffee plants. With one exception, Gabela Akalats were observed at heights of 4–6m above the forest floor, although *Sheppardia* spp. generally prefer dense understory (Keith *et al.* 1992). This atypical behaviour may account for the paucity of *S. gabela* observations in the past.

We also had a high mist-net capture rate 0.7 birds/net-hour, with 70 individual records of 19 species (Table 1). This is 2–3.5 times the capture rate recorded at similarly disturbed Afro-tropical forests in mid-elevation Kibale, Uganda (Sekercioglu 1997) and lowland Gamba, Gabon (Smithsonian Institution 2002), respectively. Even though Ryan *et al.* (2004) found Gabela Akalat to be uncommon during their visits to the area, it was the second-most common species we mist-netted, comprising 14% of unique captures. With 84m of mist-nets, we caught eight different adults and two immature birds in two mornings. We did not observe any driver ants, around which *Sheppardia* spp. may concentrate (Keith *et al.* 1992).

Akalats are highly sedentary and can occur in densities of up to 3–4 individuals/ha (Keith *et al.* 1992). Our capture of 10 individuals with 84m of mist-nets is consistent with the range of territory sizes (0.5ha–3ha per pair) of the six *Sheppardia* species that have been studied in detail (Keith *et al.* 1992). Since there has been little change in forest cover in the past decade (Ryan *et al.* 2004), we can roughly estimate available habitat by combining Gabela Akalat's global range of 1 090km<sup>2</sup> (BirdLife International 2004) with the estimate of the local deforestation rate: of 20–70% (Hawkins 1993). This would give an area of available habitat between 327 and 872km<sup>2</sup>. Conservatively assuming that the territory size of Gabela Akalat is 3 ha per pair, the largest observed for a *Sheppardia* species (Keith *et al.* 1992), this implies a minimum global population of 21 800 adults. Some of the available forest may be unsuitable for the species, and the forested area may be even less than 30%. However, as the species is known to use secondary forest, forest edge and coffee forest (Keith *et al.* 1992), where we found it to be rather common, our findings support the recent upgrading of the species' population estimate from 1 000–2 499 individuals (BirdLife International 2000, 2003) to 2 500–9 999 individuals (BirdLife International 2004). An approximation (based on satellite imagery) of the forest cover within 40km of Gabela, would help improve the population estimate. Ideally, information on land cover should be combined with home range sizes calculated by radio tracking some individuals of this easily-captured species.

The Angolan Escarpment, with its year-round high humidity and high rainfall, has served as a refugium for birds intolerant of xeric conditions. The escarpment has also been significant in avian evolution by preserving relict species, by isolating populations of some widespread taxa, and by providing a barrier between *Acacia* and *Brachystegia* forms of dryland species (Hall 1960).

Angola has started to recover from decades of warfare and there is now an opportunity to study and protect globally-sig-

nificant areas, such as Gabela, in the Angolan Escarpment.

We observed that the area is heavily settled and local people frequent the forest trails. The Kumbira Forest is not under any type of protection, but we did not notice any evidence of ongoing logging. However, most of the surroundings have been deforested and plantations of banana, maize, sweet potato and other crops are common throughout the area, including inside the forest. Firewood is being collected and we saw youths carrying slingshots to hunt native wildlife. As was our experience in the rest of Angola, we observed no signs of large mammals, except one Gentle (Samango) Monkey (*Cercopithecus nictitans mitis*) at the Keve Falls campsite on the way from Sumbe.

Nevertheless, the Kumbira Forest is still home to most, if not all, of the endemic and threatened bird species known from the Gabela IBA, including Gabela Akalat, which we found to be rather common in modified coffee forest understorey. We hope that a thorough investigation of this endangered Muscicapid may result in an upgrading of its conservation status, and that the ornithological importance of the Kumbira Forest leads to official protection, detailed study, and community-based conservation. Additional research may show that some of the other globally-threatened species in the Kumbira Forest may also be more common than previously presumed, and a combination of effective protection and community-based ecological research and tourism would further increase the hopes for Western Angola's unique avifauna.

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**Appendix:** Bird species (158) observed in and around the Kumbira Forest (900–1 000m asl), Gabela Important Bird Area. 'Aerial' refers to birds flying overhead, 'Forest' is mostly intact, semi-deciduous moist forest, 'Scrub' refers to secondary growth, shrubs and human-dominated habitats, 'Grassland' is mostly due to recent deforestation and 'Wetland' refers to the floodplain of the Keve (Cuvo) River. 'Breeding' indicates species that were displaying as a pair, carrying nesting material, feeding young, nesting, with brood patches (BP), cloacal protuberances (CP) or immature birds. Species with \* were observed between Sumbe and Kumbira, but not in the immediate vicinity of the Kumbira Forest. The wetland birds in the Appendix were mainly observed in the Keve floodplain. Taxonomy and order follows Sibley and Monroe (1990)

Common name	Species	Aerial	Forest	Grassland	Scrub	Wetland	Breeding
*Great Egret	<i>Ardea alba</i>					x	
*Cattle Egret	<i>Bubulcus ibis</i>					x	
*Hamerkop	<i>Scopus umbretta</i>					x	
*African Openbill	<i>Anastomus lamelligerus</i>					x	
*Woolly-necked Stork	<i>Ciconia episcopus</i>					x	
*White-faced Whistling-Duck	<i>Dendrocygna viduata</i>					x	
*Black-shouldered Kite	<i>Elanus caeruleus</i>	x		x			
*Yellow-billed Kite	<i>Milvus aegyptius</i>	x					
*African Fish-Eagle	<i>Haliaeetus vocifer</i>					x	
Palm-nut Vulture	<i>Gypohierax angolensis</i>	x				x	
*Bateleur	<i>Terathopius ecaudatus</i>	x					
African Harrier-Hawk	<i>Polyboroides typus</i>		x		x		
*Lizard Buzzard	<i>Kaupifalco monogrammicus</i>				x		
Black Goshawk	<i>Accipiter melanoleucus</i>		x		x		
*Eurasian Buzzard	<i>Buteo buteo</i>	x					
Red-necked Buzzard	<i>Buteo auguralis</i>	x			x		
Wahlberg's Eagle	<i>Aquila wahlbergi</i>	x					
Long-crested Eagle	<i>Lophaetus occipitalis</i>	x			x		Displaying
*Grey Kestrel	<i>Falco ardosiaceus</i>	x			x		
*African Hobby	<i>Falco cuvierii</i>	x			x		
Grey-striped Francolin	<i>Pternstis griseostriatus</i>				x		
Red-necked Francolin	<i>Pternstis afer</i>			x	x		
*Helmeted Guineafowl	<i>Numida meleagris</i>			x			
Buff-spotted Flufftail	<i>Sarothrura elegans</i>		x				
*African Jacana	<i>Actophilornis africanus</i>					x	
*Common Greenshank	<i>Tringa nebularia</i>					x	
*Wood Sandpiper	<i>Tringa glareola</i>					x	
Red-eyed Dove	<i>Streptopelia semitorquata</i>				x		
*Ring-necked Dove	<i>Streptopelia capicola</i>				x		
Blue-spotted Wood-Dove	<i>Turtur afer</i>		x		x		
Tambourine Dove	<i>Turtur tympanistris</i>		x		x		
African Green-Pigeon	<i>Treron calva</i>		x		x		
Red-crested Turaco	<i>Tauraco erythrolophus</i>		x				Material
Common Cuckoo	<i>Cuculus canorus</i>		x				
Klaas's Cuckoo	<i>Chrysococcyx klaas</i>		x		x		
African Emerald Cuckoo	<i>Chrysococcyx cupreus</i>		x				
Dideric Cuckoo	<i>Chrysococcyx caprius</i>				x		
Yellowbill	<i>Ceuthmochares aereus</i>		x				
Gabon Coucal	<i>Centropus anelli</i>		x				
White-browed Coucal	<i>Centropus superciliosus</i>				x		
Southern White-faced Owl	<i>Ptilopsis granti</i>		x		x		
African Wood-Owl	<i>Strix woodfordii</i>		x				
African Palm-Swift	<i>Cypsiurus parvus</i>	x					
Mottled Swift	<i>Tachymartia aequatorialis</i>	x					
Little Swift	<i>Apus affinis</i>	x					
*White-rumped Swift	<i>Apus caffer</i>	x					
Red-backed Mousebird	<i>Colius castanotus</i>				x		
*Giant Kingfisher	<i>Megaceryle maximus</i>					x	
*Malachite Kingfisher	<i>Alcedo cristata</i>					x	
African Pygmy-Kingfisher	<i>Ispidina picta</i>				x		
*Woodland Kingfisher	<i>Halcyon senegalensis</i>				x		
*Brown-hooded Kingfisher	<i>Halcyon albiventris</i>				x		
Striped Kingfisher	<i>Halcyon chelicuti</i>				x		
Little Bee-eater	<i>Merops pusillus</i>				x		
*Madagascar Bee-eater	<i>Merops superciliosus</i>	x					
*European Bee-eater	<i>Merops apiaster</i>	x					
*Broad-billed Roller	<i>Eurystomus glaucurus</i>				x		
Crowned Hornbill	<i>Tockus alboterminatus</i>		x		x		



Gabela Bushshrike	<i>Laniarius amboimensis</i>		x				
*Gabon Boubou	<i>Laniarius bicolor</i>				x		
Sulphur-breasted Bushshrike	<i>Telophorus sulfureopectus</i>		x				
Many-coloured Bushshrike	<i>Telophorus multicolor</i>		x				
Four-coloured Bushshrike	<i>Telophorus viridis</i>		x				
Monteiro's Bushshrike	<i>Malaconotus monteiri</i>		x				
*Fork-tailed Drongo	<i>Dicurus adsimilis</i>				x		
*Cape Glossy-Starling	<i>Lamprotornis nitens</i>				x		
Violet-backed Starling	<i>Cinnyricinclus leucogaster</i>				x		
*Pale-winged Starling	<i>Onychognathus nabouroup</i>				x		
Black-necked Weaver	<i>Ploceus nigricollis</i>		x			Nesting	
Village Weaver	<i>Ploceus cucullatus</i>	x			x	Nesting	
Viellot's Weaver	<i>Ploceus nigerrimus</i>				x		
Forest Weaver	<i>Ploceus bicolor</i>		x				
Brown-capped Weaver	<i>Ploceus insignis</i>		x				
Black-winged Bishop	<i>Euplectes hordeaceus</i>			x	x		
*Yellow Bishop	<i>Euplectes capensis</i>			x	x		
White-winged Widowbird	<i>Euplectes albonotatus</i>			x	x		
Grosbeak Weaver	<i>Amblyospiza albifrons</i>		x	x	x		
*Green-winged Pytilia	<i>Pytilia melba</i>				x		
Grey-headed Negrofinch	<i>Nigrita canicapilla</i>		x				
Red-faced Crimson-wing	<i>Cryptospiza reichenovii</i>		x				
Red-headed Bluebill	<i>Spermophaga ruficapilla</i>		x			Material	
Pale-billed Firefinch	<i>Lagonosticta landanae</i>				x		
Blue-breasted Cordonbleu	<i>Uraeginthus angolensis</i>				x		
Black-tailed Waxbill	<i>Estrilda perreini</i>		x				
Orange-cheeked Waxbill	<i>Estrilda melpoda</i>				x		
Common Waxbill	<i>Estrilda astrild</i>			x	x		
Bronze Mannikin	<i>Spermestes cucullata</i>			x	x		
Black-and-white Mannikin	<i>Spermestes bicolor</i>		x		x		
Pin-tailed Whydah	<i>Vidua macroura</i>				x		
Black-faced Canary	<i>Crithagra capistratus</i>				x		
*House Sparrow	<i>Passer domesticus</i>				x		
Grey-headed Sparrow	<i>Passer griseus</i>				x		
<b>Total number of species</b>		<b>21</b>	<b>82</b>	<b>14</b>	<b>71</b>	<b>16</b>	<b>20</b>