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A Gabar Goshawk *Micronisus gabar* takes off from a birdbath in an eruption of water droplets

Photographed at Harare (see p. 37)

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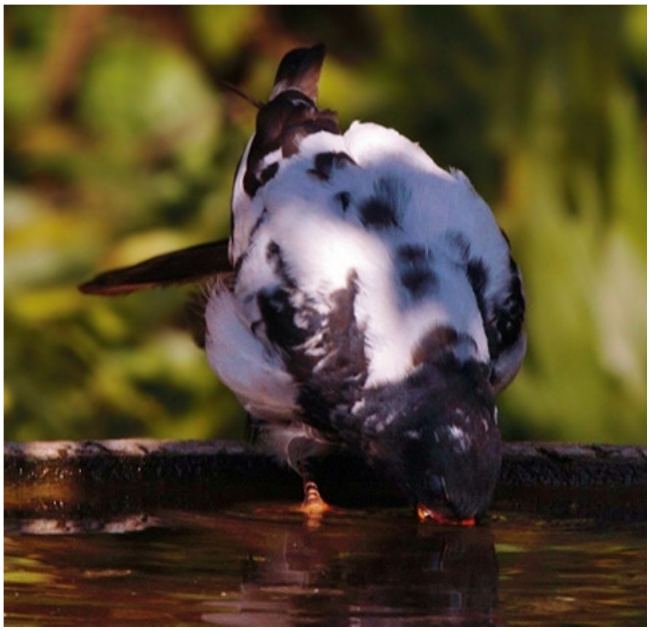

Views of a Pied Phase Gabar Goshawk
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Photos © I.C. Riddell

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Honeyguide is an ornithological journal that accepts scientific papers and articles, short notes and observations, as well as contributions of a more general interest. Its primary emphasis is on the birds of Zimbabwe but scientific contributions from other parts of Africa, and general interest contributions from anywhere else will also be accepted. Wherever possible, articles should be submitted electronically, preferably in MS-Word using the language option 'English (Zimbabwe)' or any other variant of British English.

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Honeyguide **66**: 1-6 (2020)

Birds at David Whitehead Settling Ponds, Chegutu: An Update

Innes Louw

Introduction

This paper updates the bird sightings recorded at the David Whitehead settling ponds in Chegutu after my first survey, carried out from September 2008 to September 2009 (Louw, 2010. *Honeyguide* **56**: 16-24). The second survey was from December 2009 to July 2018. The data from these two periods have been combined, to show the average number of each species seen during four periods, i.e. 2008-2010, 2011-2013, 2014-2015 and 2017-2018. The frequency of each species, i.e. the number of counts in which each was recorded, was also shown as a percentage, as an indication of changes in their relative abundance over time. The counts of raptors, other non-passerines and passerines have been grouped into only two periods (2008-12 and 2013-18) because their numbers were much lower than those of the species associated with water.

Waterbirds

The first group of birds to be considered were the waterbirds; grebes, cormorants, herons, storks, ibises and flamingos (Table 1). The only species to be recorded in each time period, and some in every visit, were the Grey and Black-headed Herons, Cattle Egret and African Sacred Ibis. Grey Herons were recorded in small numbers in each year but not on every visit, being present on only 56% of the visits, with the highest average number being recorded in 2008-2010. Black-headed Herons were present in all years and were only absent from the count made in March 2010. They were most numerous in the 2008-2010 period with the highest counts being 71 in August 2009 and about 90 in June 2011. Cattle Egret numbers were highly variable and high counts of 100 and 200 were recorded in October 2008 and January 2009, respectively. The African Sacred Ibis was especially numerous in the 2008-09 period when a high count of 39 birds in December 2009 was recorded. The numbers of other species were generally low but exceptional counts included 31 birds in December 2009 and 55 in June 2011.

Notable absences included Reed Cormorants, only recorded infrequently in the 2008-2010 period, and Glossy Ibis and African Spoonbill, which were not recorded after 2015. A single Greater Flamingo (the same bird?) was present from October 2008 to September 2009 and there was an influx of 19, 17 and 17 birds in December 2009, March 2010 and April 2010. They have not been recorded since then.

Table 1. The average numbers and frequency of waterbirds at the David Whitehead ponds, 2008-2018. 'n' = total number of counts during each period in this and all other tables.

	Numbers per visit				Frequency (%)			
	2008-10 n = 14	2011-13 n = 7	2014-15 n = 4	2017-18 n = 4	2008-10 n = 14	2011-13 n = 7	2014-15 n = 4	2017-18 n = 4
Little Grebe *Tachybaptus ruficollis*	0.1	2.0		3.5	7	29		50
Reed Cormorant *Microcarbo africanus*	0.4				29			
Grey Heron *Ardea cinerea*	1.7	0.4	0.7	0.8	64	43	67	50
Black-headed Heron *A. melanocephala*	26.4	5.0	5.5	7.0	93	100	100	100
Great Egret *Ardea alba*				1.3				50
Yellow billed Egret *E. intermedia*	0.1		0.7	1.8	7		67	50
Little Egret *E. garzetta*	0.4				21			
Black Heron *E. ardesiaca*				0.3				25
Cattle Egret *Bubulcus ibis*	27.6	7.4	17.0	20.5	71	71	67	50
Squacco Heron *Ardeola ralloides*		0.3				14		
Hamerkop *Scopus umbretta*	0.1	0.6		1.5	14	14		50
Abdim's Stork *Ciconia abdimii*				0.3				25
White Stork *C. ciconia*	0.4	0.3			21	29		
Yellow-billed Stork *Mycteria ibis*	6.4	12.9			57	57		
African Sacred Ibis *Threskiornis aethiopicus*	16.0	0.7	0.3	1.3	79	14	67	25
Glossy Ibis *Plegadis falcinellus*	1.4	0.3			43	14		
African Spoonbill *Platalea alba*	0.6	0.3			36	29		
Greater Flamingo *Phoenicopterus ruber*	4.2				64			

The next group were the ducks and geese, of which nine species were recorded (Table 2). Eight of them were recorded in 2008-2010 with the only new arrival being the Spur-winged Goose, with one bird being counted in October 2018. Only four species were present in each time period. The most numerous was the Egyptian Goose, which was particularly numerous in 2009 when the average count was 80 birds, with high counts of 129 and 120 being recorded in February and September. The next most numerous was the Red-billed Teal, which was present in all counts in 2014-2018, although in relatively small numbers. The highest counts were 62 in October 2008 and 52 in December 2017. White-faced Duck were present in small numbers but only, on average, in 43% of the counts. The highest counts were 54 and 47 in July 2009 and March 2010, respectively. Cape Teal was also recorded in each period, but in greatest numbers in 2008-2010, when they occurred in 79%

of the counts. The numbers of this species were generally low, with highest counts being 22 in June 2010 and 21 in August 2010. Other duck species occurred sporadically, with the most unusual record being of 70 and 123 Knob-billed Ducks in February-March 2009.

Table 2. The average numbers and frequency of ducks and geese at the David Whitehead ponds, 2008-2018

	Numbers per visit				Frequency (%)			
	2008-10	2011-13	2014-15	2017-18	2008-10	2011-13	2014-15	2017-18
White faced Duck *Dendrocygna viduata*	10.6	1.1	3.0	7.5	43	14	67	50
Spur-winged Goose *Plectropterus gambenis*				0.3	36			25
Egyptian Goose *Alopochen aegyptiacus*	38.5	14.9	3.0	11.0	79	57	67	50
Cape Teal *Anas capensis*	9.0	2.3	0.3	0.3	79	57	33	25
Hottentot Teal *A. hottentota*	4.4		1.3		64		33	
Red-billed Teal *A. erythrorhyncha*	15.8	5.0	4.3	15.8	50	57	100	100
Cape Shoveler *A. smithii*	1.1				50			
Southern Pochard *Netta erythrophthalma*	0.4	0.1			21	14		
Knob-billed Duck *Sarkidiornis melanotos*	13.8			1.3	14			25

Table 3. The average numbers and frequency of rails, plovers, sandpipers, and allies at the David Whitehead ponds, 2008-2018

	Numbers per visit				Frequency (%)			
	2008-10	2011-13	2014-15	2017-18	2008-10	2011-13	2014-15	2017-18
Black Crake *Amaurornis flavirostra*	0.6	0.1			36	14		
Common Moorhen *Gallinula chloropus*	0.1				7			
African Jacana *Actophilornis africanus*	0.6	0.3		0.2	43	14		25
Water Thick-knee *Burhinus vermiculatus*	0.5			0.1	29			25
Collared Pratincole *Glareola pratincola*	3.2	1.1	1.3	1.4	43	14	33	25
Kittlitz's Plover *Charadrius pecuarius*	4.6	1.7	1.0	1.8	57	43	33	75
Chestnut-banded Plover *C. pallidus*	0.1				7			
Common Ringed Plover *C. hiaticula*	0.1				7			
Three-banded Plover *C. tricollaris*	3.4	2.0	0.7	1.0	86	57	33	25
Blacksmith Lapwing *Vanellus armatus*	19.6	6.0	9.0	7.1	93	100	100	100
Crowned Lapwing *V. coronatus*	1.8			0.4	14			25
African Wattled Lapwing *V. senegallus*		0.1				14		25
Painted Snipe *Rostratula benghalensis*	0.1	0.1			7	14		
Common Sandpiper *Actitis hypoleucos*	1.6		2.0		36		67	
Wood Sandpiper *Tringa glareola*	7.4		1.7	2.3	79	29	67	50
Green Sandpiper *T. ochropus*	0.6				21			
Marsh Sandpiper *T. stagnatilis*	1.2	0.7	0.7	0.6	29	29	33	25
Common Greenshank *T. nebularia*	0.5	0.3		0.2	29	29		50
Little Stint *Calidris minuta*	6.1	1.0	0.3	1.9	57	29	33	25
Curlew Sandpiper *C. ferruginea*	0.1							
Ruff *Philomachus pugmax*	29.8	5.9	2.7	9.6	79	43	67	25
Pied Avocet *Recurvirostra avosetta*	5.8	4.7	5.3	4.0	71	57	67	50
Black-winged Stilt *Himantopus himantopus*	22.7	19.1	5.7	11.9	100	86	100	75
Grey-headed Gull *Chroicocephalus cirrocephalus*	0.1				7			
White-winged Tern *Chlidonias leucoptera*	0.1				14			

Waders and their allies (rails, and plovers and other Charadriiformes) were the third significant group of waterbirds with a total of 25 species being recorded, nine of which were recorded in each of the four periods (Table 3). Collared Pratincoles occurred in all periods but at a low frequency and were most numerous and frequent in the 2008-2010 period. Kittlitz's and Three-banded Plovers were more common and occurred in similar numbers to each other and were both more numerous in the 2008-2010 period. The commonest plover was the Blacksmith Lapwing, which was recorded on almost every count, being absent only in April 2010.

Amongst the waders, the Marsh Sandpiper was present in small numbers and low frequency in each of the four periods while the Ruff was present in larger numbers and frequencies. An exceptionally high count of 180 Ruff was recorded in January 2009, which accounts for the high average in the 2008-2010 period. Low numbers of Pied Avocets were recorded in each period, with an average frequency of 61%, making this a fairly regular species at the ponds, although not as regular as the Black-winged Stilt. This species was present in 90% of the counts and the most numerous of this group of species, with an average of 14.9 birds being counted over the entire survey, ahead of the Ruff (12.0) and Blacksmith Lapwing (10.4).

The most striking feature of these counts is that the greatest number of species was recorded in the 2008-2010 period, with almost 40 species being recorded in 2009 (Figure 1). This is partly because there were more counts during this period, as there was a highly significant relationship between the number

of species and the number of counts in any year (Figure 2). This is to be expected because more frequent counts will increase the likelihood of spotting rare species and vagrants. It also means that the effects of seasonal variation can be minimized, for example, summer counts are likely to yield more migrants that would not be present at other times.

The change in the number of species, and individuals, can also be explained by environmental factors. The value of the ponds as a source of water for birds diminished as operations at the David Whitehead factory began to decline. The factory operated almost at capacity up to 2011 but the situation deteriorated from then on and the quantity of effluent discharged into the ponds decreased. Many of the ponds dried out and only contained water during the rainy seasons. The factory began operating again in 2018 and this may account for the increased number of wader species counted in that year, but the continuing economic problems in 2019 may cause it to close down again, once again reducing the habitat available to waterbirds.

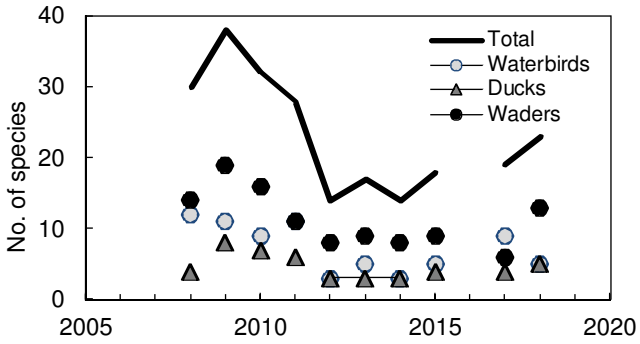

Figure 1. The number of waterbirds, ducks and wader species recorded at the David Whitehead ponds, 2008-2018

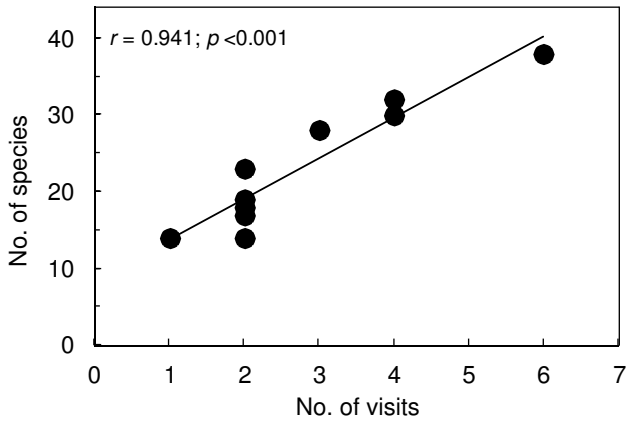

Figure 2. The relationship between the number of waterbirds, ducks and waders recorded in any year and the number of counts in that year

Table 4. The average numbers and frequency of raptors at the David Whitehead ponds, 2008-2018. The symbol '+' denotes values < 0.05 which cannot be rounded up to 0.1.

	No. per visit		Frequency (%)	
	2008-12	2013-18	2008-12	2013-18
Black-shouldered Kite *Elanus caeruleus*	0.6	0.1	61	67
Wahlberg's Eagle *Hieraaetus wahlbergi*	0.1	+	6	
African Hawk Eagle *Aquila spilogaster*	0.1		11	
Long-crested Eagle *Lophaetus occipitalis*	0.2	+	11	11
Martial Eagle *Polemaetus bellicosus*	0.1		11	11
Brown Snake Eagle *Circaetus cinereus*	0.2		17	
Black-chested Snake Eagle *Circaetus pectoralis*	0.3	+	28	56
African Fish Eagle *Haliaeetus vocifer*		+		22
Lizard Buzzard *Kaupifalco monogrammicus*	0.1		6	
Little Sparrowhawk *Accipiter minullus*	0.1	+	17	22
Gabar Goshawk *Micronisus gabar*	0.1	+	6	11
Harrier *Circus* sp.	0.1		6	
Osprey *Pandion haliaetus*	0.1		6	
Amur Falcon *Falco amurensis*	2.18	0.3	11	22
Lanner Falcon *Falco biarmicus*	0.11		11	

Other species

Although waterbirds were the main focus, counts were made of other species in the surrounding woodland. These may have been less comprehensive than the waterbird counts since woodland birds are more elusive and less visible, and sometimes only identified by their calls, and may also be less active at certain times of the day and therefore overlooked.

Fifteen raptor species were counted but generally in low numbers, and low frequency. In most cases, only single birds were seen, with the only flocks being of Amur Falcons, with 40 and 10 being recorded in December 2008 and 2009, respectively, as well as 5 birds in January 2013 and seven in October 2018. Pairs of Black-chested Snake Eagles were recorded in April 2012, June 2013 and October 2018, while the only record of Lanner Falcons was of two seen in June 2011. Black-shouldered Kites were recorded most frequently, but only as single birds, while two migrants, a harrier that could not be identified and an Osprey, were only recorded once. It was of some concern to note that all the species that occurred in

both time periods were recorded in smaller numbers in 2013-18 than in 2008-12.

Twenty-nine other non-passerines species were recorded, with 23 in 2008-12 and 21 in 2013-18, but only 13 of them were recorded in both periods (Table 4). Only three of the latter were recorded in greater numbers in 2013-18 than in 2008-12. The Grey Go-away-bird increased slightly, possibly because the Purple-crested Turaco seemed to have disappeared. The other two, the African Palm Swift and European Bee-eater, are highly mobile species occasionally found in quite large flocks. The most striking decreases occurred in the larger doves. The Laughing and Red-eyed Doves declined by 41% and 54% respectively, but the Cape Turtle Dove experienced a 93% decrease.

A notable record was a single Lilian's Lovebird spotted in July 2017. This was probably an escaped cage bird but a small feral population of Rosy-faced Lovebirds *Agapornis roseicollis* may still live in the northern suburbs of Harare, so the possibility of a feral population of this species in the Chegutu area cannot be ruled out.

Table 4. The average numbers and frequency of other non-passerines at the David Whitehead ponds, 2008-2018

	No. per visit		Frequency (%)	
	2008-12	2013-18	2008-12	2013-18
Natal Spurfowl *Pternistis natalensis*	0.4		26	
Swainson's Spurfowl *P. swainsoni*	0.4	0.2	32	11
Red-eyed Dove *Streptopelia semitorquata*	5.8	2. 6	84	100
Cape Turtle Dove *S. capicola*	2.6	0.2	79	22
Laughing Dove *Spilopelia senegalensis*	4.9	2. 9	89	78
Namaqua Dove *Oena capensis*	1.1	1.1	53	44
Lilian's Lovebird *Agapornis lilianae*		0.1		11
Meyer's Parrot *Poicephalus meyeri*		0.1		11
Purple-crested Turaco *Gallirex porphyreolophus*	0.1		5	
Grey Go-away-bird *Corythaixoides condor*	0.3	0.4	16	11
Levaillant's Cuckoo *Clamator levallantii*		0.1	5	11
Great Spotted Cuckoo *Clamator glandarius*	0.1		11	
Diderick Cuckoo *Chrysococcyx caprius*	1.7	0.1	32	11
Senegal Coucal *Centropus senegalensis*	0.5	0.3	32	33
Marsh Owl *Asio capensis*		0.2		22
Common Swift *Apus apus*		0.2		11
Little Swift *Apus affinis*		0.4	32	44
African Palm Swift *Cypsiurus parvus*	4.3	5.1	79	89
Red-faced Mousebird *Urocolius indicus*	0.6	0.2	16	22
Striped Kingfisher *Halcyon chelicuti*	0.1		5	
European Bee-eater *Merops apiaster*	2.0	4.4	26	44
Little Bee-eater *M. pusillus*	0.5		26	
Lilac-breasted Roller *Coracias caudatus*	0.7	0. 6	47	44
Purple Roller *C. naevius*	0.1		5	
Green Wood-hoopoe *Phoeniculus purpureus*	0.2		11	
Cardinal Woodpecker *Dendropicos fusescens*	0.2		16	
Black-collared Barbet *Lybius torquatus*	0.4	0.4	37	44
Crested Barbet *Trachyphonus vaillantii*	0.2	0.1	21	44
Yellow-fronted Tinkerbird *Pogoniulus chrysoconus*	0.2	0.2	16	22

A total of 76 passerine species were recorded in the 2008-12 period, compared to 70 in 2013-18 (Table 5). The most frequently recorded species was the Blue Waxbill, which was recorded on all visits in both periods, followed by the Tawny-flanked Prinia (89% in both periods) and Dark-capped Bulbul (68% and 78%). Of the 'common' species (i.e. with a frequency of 20% or more) recorded in 2008-12, seven were not recorded in 2013-18; they were Wire-tailed Swallow, Chin-spot Batis, Buffy Pipit, Brubru, Marico Sunbird, Variable Sunbird, African Yellow White-eye, Village Weaver and Black-throated Canary. Another six species, i.e. Red-breasted Swallow, Arrow-marked Babbler, Common Waxbill, Pin-tailed Whydah and Yellow-fronted Canary, experienced a 50% reduction in their frequency over the same period.

Species that became 'common' in 2013 (i.e. their frequency increased to 20% or more) included Grey-rumped Swallow, Pied Crow, Magpie Shrike and Greater Blue-eared Starling, while four species that had not been present in 2008-12 had become 'common' in 2013-18. These were the Capped Wheatear and Yellow Bishop, as well as two invasive non-native species, the Common Myna and House Sparrow. Species that recorded significant increases included the Rattling Cisticola, Tropical Boubou, Black-crowned Tchagra, White-bellied Sunbird, Masked Weaver and Jameson's Firefinch. Species that declined significantly included the Lesser Striped Swallow, Fork-tailed Drongo, Croaking Cisticola, Yellow-throated Longclaw and Red-billed Firefinch.

These changes seem to reflect several environmental issues in the area. The decreased rainfall would have affected species like the Yellow-throated Longclaw and Common Waxbill, which favour moist grasslands. In some cases, dryland species have increased at the expense of those that favour moister conditions, e.g. Rattling Cisticola increased, Croaking Cisticola decreased; White bellied Sunbird increased, Variable Sunbird decreased. The destruction of natural vegetation has reduced

the numbers of species such as the Arrow-marked Babbler, Brubru, African Yellow White-eye and Fork-tailed Drongo.

Others may have benefitted from vegetation changes such as acacia encroachment (Magpie Shrike) or increased areas of sparse vegetation and cultivation (e.g. Grey-rumped Swallow, Capped Wheatear, Greater Blue-eared Starling). Finally, those species particularly associated with humans, such as the Pied Crow, Common Myna and House Sparrow, have all benefitted from the changes that have taken place in the environment around the ponds.

Table 5. The average numbers and frequency of passerines at the David Whitehead ponds, 2008-2018

	No. per visit		Frequency (%)	
	2008-12	2013-18	2008-12	2013-18
Rufous-naped Lark *Mirafra africana*	0.3	0.2	16	22
Red-capped Lark *Calandrella cinerea*	0.2		11	
Chestnut-backed Sparrowlark *Eremopterix leucotis*	0.9		5	
Barn Swallow *Hirundo rustica*	5.5	6.4	32	33
Wire-tailed Swallow *H. smithii*	1.3		32	
Pearl-breasted Swallow *H. dimidiata*	0.2	0.1	5	11
Red-breasted Swallow *Cecropis semirufa*	0.6	2.0	26	11
Lesser Striped Swallow *C. abyssinica*	3.3	0.9	74	44
Grey-rumped Swallow *Pseudhirundo griseopygia*	0.3	1.0	11	33
House Martin *Delichon urbicum*	0.1	0.9	11	11
Brown-throated Martin *Riparia paludicola*		0.4		22
Fork-tailed Drongo *Dicrurus adsimilis*	1.8	1.2	79	44
African Golden Oriole *Oriolus auratus*	0.1		11	
Black-headed Oriole *O. larvatus*	0.2	0.2	16	11
Pied Crow *Corvus albus*	0.3	1.0	16	67
Arrow-marked Babbler *Turdoides jardineii*	1.5	0.1	37	11
Dark-capped Bulbul *Pycnonotus tricolor*	2.2	1.3	68	78
Kurrichane Thrush *Turdus libonyanus*	0.1	0.1	5	11
Groundscraper Thrush *Psophocichla litsitsirupa*	0.3	0.2	16	11
Capped Wheatear *Oenanthe pileata*		0.2		22
African Stonechat *Saxicola torquata*		0.1		11
White-browed Robin-chat *Cossypha heuglini*	0.4	0.2	32	22
Green capped Eremomela *Eremomela scotops*		0.1		11
Chestnut-vented Tit-babbler *Sylvia subcaerulea*	0.1		5	
Great Reed Warbler *Acrocephalus arundinaceus*	0.1		5	
Willow Warbler *Phylloscopus trochilus*	0.2	0.1	16	11
Long-billed Crombec *Sylvietta rufescens*	0.5	0.3	26	22
Grey-back Camaroptera *Camaroptera brevicaudata*	0.3	0.1	16	11
Zitting Cisticola *Cisticola juncidis*	1.3	1.6	53	56
Croaking Cisticola *C. natalensis*	0.6	1.1	32	11
Rattling Cisticola *C. chiniana*	1.0	1.7	53	78
Tawny-flanked Prinia *Prinia subflava*	2.3	2.0	89	89
African Pied Wagtail *Motacilla aguimp*	0.1		5	
Spotted Flycatcher *Muscicapa striata*	0.1		11	
S. Black Flycatcher *Melaenornis pammelaina*	0.5	0.6	26	33
Marico Flycatcher *Bradornis mariquensis*		0.1		11
Chin-spot Batis *Batis molitor*	0.3		21	
African Pipit *Anthus cinnamomeus*	1.1	0.6	37	44
Buffy Pipit *A. vaalenis*	0.5		32	
Yellow-throated Longclaw *Macronyx croceus*	2.0	1.6	74	56
Red-backed Shrike *Lanius collurio*	1.4	1.1	37	44
Magpie Shrike *Urolestes melanoleucus*	0.1	0.7	5	33
Southern Puffback *Dryoscopus cubla*	0.3	0.3	26	33
Tropical Boubou *Laniarius major*	0.7	0.9	58	89
Black-crowned Tchagra *Tchagra senegala*	0.4	0.7	37	56
Brown-crowned Tchagra *T. australis*	0.3	0.3	16	11
Orange-breasted Bush Shrike *Telophorus sulfureopectus*	0.1	0.1	5	11
Grey-headed Bush Shrike *Malaconotus blanchoti*	0.2	0.1	16	11
Brubru *Nilaus afer*	0.7	0.2	47	22
White-crowned Shrike *Eurocephalus anguitmens*	0.1		5	
White-crested Helmet-shrike *Prionops plumatus*	0.6		11	
Miombo Starling *Lamprotornis elisabeth*	0.1	0.2	5	11
Greater Blue-eared Starling *L. chalybaeus*	0.2	1.0	11	22
Common Myna *Acridotheres tristis*		3.6		33
Wattled Starling *Creatophora cinerea*		0.1		11
Marico Sunbird *Cinnyris mariquensis*	0.7	0.2	53	22

	No. per visit		Frequency (%)	
	2008-12	2013-18	2008-12	2013-18
Variable Sunbird *C. venustus*	0.6		53	
White-bellied Sunbird *C. talatala*	1.0	0.8	37	67
Scarlet-chested Sunbird *Chalcomitra senegalensis*	0.6	0.2	16	22
Amethyst Sunbird *C. amethystina*	0.1	0.1	11	11
Southern Yellow White-eye *Zosterops anderssoni*	1.9		32	
House Sparrow *Passer domesticus*		0.3		22
Southern Grey-headed Sparrow *P. diffusus*	0.2	0.4	16	22
Yellow-throated Petronia *Gymnoris superciliaris*	0.1	0.1	5	11
Village Weaver *Ploceus cucullatus*	1.6		32	
Golden Weaver *P. xanthops*	0.1		11	
Southern Masked Weaver *P. velatus*	1.4	2.6	42	78
Spectacled Weaver *P. ocularis*		0.1		11
Southern Red Bishop *Euplectes orix*	2.1	1.2	21	33
Yellow Bishop *E. capensis*		0.4		33
White-winged Widowbird *E. albonotatus*	19.3	7.9	63	78
Red-billed Quelea *Quelea quelea*	12.2	2.6	42	33
Cuckoo Finch *Anomalospiza imberbis*	0.6	0.7	16	11
Green-winged Pytilia *Pytilia melba*	0.4	0.1	16	11
Jameson's Firefinch *Lagonosticta rhodopareia*	0.8	3.4	21	56
Red-billed Firefinch *L. senegala*	2.5	1.1	74	44
Blue Waxbill *Uraeginthus angolensis*	6.4	7.3	100	100
Common Waxbill *Estrilda astrild*	1.0	0.2	32	11
Quail Finch *Ortygospiza atricollis*	2.9	0.1	11	11
Orange-breasted Waxbill *Amandava subflava*	0.4	2.8	11	22
Bronze Mannikin *Lonchura cucullata*	8.5	5.2	79	100
Pin-tailed Whydah *Vidua macroura*	0.4	0.1	26	11
Village Indigobird *V. chalybeata*		0.1		11
Yellow-fronted Canary *Crithagra mozambica*	1.7	0.7	47	11
Black-throated Canary *C. atrogularis*	1.0		21	
Bully Canary *C. sulphurata*	0.1	0.1	5	11
Streaky-headed Seedeater *C. gularis*	0.1		5	

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Longevity and Movements of Forest Birds in Zomba, Malawi

John G.M. Wilson & R.D. (Bob) Medland

Introduction

John Wilson lived in a house in Zomba, Malawi (at 15°22'S, 35°19'E) for 31 years from 1988 to 2019. The garden of the property is just under one hectare and backed onto indigenous evergreen forest of the Mulunguzi River gorge. It is located at an altitude of 1 000 m on the south-eastern, lower slope of Zomba Plateau, which rises to 2 130 m.

The dominant canopy tree species in this garden was *Newtonia buchananii*, which grows to >25m in height, and there were several other tall indigenous trees including *Albizia gummifera, Albizia antunesiana, Erythrophleum sauvolens, Sapium ellipticum, Ficus natalensis,* also several *Phoenix reclinata* palms. In addition, exotic species such as *Parkia filicoidea, Burtdavyii nyasica, Terminalia ivoriensis, Spathodea nilotica, Jacaranda* sp., and *Pinus patula* have been planted in the garden. Fruit-eating birds were attracted to many of these trees and Livingstone's Turacos were especially fond of the berries of the Golden Dewdrop, *Duranta erecta*. Flowering shrubs and small trees that were attractive to nectar-eating birds included Bottlebrush *Callistemon* sp., Sleeping Hibiscus *Malvaviscus arboreus,* Zebra Plant *Sanchezia oblongata*, Chinaman's Hat *Holmskioldia sanguinea* and *Heliconia* sp.

By 1988 large areas of the garden had been overwhelmed by Himalayan Raspberry *Rubus ellipticus*, an invasive alien species which provides a thicket-like cover and produces fruit which is very attractive to birds, especially Little Greenbuls. Since then it has been cleared from most of the garden, but it remains in the surrounding area. Above the garden there was an area of virtually undisturbed indigenous forest. With protection over the years, the trees have grown bigger, closing the canopy and suppressing the under-story. The dominant tree species were *Newtonia buchananii,* interspersed with *Trichilia emetica* and *Uapaca kirkiana.*

Figure 1. John Wilson's house in Zomba (left) and the net lane in the garden (right). Photos © Bob Medland.

Methods

Birds were caught with mist-nets and ringed in this garden on 17 occasions, over a total of 52 days in the 23 years from December 1988 to October 2011, by 7 different people (Table 1). Most of these will have been part-days only, e.g. set-up evenings, mornings only or afternoons with nets closed before dusk to avoid catching bats. The catching rate, whilst not analysed here, was always greatest on the first morning of ringing. By the second day birds were becoming 'net-shy' and on the third day the catching rate dropped to make in not worthwhile ringing.

A rough estimate of the total number of birds in the garden and adjoining forest was calculated to be 390, based on the re-trapping of 1/3 (27 birds out of 65) in January 2004 by Claire Spottiswoode out of the 130 birds trapped by Bob Medland three weeks earlier in December, 2003. The intention of this paper is to highlight (a) the abundance of different species in mid-altitude rain forest (b) the site-fidelity of individual birds over subsequent seasons; (c) the longevity of tropical bird species, especially in rain forest; and (d) the seasonal movement of rain forest associated species.

Table 1. Details of mist-netting activity in the Zomba garden, 1988-2011.

Ringers	Dates	Period
M.J. & T. Roberts	02-04 Dec 1988	3 days
M.J. & T. Roberts	11-13 Mar 1989	3 days
M.J. & T. Roberts	07-09 Jul 1989	3 days
M.J. & T. Roberts	24-26 Nov 1989	3 days
M.J. & T. Roberts	02- 04 Feb 1990	3 days
M.J. & T. Roberts	01-03 Jun 1990	3 days
M.J. & T. Roberts	11 Jan 1992	1 day
R.D. Medland	04-06, 18-20 Sep 1994	6 days
J. Haugaard	25-26 Aug 1996	2 days
R.D. Medland	02-03 Jan 1997	2 days
R.D. Medland	24-27 Jan 1999	3 days
J. Haugaard	24 Jul 1999	1 day
R.J. Dowsett	7-8, 13, 17 Nov 2000	4 days
R.D. Medland	15-20 Dec 2003	6 days
C. Spottiswoode	13-14 Jan 2004	2 days
R.D. Medland	3-5, 15-16 Nov 2007	6 days
L. Roxburgh	12 Oct 2011	1 day

Table 2. The number of birds ringed and recaptured.

		Individuals recaptured	
	Ringed	**No**	**%**
Lemon Dove *Columba larvata*	1		
Blue-spotted Wood Dove *Turtur afer*	1	1	100.0
Tambourine Dove *Turtur tympanistria*	12	2	16.7
Livingstone's Turaco *Tauraco livingstonii*	1		
African Wood Owl *Strix woodfordii*	1		
Pygmy Kingfisher *Ispidina picta*	12		
White-eared Barbet *Stactolaema leucotis*	3		
Yellow-rumped Tinkerbird *Pogoniulus bilineatus*	6		
Scaly-throated Honeyguide *Indicator variegatus*	2		
Cardinal Woodpecker *Dendropicos fuscescens*	2		
Mountain Wagtail *Motacilla clara*	2		
Stripe-cheeked Bulbul *Arizelocichla milanjensis*	31	1	3.2
Little Greenbul *Andropadus virens*	160	8	5.0
Terrestrial Brownbul *Phyllastrephus terrestris*	2		
Grey-olive Greenbul *Phyllastrephus cerviniventris*	13	4	30.8
Placid Greenbul *Phyllastrephus placidus*	34	3	8.8
Dark-capped Bulbul *Pycnonotus tricolor*	35	1	2.9
Orange Ground Thrush *Geokichla gurneyi*	2		
White-starred Robin *Pogonocichla stellata*	21	2	9.5
White-browed Robin-chat *Cossypha heuglini*	25	3	12.0
Red-capped Robin-chat *Cossypha natalensis*	24	5	17.2
Evergreen Forest Warbler *Bradypterus lopezi*	1		
Garden Warbler *Sylvia borin*	5		
Yellow-breasted Apalis *Apalis flavida*	3		
Green-backed Camaroptera *Camaroptera brachyura*	12	5	41.7
Ashy Flycatcher *Muscicapa caerulescens*	1		
Black-throated Wattle-eye *Platysteira peltata*	10		
White-tailed Crested Flycatcher *Elminia albonotata*	19	1	5.3
Collared Sunbird *Hedydipna collaris*	53	2	3.8
Olive Sunbird *Cyanomitra olivacea*	211	24	11.4
Variable Sunbird *Cinnyris venustus*	43	1	2.3
Eastern Miombo Sunbird *Cinnyris manoensis*	10		
Eastern Double-collared Sunbird *Cinnyris mediocris*	57	3	5.3
Purple-banded Sunbird *Cinnyris bifasciatus*	3		
African Yellow White-eye *Zosterops senegalensis*	16	2	12.5
Southern Puffback *Dryoscopus cubla*	1		
Tropical Boubou *Laniarius major*	1		
Square-tailed Drongo *Dicrurus ludwigii*	4		
Dark-backed Weaver *Ploceus bicolor*	2		
Spectacled Weaver *Ploceus ocularis*	18		
Red-faced Crimsonwing *Cryptospiza reichenovii*	8		
Red-throated Twinspot *Hypargos niveoguttatus*	54	5	9.3
Green Twinspot *Mandingoa nitidula*	12		
Red-billed Firefinch *Lagonosticta senegala*	25		
Blue Waxbill *Uraeginthus angolensis*	16	1	6.3
Bronze Mannikin *Lonchura cucullata*	1		
Red-backed Mannikin *Lonchura bicolor*	20		
Magpie Mannikin *Lonchura fringilloides*	1		
Village Indigobird *Vidua chalybeata*	1		
Dusky Indigobird *Vidua funerea*	1		
African Citril *Serinus citrinelloides*	10		
Total	1014	74	7.3

Results

Over the period of 23 years, 1,014 individual birds of 51 species were trapped; of these, 74 individuals (7.3% of all birds ringed) of 19 species were subsequently recaptured (Table 2). The table includes only birds that had been ringed for longer than three months, in order to illustrate site fidelity and longevity.

By the general standards of bird-ringing this is an extraordinarily high rate of re-trapping, reflecting both the highly sedentary nature and longevity of Afro-tropical rainforest species.

Longevity and site fidelity

There were many instances of individuals being recaptured several times within a season, during a ringing session, or even the same day but it would serve little purpose to record every one of these. The number of recaptures listed (see Appendix) has therefore been restricted to those where the elapsed time between ringing and recapture exceeded three months. Where the same individual was recaptured more than once within three months, only the later data are shown.

Olive Sunbirds and Little Greenbuls accounted for 37% of the total number of birds ringed (1,014) with 211 and 160 individuals respectively. Of the 51 species caught, only three others exceeded 50 in number, viz. Eastern Double-collared Sunbird (57), Red-throated Twinspot (54), and Collared Sunbird (53). Given the nature of the habitat this is unsurprising. The following are comments on the most frequently caught species and others of particular interest to the study, in descending order of abundance. Most birds had been ringed as 'adult', i.e. at least 9 months old.

Comments on some species follow:

Tambourine Dove

Locally common in the ground stratum of evergreen rain forest (lowland to montane), riparian forest and semi-evergreen thicket: 12 were trapped, 2 were recaptured (one of them, a male, after 4 years, 10 months and 11 days).

Pygmy Kingfisher

An intra-African migrant and breeding visitor, most arrive during October and depart in March to mid-April; 12 ringed, none recaptured.

Yellow-rumped Tinkerbird

Common in lowland to montane rain forest; six were trapped, none recaptured.

Little Greenbul

Common in the dense understorey and ground thickets of mid-altitude and lowland rain forest. It was surprisingly abundant with 160 birds being caught, in all months. It also provided the second-highest number of recaptures, 8 individuals or 5.0% of the total. The oldest was 8 years 30 days, whilst four (2.5%) were 5 years or more. Details of the three oldest are:

BB73708: male, 8 years and 30 days (03 December 1988 – 02 January 1997);

F21170: male, 7 years, 9 months, and 28 days (15 December 2003 – 12 October 2011),

BB2096: 6 years, 8 months, and 7 days (24 November 1989 – 25 August 1996).

Stripe-cheeked Greenbul

Widespread in montane and mid-altitude rain forest; 31 were ringed and 1 (3%) was recaptured (2 years and 10 months later).

Placid Greenbul [Cabanis's]

A montane and mid-altitude rainforest species, feeding on the ground and in low shrubs and thickets. Of 34 caught only three (8.8%) were recaptured. This species has seldom been ringed so it was rewarding to recapture these birds, one of which, BB73728, was ringed on 4 December 1988 and last recaptured on 24 January 1999 (10 years, 1 month, and 20 days later).

Grey-olive Greenbul

An inhabitant of riparian forest, semi-evergreen thickets, and locally in lowland, mid-altitude and the lower levels of montane rain forest, feeding on the ground and low levels on bark and the foliage of lianas and shrubby tangles, usually near streams. Little known from ringing and 13 were ringed, three (23.1%) were recaptured. The two oldest birds were caught after 7 years, 9 months, and 24 days (11 March 1989 – 03 January 1997) and 7 years, 5 months, and 14 days (11 March 1989 – 25 August 1996).

Dark-capped Bulbul

Common in most habitats including gardens. Of the 35 birds that were ringed only one (2.9%) was recaptured. This species is known for being 'net shy' i.e. wary of nets having been caught once. The one recapture was 9 years, 4 months and 9 days after it was ringed.

White-starred Robin

A mid-stratum species in montane and mid-altitude forest. 21 were ringed, and 2 (9.5%) were recaptured. A female was last recaptured after 9 years, 6 months, and 19 days.

White-browed Robin-chat

Originally a species of thicket and riparian vegetation, now adapted to gardens as the familiar 'Heuglin's Robin'. A total of 25 were ringed, 3 (12%) were recaptured, the oldest after 8 years, 1 month and 1 day.

Red-capped Robin-chat

Widespread in the ground stratum of mid-altitude and lowland rain forest. It is a partial migrant and its status at medium elevations was considered uncertain but this species was caught in all months, indicating resident status. A total of 29 were ringed, and 5 (17.2%) were recaptured which is the third-highest recovery rate, with the oldest being caught 6 years, 8 months, and 7 days after ringing.

Garden Warbler

A Palearctic migrant; five ringed, none recaptured.

Green-backed Camaroptera

Edge-of-forest and riparian habitat, of which 12 were ringed and five (41.7%) recaptured. The oldest was caught after 5 years, 9 months, and 17 days (02 December 1988-19 September 1994). This is unsurprising as it is a forest and riparian associated species, found in the lower stratum with little or no seasonal movement or migration. Of particular interest was individual AB88780, originally ringed with X81743 and recaptured just over three years later when it was found with its right foot and ankle completely missing. The

ring slid off the leg easily and so it was re-ringed on the left leg. Evidently a survivor, it was caught again a month later and found to be in healthy condition.

Black-throated Wattle-eye

Occurs in thicket and forest at low and medium elevations; 10 were ringed, none recaptured.

White-tailed Crested Flycatcher

Occurs at all levels of the understorey of montane and mid-altitude rain forest; 19 were ringed, one was recaptured.

Collared Sunbird

Common in densely wooded or forested country at low and medium elevations, feeding on flowers on the outer edges and canopy of vegetation. 53 were caught, and 2 (3.8%) were recaptured, none older than 4 years 3months 12 days.

Olive Sunbird

Common throughout in lowland, mid-altitude and lower montane rain forest, also in riparian forests and dense semi-evergreen thickets. Although mainly insectivorous, its numbers were doubtless influenced by the presence of exotic flowering plants in the garden. Altogether 24 individuals (11.4% of the total) were recaptured on at least one occasion. This species also provided the oldest two birds in terms of the time elapsed between ringing and recapture, one after 14 years 10 months and 1 day and another after 11 years 11 months and 9 days. No fewer than 10 of them (5% of total ringed) were recaptured after five years or more. A male and a female, ringed together on 15 December 2003, were recaptured together almost four years later on 4 November 2007, suggesting a permanent pair-bond. Details of the oldest birds are as follows:

AC03697: male, ringed on 13 March 1989, recaptured on several occasions, the last on 14 January 2004, 14 years, 10 months, and 1day after ringing.

AC03855: male, ringed on 11 January 1992, last recaptured on 20 December 2003 after 11 years, 11 months, and 9 days;

AD33183: female, ringed on 24 January 1999, last recaptured on 16 November 2007 after 8 years, 9 months, and 23 days;

AD33185: unsexed, ringed on 24 January 1999, last recaptured on 5 November 2007 after 8 years, 9 months, and 12 days;

AB38257: unsexed, ringed on 3 December 1988, last recaptured on 2 January 1997 after 8 years, and 30 days;

AC03836: male, ringed on 11 January 1992, last recaptured on 26 January 1999 after 7 years, and 15 days);

AD33143: unsexed, ringed on 5 September 1994, last recaptured on 13 November 2000 after 6 years, 2 months, and 8 days.

The survival rate of these sunbirds seems to be fairly high since the number of birds > 3 years old increased in the first 10 years of the investigation (Table 3). Their numbers declined in 2007 and none were caught in 2011, probably because ringing was carried out on only one day. Given the periods of time between ringing sessions it seems extraordinary that, out of the maximum possible number of previously ringed birds (even assuming that all had survived), up to over 10% of these should have been recaptured. This suggests a high degree of site fidelity.

Table 3. Abundance, site fidelity and survival of Olive Sunbirds, September 1994 – October 2011.

Ringed before:	Sep 1994	Aug 1996	Jan 1997	Jan 1999	Jul 1999	Nov-Dec 2000	Dec-Jan 2003/04	Nov 2007	Oct 2011
Previously ringed	67	68	75	76	91	117	177	183	204
Birds >3-year recaptured	2	1	5	8	7	8	19	7	0
% recaptured	3.0	1.5	6.7	10.5	7.7	6.8	10.7	3.8	0.0
Days ringing	6	2	2	3	1	4	6	6	1
Recaptures per /day	0.3	0.5	2.5	2.7	7.0	2.0	3.2	1.2	0.0

Variable Sunbird

A wide-ranging species found in in many habitats and the commonest sunbird species in Malawi. Of the 43 that were caught, only one (2.3%) was recaptured. Elsewhere in Malawi, this species has been easy to recapture so this low return rate is surprising.

Eastern Miombo Sunbird

A total of 10 were caught, none were recaptured.

Eastern Double-collared Sunbird

A montane rainforest species almost throughout above 1600m. Descends to lower altitudes outside the breeding season. A total of 57 were ringed and 3 (5.3%) were recaptured. All were caught in the non-breeding season (November-January) which is indicative of downward migration. Significantly, one was caught 7 years and 16 days after ringing, another after 4 years, 10 months, and 21 days.

African Yellow White-eye

Almost throughout in all forest types, also forest regrowth, riparian thicket, wetter types of woodland, especially miombo, and gardens. The most numerous species locally in evergreen forest; 16 were ringed, two (12.5%) were recaptured after 5 years, 9 months, and 16 days (03 December 1988 – 19 September 1994) and 5 years, 5 months, and 24 days (13 March 1989 – 05 September 1994) respectively.

Spectacled Weaver

The most widespread weaver in Malawi, in rank growth or thicket, often riparian; 18 were ringed, none recaptured.

Red-faced Crimsonwing

This elusive species of low understorey of montane and mid-altitude rain forest, often near streams, was recorded in January (2) and June (1) and July (6). None were recaptured. The breeding season is from March to September.

Red-throated Twinspot

Widespread in dense understorey of thickets, riparian and lowland rain forest, and the edges of mid-altitude forest. A well-known if shy garden species. A total of 54 birds were caught and five (9.3%) were recaptured. Perhaps significantly – at least when compared with other species reviewed here – none was older than 4 years, 4 months, and 6 days. There may be a correlation between this short life-span and the breeding dynamics of estrildids, which in Malawi have average clutch sizes around four eggs. This is approximately twice the average clutch size of greenbuls and sunbirds, suggesting a shorter longevity hence greater need for annual recruitment in these species.

Green Twinspot

Resident in the herbaceous understorey of evergreen forest, semi-evergreen thicket and riparian forest, this elusive species was mostly recorded during the rains, i.e. November (3), December (3), and January (3). There was one record for June. The breeding season is from late January to May, and juveniles have been observed in the garden in late March. None were recaptured.

Red-billed Firefinch

Widespread and usually common in patches of thicket and scrub next to some bare ground; 25 were ringed, none recaptured.

Red-backed Mannikin

An ecotone species of rich woodland and edges of evergreen forest and denser riparian thicket, common on the slopes of mountains; 20 were ringed, none recovered.

Blue Waxbill

Found in any thicket or secondary growth, particularly around rural settlements and in gardens; 16 were ringed, one recaptured.

African Citril

Common at montane forest edges, this species was trapped both in the rains, in December (1), January (4), February (1), which includes the breeding season September to March, and in the winter, June and July (7).

A further 21 species were ringed, but none recaptured (see Appendix).

Comments on longevity

The relatively greater longevity of tropical bird species compared to their temperate counterparts is well-established (Johnston *et al.* 1997) but the extent encountered in this study was surprising. At least two were longevity records for the species. The elapsed time between ringing and the last recapture, to which may be added at least 9 months to the bird's age, was over 10 years for three individuals, of which two were Olive Sunbirds and one was a Placid Greenbul. A further 29 birds were between 5 and 10 years, all of which were passerine species, as follows: 12 greenbuls, 9 robin-chats (*Cossypha* spp.), 2 White-starred Robins, 2 African Yellow White-eyes, 1 camaroptera, and 12 sunbirds.

The greatest longevity record was 14 years, 10 months, and 1 day for a male Olive Sunbird. Taking into account that this bird was an adult when first ringed, it must have reached the age of at least 15 years and 7 months.

The late Dale Hanmer ringed birds extensively at Nchalo in the Lower Shire valley, southern Malawi, for 16 years up to July 1989. The maximum longevity recorded there was a Brown-throated Weaver of 13 years, while one Blue-spotted Wood Dove, one Brown-throated Weaver *Ploceus xanthopterus* and one Southern Masked Weaver *P. velatus* all reached 12.5 years (Hanmer 1989). The sample size is significant with 19,000 birds having been ringed and, of these, 574 individuals of 75 species (approximately 3% of the ringed birds) reached the age of 5 years or more. Of birds aged 10 years or more, excluding Brown-throated Weavers, where all seven birds aged 11 years or more were females, 18 birds were male and 6 were female.

The Zomba ringing records reflect this in that of sexed birds under five years, five were female and four were male. Of sexed birds over 5 years, only one was female, while seven were males. These findings suggest that male birds generally live longer than females.

Interestingly, a considerably higher proportion of old birds were sunbirds, especially when compared to weavers or bishops, which were longer-lived at Nchalo (Hanmer 1989). The numbers ringed and recovered suggest that this is a result of their strong territoriality. Also, weavers and bishops were uncommon in the forest habitat at Zomba.

In Lilongwe, ringing in a garden from 1990-1994 recorded a Dark-capped Bulbul that had reached 4-5 years, and a Terrestrial Bulbul *Phyllastrephus terrestris*, ringed on 19 January 1991, was recaptured on 8 January 1997, a few days short of 6 years (Medland, unpublished).

Intra-African and altitudinal migration

Pygmy Kingfisher

An intra-African migrant and breeding visitor. Most arrive in Malawi from West Africa, including Senegal, in October, with a few from late August to September. One was captured in September, and five in November-December. Local breeders depart in February with some passage noticeable in March to mid-April. One was captured in February and three in March, in conformity with this but none were captured in June, July or August.

Orange Ground Thrush

There was only one record of a pair of Orange Ground Thrushes trapped in September. This species is mainly resident in mid-altitude forest 1,200-2,200m where they breed from October to January. This record suggests an altitudinal off-season movement down the forested slopes of Zomba Mountain in the cold season.

White-starred Robin

Ringed in January (2), February-March (3), June (5), July (5), August (1), and September (5). This species is a partial altitudinal migrant, where only adults and immature females, also some immature males depart from the plateau in the last week of December or first week in January after breeding from September, with a peak in November. Territorial males are sedentary and remain on Zomba Plateau, guarding their territories throughout the winter months.

Red-capped Robin-chat

Caught in August (1), September (4), November (9), December (11) and January (10). This species is a partial migrant in many parts of its African range but these data indicate a resident population breeding in November, December and January, then absent from February to July. One recorded in August may have been an off-season wanderer. This species is also believed to be an altitudinal

migrant, generally (but perhaps not all individuals) moving down into the Rift Valley during the non-breeding season in the cool/dry months.

Eastern Miombo Sunbird

This species is locally common in miombo woodland. All 10 records are from March to June, indicating downward movement from breeding habitat in the miombo woodland on Zomba Plateau in the non-breeding season around the end of the rainy season.

Eastern Double-collared Sunbird

Resident in montane rain forest above 1600m, and more locally in mid-altitude rain forest, this species was most abundant during the rains the 57 captures being in November (5), December (13), January (36) and February (2). Exceptionally there was one record for the cold month of June. The breeding season in Malawi is from April to October, with a peak in August (Dowsett-Lemaire & Dowsett 2006); these records indicate that it breeds at the higher altitude. The concept of altitudinal migration of sub-montane, rain-forest species in Malawi is well described in Johnston-Stewart (1984).

Table 4. The months when certain species were ringed in the garden; there was no trapping in April or May. The values are the total number ringed over the study period.

Species	J	F	M	(A)	(M)	J	J	A	S	O	N	D
Pygmy Kingfisher		1	3						1		2	3
Orange Ground Thrush									2			
White-starred Robin	2	4	3			5	5	1	5			
Red-capped Robin-chat	9						1	1	3			
Eastern Miombo Sunbird							5					
Eastern Double-collared Sunbird	16	3	4			1					6	16

Figure 2. The heads of some greenbuls mentioned in the text. Clockwise from top left: *Phyllastrephus placidus* adult female, *P. cervineiventris* adult female, *P. terrestris* unsexed and *Andropadus virens* adult male. Photos © Bob Medland.

Conclusions

The site-fidelity of birds in Malawi has become recognised in the last 40 years, especially through the work of Dale Hanmer at Nchalo. This was published regularly in various journals, culminating in her final paper (Hanmer 1989). Similar work at Lilongwe was published with similar findings (Medland 1993). Both, however, related primarily to palaearctic migrants in a different habitat, whereas the Zomba project focused on species having sedentary or very local migratory status in mid-altitude evergreen forest.

The Zomba project has demonstrated considerable longevity in Afro-tropical species, particularly those associated with rain forest habitats. This may be related to the breeding dynamics of such species which generally have one small brood each year; greater longevity reduces the need for recruitment. The concept of altitudinal migration in sub-montane forest species in Malawi, which was studied in the early 1980s (Johnstone-Stewart 1984), is also evident in the results from this project.

Seasonal abundance of species reflected their breeding and off-seasons whilst the long breeding season of some species, such as the Olive Sunbird, which extends from September to February, may have influenced their high catching rate.

Acknowledgements

This was unique as a long-term project, which started when Mike and Teresinha Roberts first visited the garden on 2 April 1988. Their six subsequent visits up to January 1992 confirmed the potential of the location for longer-term retrapping of birds and thus for gaining some knowledge of the extent of site-fidelity, seasonal movements and longevity. Other ringers participated as and when possible, so the project was essential 'ad hoc' rather than planned, although the long-term goals were maintained. They included Jens Haugaard, Bob Medland, Claire Spottiswood, Lizanne Roxburgh, and Bob Dowsett and Françoise Dowsett-Lemaire. Our grateful thanks are offered to all who participated and freely made their ringing data available for analysis and presentation in the paper. Thanks are due also to The South African Ringing Scheme (SAFRING) which is based at the University of Cape Town and provides bird ringing services in South Africa and other African countries.

References

Dowsett-Lemaire, F. & Dowsett, R.J. 2006. *The birds of Malawi. An atlas and handbook*. Tauraco Press: Liege, Belgium.

Hanmer, D.B. 1989. The end of an era – final longevity figures for Nchalo. *Safring News* 18: 19-30.

Johnston, J.P., White, S.A., Peach, W.J. & Gregory, R.D. 1997. Survival Rates of Tropical and Temperate Passerines: A Trinidadian Perspective. *American Naturalist* **150**: 771-789.

Johnston-Stewart, N.G.B. 1984. Evergreen Forest Birds in the Southern Third of Malawi. *Nyala* **10**(2): 99-119. Journal of the National Fauna Preservation Society (now, The Wildlife & Environmental Society of Malawi).

Medland, R. D. (1993). Palearctic Migrants and Wintering Site Fidelity at Lilongwe, Malawi. *Safring News* 22: 47-54.

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Appendix

Details of the species that were ringed and recaptured during this investigation. The symbols ♂ and ♀ denote males and females, respectively.

Ring No.	Species	Date ringed	Date(s) recaptured	Time elapsed
?	*Turtur afer*	2 Feb 90	1 Jun 90	3m, 0d
4A00170	*Turtur tympanistria* ♂	24 Jan 99	16 Dec 03	4y, 10m, 15 d
4A00171	*Turtur tympanistria*	27 Jan 99	25 Jul 99	5m, 24d
?	*Arizelocichla milanjensis*	11 Mar 89	11 Jan 92	2y, 10m, 10d
BB92096	*Andropadus virens*	24 Nov 89	25 Aug 96	6y, 9m, 24d
BC14593	*Andropadus virens*	11 Jan 92	20 Sep 94	2y, 8m, 19d
F21153	*Andropadus virens*	5 Sep 94	24 Jul 99	4y, 10m, 23d
F21160	*Andropadus virens* ♂	20 Sep 94	25 Jan 99	4y, 4m, 24d
F21170	*Andropadus virens* ♂	15 Dec 03	4 Nov 07	3y, 10m, 3d
			12 Oct 11	7y, 9m, 11d
BB92096	*Andropadus virens*	24 Nov 89	25 Aug 96	6y, 9m, 24d
BB73708	*Andropadus virens* ♂	3 Dec 88	2 Jan 97	8y, 0m, 1d
BB73748	*Phyllastrephus cerviniventris* ♂	11 Mar 89	2 Jan 01	10m, 1d
			19 Sep 94	5y, 6m, 18 d
			25 Aug 96	7y, 5m, 24d
			3 Jan 97	7y, 9m, 2d
BD03526	*Phyllastrephus cerviniventris* ♀	19 Sep 94	25 Aug 96	1y, 11m, 24d
BD46508	*Phyllastrephus cerviniventris* ♂	13 Jan 04	4 Nov 07	3y, 9m, 3d
			12 Oct 11	7y, 8m, 11d
BE16509	*Phyllastrephus cerviniventris* ♀	13 Jan 04	4 Nov 07	3y, 9m, 3d
?	*Phyllastrephus placidus*	2 Dec 88	11 Mar 89	3m, 10d

Ring No.	Species	Date ringed	Date(s) recaptured	Time elapsed
BD73728	*Phyllastrephus placidus*	4 Dec 88	2 Jan 97	8y, 0m, 1d
			24 Jan 99	10y, 1m, 23 d
BD41340	*Phyllastrephus placidus*	24 Jul 99	15 Dec 03	4y, 4m, 14d
BD03515	*Pycnonotus tricolor* ♀	4 Sep 94	13 Jan 04	9y, 4m, 14d
?	*Pogonocichla stellata*	11 Mar 89	7 Jul 89	3m, 6d
AC9512	*Pogonocichla stellata* ♂	7 Jul 89	1 Aug 96	7y, 0m, 0d
			25 Jan 99	9y, 6m, 24d
BD73711	*Cossypha heuglini*	3 Dec 88	4 Sep 94	5y, 9m, 3d
			24 Jul 97	8y, 1m, 2d
BD03583	*Cossypha heuglini* ♀	27 Jan 99	24 Jul 99	5m, 23d
BC15960	*Cossypha heuglini* ♂	16 Dec 03	16 Nov 07	3y, 11m, 15d
??	*Cossypha natalensis*	24 Nov 89	11 Jan 92	2y, 1m, 10d
BB92132	*Cossypha natalensis*	25 Nov 89	19 Sep 94	4y, 9m, 18d
			1 Aug 96	6y, 8m, 0d
BD41336	*Cossypha natalensis* ♂	24 Jul 99	17 Nov 00	1y, 3m, 16d
BD03588	*Cossypha natalensis* ♀	13 Nov 00	16 Dec 03	3y, 1m, 15d
			13 Jan 04	3y,2m,15d
BD03587	*Cossypha natalensis* ♂	15 Dec 03	4 Nov 07	3y, 10m, 3d
AB38255	*Camaroptera brachyura*	2 Dec 88	19 Sep 94	5y, 9m, 18d
AB88780	*Camaroptera brachyura* ♀	17 Nov 00	14 Jan 04	3y, 1m, 13d
AB88789	*Camaroptera brachyura* ♂	17 Dec 03	5 Nov 07	3y, 10m, 4d
GA94353	*Camaroptera brachyura* ♀	13 Jan 04	5 Nov 07	3y, 9m, 4d
AC20740	*Camaroptera brachyura*	4 Nov 07	12 Oct 11	3y, 211m, 11d
?	*Elminia albonotata*	11 Mar 89	7 Jul 89	3m, 6d
X67137	*Hedydipna collaris* ♀	11 Jan 92	5 Sep 94	2y, 7m, 4d
AB76614	*Hedydipna collaris* ♂	20 Sep 94	2 Jan 97	2y, 3m, 1d
AB38257	*Cyanomitra olivacea*	3 Dec 88	20 Sep 94	5y, 9m, 19d
			2 Jan 97	8y, 0m, 1 day
AC03697	*Cyanomitra olivacea* ♂	13 Mar 89	3 Jan 97	7y, 9m, 2d
			14 Jan 04	14y, 10m, 13d
AC03836	*Cyanomitra olivacea* ♂	11 Jan 92	5 Sep 94	2y, 7m, 4d
			3 Jan 97	4y, 11m, 2d
			26 Jan 99	7y, 0m, 25d
AC03855	*Cyanomitra olivacea* ♂	11 Jan 92	20 Dec 03	11y, 11m, 19d
AC20700	*Cyanomitra olivacea* ♀	3 Jan 97	24 Jan 99	2y, 0m, 23d
			13 Nov 00	3y, 10m, 12d
AD33143	*Cyanomitra olivacea*	5 Sep 94	2 Jan 97	2y, 3m, 1d
			24 Jan 97	2y, 3m, 1d
			13 Nov 00	6y, 2m, 12d
AE58017	*Cyanomitra olivacea* ♂	25 Aug 96	2 Jan 97	4m, 1d
			24 Jan 99	2y, 4m, 23d
			24 Jul 99	2y, 10m, 23d
			7 Dec 00	4y, 3m, 6d
AD88727	*Cyanomitra olivacea* ♂	2 Jan 97	24 Jan 99	2y, 0m, 23d
			24 Jul 99	2y, 6m, 23d
			13 Nov 00	3y, 10m, 12d
AB88732	*Cyanomitra olivacea* ♂	2 Jan 97	27 Jan 99	2y, 0m, 26 d
AB88738	*Cyanomitra olivacea* ♂	3 Jan 97	26 Jan 99	2y, 0m, 25d
			24 Jul 99	2y, 6m, 23d
			13 Nov 00	3y, 10m, 12d
AD33183	*Cyanomitra olivacea* ♀	24 Jan 99	25 Jul 99	6m, 24d
			16 Nov 07	8y, 9m,15
AD33185	*Cyanomitra olivacea*	24 Jan 99	5 Nov 07	8y, 9m, 4d
AD33186	*Cyanomitra olivacea* ♀	24 Jan 99	25 Jul 99	6m, 24d
			16 Dec 03	4y,10m, 15d
AD33192	*Cyanomitra olivacea*	25 Jan 99	24 Jul 99	5m, 23d
			8 Dec 00	1y, 10m, 7d
			15 Dec 03	4y, 10m, 14d
			25 Jan 04	4y, 11m, 13d
AD33195	*Cyanomitra olivacea* ♀	25 Jan 99	25 Jul 99	6m, 12 d
			13 Nov 00	1y, 9m, 12d
AE58149	*Cyanomitra olivacea* ♂	24 Jul 99	7 Dec 00	1y, 4m,6d

Ring No.	Species	Date ringed	Date(s) recaptured	Time elapsed
			15 Dec03	4y, 4m, 14d
			14 Jan 04	4y, 5m, 13d
X81736	*Cyanomitra olivacea* ♀	13 Nov 00	20 Dec 03	3y, 1m, 19d
			14 Jan 04	3y, 2m, 13d
X81760	*Cyanomitra olivacea* ♂	7 Dec 00	16 Dec 03	3y, 0m, 15d
			13 Jan 04	3y, 1m, 12d
X81761	*Cyanomitra olivacea* ♂	7 Dec 00	19 Dec 03	3y, 0m, 18d
AA88759	*Cyanomitra olivacea*	5 Dec 03	5 Nov 07	3y, 11m, 4d
AB88764	*Cyanomitra olivacea* ♀	15 Dec 03	4 Nov 07	3y, 10m, 3d
AB88765	*Cyanomitra olivacea* ♂	15 Dec 03	4 Nov 07	3y, 10m, 3d
AB88766	*Cyanomitra olivacea*	15 Dec 03	3 Nov 07	3y, 10m, 3d
AB88776	*Cyanomitra olivacea*	16 Dec 03	3 Nov 07	3y, 10m, 2d
X76668	*Cinnyris venustus* ♂	2 Jan 97	26 Jan 99	2y, 0m, 25d
X67148	*Cinnyris mediocris* ♀	12 Jan 92	26 Jan 99	7y, 0m, 25d
W22304	*Cinnyris mediocris* ♂	25 Jan 99	15 Dec 03	4y, 10m, 14d
X81756	*Cinnyris mediocris* ♀	17 Nov 00	15 Dec 03	3y, 0m, 14d
			13 Jan 04	3y, 1m, 12d
X54465	*Zosterops senegalensis* ♂	3 Dec 88	19 Sep 94	5y, 9m, 18d
X60606	*Zosterops senegalensis* ♂	13 Mar 89	5 Sep 94	5y, 5m, 4d
AD33147	*Hypargos niveoguttatus* ♂	5 Sep 94	3 Jan 97	2y, 3m, 2d
			25 Jan 99	4y, 4m, 24d
AD33157	*Hypargos niveoguttatus* ♀	19 Sep 94	2 Jan 97	2y, 3m, 1d
			25 Jan 99	4y, 4m, 24d
AB88730	*Hypargos niveoguttatus* ♂	2 Jan 97	25 Jan 99	2y, 0m, 24d
			13 Nov 00	3y, 10m, 12d
AD33188	*Hypargos niveoguttatus* ♀	24 Jan 99	13 Nov 00	1y, 9m, 12d
X81745	*Hypargos niveoguttatus* ♀	17 Nov 00	15 Dec 03	3y, 0m, 14d
			13 Jan 04	3y, 1m, 04
X76671	*Uraeginthus angolensis* ♂	2 Jan 97	25 Jan 99	2y, 0m, 24 d

Honeyguide **66**: 16-18 (2020)

Matabeleland Birds: Eat and be Eaten

The Matopos Raptor Research Group operated for a while in the 1970s conducting and co-ordinating raptor studies in the Matobo area. Very little of their materials has been published, apart for a summary of the populations of raptors and owls (MacDonald and Gargett 1984). This paper documents unpublished records of birds feeding in the Matobo and the wider Matabeleland area obtained from various sources, including the Nest Record System and personal communications. Feeding on termites is discussed elsewhere in this issue (see pp. 32-33). Items marked * are not mentioned in Hockey *et al*. (2005) while the names of trees and insects came from Coates Palgrave & Coates Palgrave (2002) and Skaife & Ledger (1979) respectively. Note: MNP = Matobo National Park, MRS = Matopos Research Station.

Black Stork *Ciconia nigra,* August 1952, one killed by an African Wild Cat *Felis lybica* at Nswatugi, MNP.

Marabou Stork *Leptoptilos crumenifer,* 28 November 1973. A flock of 50 was seen feeding on *Hodotermes alates* along the Bulawayo-Matobo road.

Secretarybird *Sagittarius serpentarius,* 1975. One seen carrying a Scrub Hare *Lepus saxatilis** at Figtree.

White-backed *Gyps africanus* and **Lappet-faced Vulture** *Torgos tracheliotus*, various dates, were the only vultures recorded at livestock carcases on Lucydale (MRS) and Cyrene.

Peregrine Falcon *Falco peregrinus* 23 June 1973, carrying an intact Cape Turtle Dove *Streptopelia capicola* (MNP).

Lanner Falcon *Falco biarmicus,* 16 August 1979, seen to hit a Red-billed Quelea *Quelea quelea** in a flock, MNP (D.C.H. Plowes); 26 June 1975, one hit a Helmeted Guineafowl *Numida meleagris** but it escaped (MRS).

Rock Kestrel *Falco rupicolus,* 12 September 1967, twice seen carrying rodents into a nest hole at Rowallan Park (MNP); 1 February 1975, one was flushed off an adult male Harlequin Quail *Coturnix delegorguei* which *may have been* killed by flying into a fence.

Yellow-billed Kite *Milvus aegyptiacus,* 22 November 1974, one found on Bulawayo-Gweru road was found to have 58 *Anoplotermes* and >50 *Odontotermes* (termites), beetle fragments, and unidentifiable arthropods in its stomach; 16 February 1973, a bird was seen taking adult dung beetles (Coleoptera: Scarabaeidae) in flight from dung pats (MNP). In 1975 one was seen taking fish off the surface but it is not known if these were alive or dead; 2 December 1975, one was seen feeding on a dead Puff Adder *Bitis arietans* (MRS); 12 December 1975, another was seen feeding on a dead snake on the Bulawayo-Cyrene road; 3 November 1973, a bird found dead had grasshoppers (Orthoptera: Acrididae), termite (Isoptera), and ant alates* (Hymenoptera: Formicidae) (MRS); 19 September 1966, a dead rat* was seen on a nest at Figtree; 10 November 1972, two dead frogs were seen on a nest at Figtree.

Steppe Eagle *Aquila nipalensis,* 16 November 1974, a flock of 10-15 birds was seen in trees with full crops watching a Black-backed Jackal *Canis mesomelas* feeding off a Steenbok *Raphicerus campestris* killed by a leopard *Panthera pardus* (MRS).

Crowned Eagle *Stephanoaetus coronatus,* December 1996. A bird was observed diving at an Impala *Aepyceros melampus** in the MNP (Erwee personal communication).

Lizard Buzzard *Kaupifalco monogrammicus,* 9 August 1975, one was seen feeding on a large dark rodent.

Brown Snake Eagle *Circaetus cinereus,* 20 August 1975, seen feeding on a 94.5cm Puff Adder *Bitis arietans* killed by a single talon puncture into the brain (MRS).

Black-chested Snake Eagle *Circaetus pectoralis,* all feeding records are of snakes including Schlegels's Giant Blind Snake *Megatyphlops schlegelii** and Dwarf Sand Snake *Psammophis angolensis** found in the crop of a dead specimen in 1965. The only other prey recorded is of a frog taken out of a large mating group on Lonsdale Dam on 11 November 1974.

Fish Eagle *Haliaeetus vocifer, a*ll records are of fish with only barbel *Clarias gariepinus being* specifically identified.

Steppe Buzzard *Buteo buteo, s*ummer 1974/75, a road casualty at Cyrene contained one lizard, one lepidopteran (butterfly or moth), and two rodents, including a Striped Grass Mouse *Lemniscomys rosalia* [**Editor's note**: given as *L. griselda* in the original manuscript, but the taxonomy of this mouse appears to have undergone major revision, with this name now being applied to the Zimbabwean species (Monadjem *et al*. 2015)].

Ovambo Sparrowhawk *Accipiter ovampensis,* 19 August 1975, one took a dove *Streptopelia* sp. out of flock (MRS); 29 December 1975 a bird perched on a telephone wire took off after and caught a Green-winged Pytilia *Pytilia melba* (MRS); 12 January 1976, a Harlequin Quail *Coturnix delegorguei** was chased by one of these sparrowhawks, but escaped (Figtree).

Shikra *Accipiter badius,* 30 May 1971, seen killing a Southern Red Bishop *Euplectes orix* (*MRS); 28 May 1975, a bird was seen carrying a large Angoni Vlei Rat *Otomys angoniensis** (MNP); 9 January 1976, another was observed eating a nestling African Paradise Flycatcher *Terpsiphone viridis** while being bombed by the adults (MRS). 14 June 1975 one took a House Sparrow *Passer domesticus* in Bulawayo.

Gabar Goshawk *Micronisus gabar* November 1972, seen taking a Plum-coloured starling *Cinnyricinclus leucogaster** (MRS).

African Harrier-hawk *Polyboroides typus,* December 1975, a lizard, rodent and Red-winged Starling *Onychognathus morio* feather were found on a nest at Figtree.

Coqui Francolin *Peliperdix coqui,* 12 September 1973, two young birds, found as roadkill, had been feeding on poison gooseberry *Withania somnifera**, and the grasses *Triumfetta annua** and *Panicum maximum** (MNP).

Bronze-winged Courser *Rhinoptilus chalcopterus,* 21 March 1971, the stomach contents of a road casualty included termites (*Hodotermes**), tenebrionid* and curculionid* beetles, and formicid ants* (MRS).

Barn Owl *Tyto alba,* October 1975 and June 1976, pellets found at Empandeni Mission (QDS 2027D4) contained remains of the Angoni Vlei Rat *Otomys angoniensis,* Bushveld Gerbil *Gerbilliscus leucogaster,* South African Multimammate Mouse *Mastomys coucha,* Single-striped Grass Mouse, Namaqua Vlei

Rat *Aethomys namaquensis,* Red Rock Rat *Aethomys chrysophilus,* South African Pouched Mouse *Saccostomus campestris,* and Lesser Red Shrew *Crocidura hirta.* These are the first records of these species in this QDS, and were not reported in the adjoining QDSs either (Smithers & Wilson 1979).

Marsh Owl *Asio capensis,* 1 July 1975, prey at nest included Harlequin Quail, Single Striped Grass Mouse*, Lesser Red Shrew and Black Cuckooshrike *Campephaga flava** (MRS).

African Barred Owlet *Glaucidium capense,* September 1981, killed a Grey-backed Camaroptera *Camaroptera brevicaudata*,* Hwange National Park (BLZ Nest Record Cards).

Rufous-cheeked Nightjar *Caprimulgus rufigena,* 20 December 1972, a road casualty on the Matopos road contained 81 curculionid* and scarabeid beetles, and a moth; 20 December 1972 another road casualty on the Figtree-Matobo road had eaten reduviid bugs* and scarabeid beetles; 20 December 1972, a second road casualty on the Figtree-Matobo road had eaten beetles.

Freckled Nightjar *Caprimulgus tristigma,* 20 December 1972, a road casualty had eaten scarabeid beetles, cockroaches and Lepidoptera (MRS).

Mozambique Nightjar *Caprimulgus fossi,* 6 February 1973, the stomach of a road casualty on the Figtree-Matobo road contained termite alates (*Hodotermes**), cockroaches (Blattidae*) and beetles (Scarabaeidae, Cetoniidae*, Coprinae*, Chrysomelidae*) and shield bugs (Pentatomidae).

Cape Turtle Dove *Streptopelia capicola,* 2 January 1975, numbers of them were feeding on the ripe fruits of the Puzzlebush *Ehretia rigida** on the Bulawayo-Matobo road.

African Green Pigeon *Treron calvus,* 6 August 1949, the crop of a collected bird contained fruits of Kei apple *Dovyalis macrocalyx* (MRS); 6 October 1951, seen feeding on Jackal-berry *Diospyros mespiliformis* in eastern MNP.

African Grey Hornbill *Tockus nasutus,* 11 July 1975, a pair were flushed from the roadside where they had been feeding on actively foraging ants (Formicinae: *Anoplolepis* sp.) (MRS).

Grey Lourie *Corythaixoides concolor,* 3 September 1971, three feeding on young foliage of syringa *Melia azedarach* on the ground in Hillside, Bulawayo, and ignoring the toxic fruits.

Striped Kingfisher *Halcyon chelicuti,* 9 May 1952, catching unidentified fish*, Sandy Spruit Dam, MNP.

Yellow-fronted Tinkerbird *Pogoniulus chrysoconus,* 27 July 1976, observed feeding on mistletoe (*Loranthaceae*) berries and seen to wipe bill on breast (MRS).

Black-collared Barbet *Lybius torquatus,* 25 January 1976, eggs taken from a nest by a Bush Squirrel *Paraxerus cepapi*, which was later chased from the tree by a Crested Barbet *Trachyphonus vaillanti* (MRS).

Kurrichane Thrush *Turdus libonyanus,* 30 November 1975, one was being swallowed by a 60cm Puff Adder in Tokwe Wildlife Area. Later the snake was moving along the ground being followed by another Kurrichane Thrush making an alarm call about one metre from the moving snake.

Pied Crow *Corvus albus,* 6 November 1975 was seen to attack a fruit bat (white spots behind its eyes suggest an epauleted fruit bat *Epomophorus* sp.), which was carrying a very large youngster and hence flying with difficulty. A Yellow-billed Kite also stooped half-heartedly at the bat (MRS).

White-necked Raven *Corvus albicollis* 29 January 1952, one seen eating fruits of a Coral Tree *Erythrina* sp. (MNP).

Grey-headed Bush Shrike *Malaconotus blanchoti,* 5 November 1950, seen feeding on the eggs of the African Paradise Flycatcher *Terpsiphone viridis.*

Yellow-fronted Canary *Crithagra mozambica* 28 June 1975, two birds seen feeding on the fruits of the Velvet-leafed Corkwood *Commiphora mollis** (MRS); December 1975, seen feeding on seeds of Jimson Weed *Datura stramonium** (MRS). [**Editor's note**: the original manuscript identified this plant as "*Satura*" but no plant of this name could be found. *Datura* is highly toxic but the seeds are said to be distributed in bird faeces so it is possible that some bird species can eat them without ill effects]; 11 January 1976, seen feeding on seed-heads of Black-footed Grass *Brachiaria nigropedata** on La Concorde Farm, about 8 km southeast of Figtree.

Cinnamon-breasted Bunting *Emberiza tahapisi,* 2 December 1975, seen feeding on [flower of] a Red-hot Poker Aloe *Aloe aculeata** at Hazelside (MNP).

Novel records

The record of a Crowned Eagle diving at an impala is the first of any prey except hyrax in the MNP (Tuer & Tuer 1974). The Barn Owl food from Empandeni gave range extensions for several small mammal species, emphasising the value of owls for small mammal surveys. The Bronze-winged Courser diet is the first specially identified for the species, as there is nothing specific in Hockey *et al.* (2005).

The record of an African Wild Cat killing a Black Stork is particularly interesting as one would not expect a small cat to attack such a large bird. However, there is a video on YouTube showing a serval *Leptailurus serval* leaping up to catch an Abdim's Stork *Ciconia abdimii.* There are previous records of flying bats carrying young (Ansell 1986) but this is the first record of an attempt to prey upon what must seem like an easy target.

Finally, a Boomslang *Dispholidus typus* was observed trying unsuccessfully to push its head into the nest of a Grey Penduline Tit *Anthoscopus caroli* in the Ndumo Game Reserve, Zululand. This is further evidence of the safety from predator this nest provides.

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References

Ansell, W.F.H. 1986. Records of bats in Zambia carrying non-volant young in flight. Arnoldia Zimbabwe **9**: 315-318.

Hockey, P.A.R., Dean, W.R.J., & Ryan, P. 2005. Roberts' Birds of Southern Africa, 7th edition. John Voelcker Book Fund: Cape Town.

Coates Palgrave, K.C. and Coates Palgrave, M.C. 2002. *Trees of Southern Africa*. Struik: Cape Town.

MacDonald, I.A.W. and Gargett, V. 1984. Raptor density and diversity in the Matopos, Zimbabwe. Proceedings of the Fifth Pan-African Ornithological Congress: pp. 287-304.

Monadjem, A., Taylor, P.J., Denys, C. & Cotterill, F.P.D. 2015. *Rodents of sub-Saharan Africa: a biogeographical and taxonomic synthesis*. Walter de Gruyter GmBH: Berlin.
Skaife, S.H. & Ledger, J. 1979. *African Insect Life*. Country Life Books: London.
Smithers, R.H.N. & Wilson, V. 1979. *Checklist and atlas of the mammals of Zimbabwe-Rhodesia*. Trustees of the National Museum and Monuments of Rhodesia, Salisbury.
Tuer, V. & Tuer, J. 1974. Crowned Eagles of the Matopos. *Honeyguide* No. 80: 32.

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Photos © Colin Baker

African Paradise-flycatcher *Terpsiphone viridis* nesting at Victoria Falls, see article on pp. 29-31
a 18 February 2020 Female with chick, day 6
b 18 February 2020 Female offering fly, day 6
c 20 February 2020 Male removing faecal sac, day 8
d 23 February 2020 Chick shortly before leaving the nest, day 11

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Relative Abundance of Vultures in Zimbabwe – a Historical Perspective Prior to 1995

Kit Hustler & Kevin Barry

Abstract

Anecdotal historical and Atlas data collected between 1987-1992 were analysed in order to show the historical distribution of vultures in Zimbabwe. Seasonal abundance suggests movement of Lappet-faced Vultures into the country between April and June. National Parks in the north and northwest had the highest reporting rates for all species when compared with other protected areas. White-headed and Hooded Vultures were restricted to land administered by National Parks and were rare outside of these areas.

Introduction

Until recently, vultures were considered to be a usual part of the large protected areas that characterise the continent and did not warrant much attention. It was much easier to get funding to study large mammals like rhinoceros and elephants, and the impact of poaching on their numbers, than it was to study vultures. The efforts being made to improve the profile of vultures have been part of the motivation for this publication. Without historical data, it is difficult to determine whether populations are declining or not. Zimbabwe, through the then Ornithological Association of Zimbabwe, participated in the Southern African Bird Atlas Project (SABAP) from 1987-1992 (Harrison *et al*. 1997). These data were collected 7-13 years after independence and before the land reform policy that resulted in widespread alteration of practices in the commercial farming sector of the country.

Recent publications on the status of vultures in Africa (Ogada *et al*. 2016; Anon, 2018) have not included Zimbabwe, for whatever reason, and there seems to be a void of research effort on vultures between East and South Africa. We have therefore re-analysed the atlas data for vultures in Zimbabwe only, with a view to providing a more local perspective on the situation at the time. It is hoped that this historical perspective will provide a measure against which the undoubted changes in vulture populations in this part of Africa can be monitored and will stimulate interest in a more continent-wide approach to their conservation.

Methods

All historical records published in *Honeyguide* were examined with a view to providing evidence of the historical distribution of vultures in the country prior to the atlas study. Reliable observers were contacted and their opinions sought as to the perceived status of vultures in the country prior to the atlas. The bird collection held at the Natural History Museum in Bulawayo (NMZB) was also examined in order to confirm possible past specimens collected in the country. Similarly, egg collectors hold priceless specimens, which prove the existence of certain species breeding at a particular place and time. They were consulted and were very forthcoming with their information.

The following species are discussed in this paper: White-backed Vulture *Gyps africanus,* Lappet-faced Vulture *Torgos tracheleotus),* White-headed Vulture *Trigonoceps occipitalis,* Hooded Vulture *Necrosyrtes monachus* and Cape Vulture *Gyps coprotheres*. The Palm-nut Vulture *Gypohierax angolensis* and Egyptian Vulture *Neophron percnopterus* were not considered in our analyses because they are scarce, highly localised and of unpredictable occurrence in Zimbabwe.

Data were obtained from 12 481 Zimbabwean atlas cards, containing approximately 830 000 individual sightings of a variety of bird species, collected between 1987-1992. These data were computerised in the mid-1990s by KH and copies of the database were provided to the then Ornithological Association of Zimbabwe and the Avian Demography Unit at the University of Cape Town. The data cards are stored in the ornithology department of the Natural History Museum of Zimbabwe in Bulawayo (NMZB).

Volunteers recorded all the birds they saw on a pre-designed card for each QDS (quarter-degree square; 15' latitude x 15' longitude, 1:50 000 map) in a calendar month. These cards were sent to and collated by a regional co-ordinator for accuracy and then passed on to KH at the NMZB for computerisation. The initial aim was to get a minimum of one card per half-degree square (HDS; 30' latitude x 30' longitude; 4 QDS make up a HDS) per season, i.e. hot dry (August-November), hot wet (December-March) and cool dry (April-July) for the country during the atlas period. For some squares this was not achieved, because of security issues along the eastern, south-eastern and southern borders and southwest, and difficulties in accessing some areas. Parts of the National Parks estate such as Hwange National Park, Gonarezhou National Park and the Zambezi Valley away from the river were not well atlassed, again because of limited access and seasonal closure to the public at large.

Unfortunately, observers could record the presence or absence of birds for a calendar month only and there was no facility for recording the numbers of any species. This introduced some bias; for example, if a carcass was encountered and there were 180 White-backed, 10 Lappet-faced, 3 White-headed, 6 Hooded and 1 Cape present (200 vultures in all), then each species would simply be recorded as present. In this example, each would be given an equal "abundance" value that did not reflect their real abundance.

The Zimbabwe atlas database was analysed for distribution and breeding records for all vulture species under consideration, as outlined above. The analyses carried out by Harrison *et al*. (1997) was done by QDS and calendar month, a resolution too fine for the Zimbabwean atlas data set, which barely had the coverage of one data card per HDS per season. We believe that a much coarser resolution provides a more accurate picture of distribution and seasonal coverage and so we analysed the data by HDS. This provides distributional data accurately, due to the mobility of vultures, while securing the exact location of breeding sites, particularly for vulnerable species.

The number of sightings of each vulture species was summed and divided by the total number of atlas cards recorded to give the number per HDS. This gave a value for the relative abundance of a specific vulture species for each HDS across the country. Data for specifically identified HDS (Figure 1) were then analysed on a seasonal basis (cool-dry,

hot-dry and hot-wet) from 1987-1992. This facilitated a comparison of relative abundance of vultures from both a temporal and spatial perspective.

Distributional data were collated into groups using incremental values fixed at 0.1 vultures/card up to a maximum of 0.5 vultures/card, in order to make the maps comparable with each other. Squares marked with an X (either white or black), indicate a confirmed breeding record in that square since 1970.

The total number of records of individual species were combined and divided by the total number of all vulture species, for specifically identified parts of the country (Figure 1). This gave an abundance rating (%) of all vulture species for these areas and was done in order to identify those parts of the country that might have been strongholds for particular species at that time.

Breeding data were extracted from the atlas cards (although these were few) and amalgamated with historical records of breeding obtained from published sources (Hustler & Howells 1988b, 1988c), personal observations and egg collectors.

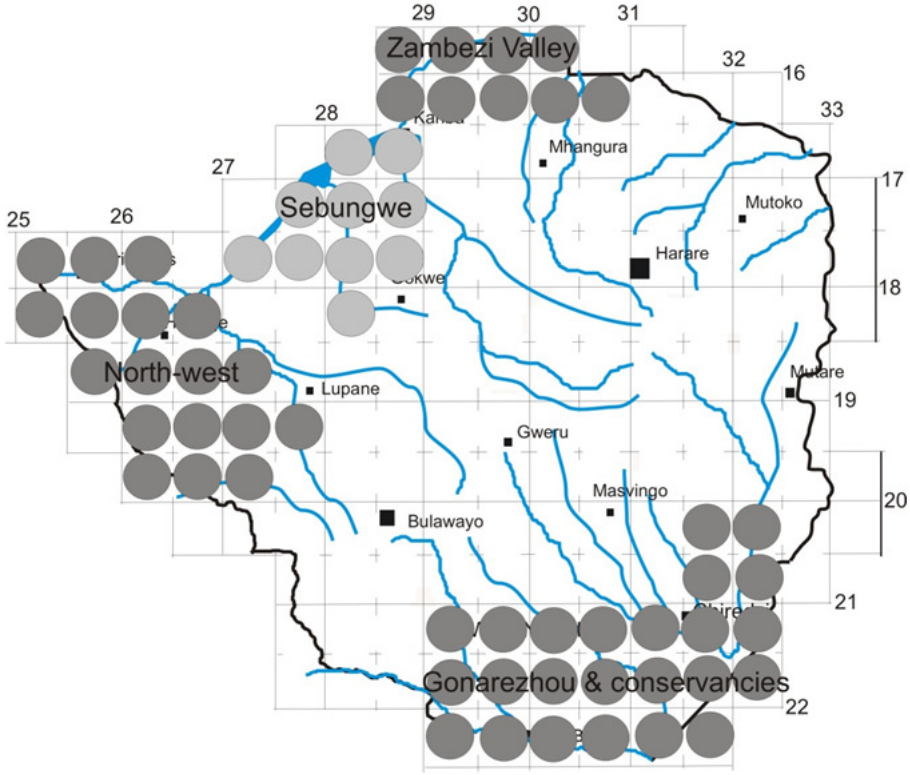

Figure 1. The location of HDS used in grouped analyses of vulture distributions; these are the areas referred to as Parks and Wildlife Land in the text. The HDS not covered by specific shading and identifiers is referred to as the 'Rest' in the text. The Sebungwe region is counter-shaded to distinguish it from the adjacent Parks and Wildlife areas.

Results

Pre-atlas information

There are limited historical data on the distribution of vultures in this part of Africa and much of this is anecdotal. Early writers tended to misidentify White-backed and Cape Vultures, underestimating the former and overestimating the latter. Nevertheless, there is a perception that all species were more widespread than they are now, presumably because there were more large game animals then, and also because livestock were susceptible to many diseases. The most notable of these was the outbreak of rinderpest in 1896-97 that killed 90% of cattle in Matabeleland, as well as most cloven-hoofed game animals (Vogel & Heyne 1996). This provided a super-abundance of food for vultures at first, but then very little once all the animals had died. It seemed that vultures declined after the rinderpest and only recovered once the game population increased.

That vultures were numerous before the rinderpest is indicated by Selous (1908), who shot a tsessebe in western Matabeleland in 1884 which attracted the attention of a dozen or more vultures in the short time before it died. In 1891, Churchill (1892) shot three Roan Antelope on the Umfuli River (presumably near present-day Beatrice) and described how "… vultures settled by scores …" on their bodies (pp. 228-229).

Priest (1933) included comments from [Sir Clarkson] Tredgold who wrote, "In my boyhood they [vultures] were plentiful everywhere – in that while generally invisible they appeared at once on a death or kill. We had rinderpest in 1896-1897, and after that they almost disappeared. It was generally said that they had got poisoned through eating rinderpest meat or through over-gorging. Whether this is true or not they certainly had enormously diminished in numbers. In 1904 I saw a few Black [Lappet-faced] and White-necked [White-backed?] if I remember rightly at Salisbury. I have noticed a marked increase here and my sons tell me that in our low veld – Tuli-Shashe area – one cannot leave a kill unprotected as they are so numerous and come down so quickly. I have heard of nesting places on the escarpment of the Zambezi Valley ...". Similarly, Alexander (1900) reported an unexpectedly low number of Hooded Vultures in the Zambezi Valley in 1898, immediately after the rinderpest, and mentions no other vulture species.

After their initial decline, vulture numbers seem to have recovered fairly quickly after the rinderpest. Marshall (1900)

noted that in Mashonaland, White-backed Vultures (misidentified as Cape Vultures) were "abundant", Lappet-faced Vultures were "common" and Hooded Vultures "fairly common." White-backed Vultures (again misidentified as Cape Vultures) were said to be "extremely abundant" in what is now the south-eastern lowveld of Zimbabwe and adjacent Mozambique (Swynnerton 1907). Priest (1933) was told by Austin Roberts that White-backed Vultures were plentiful along the Runde River in 1913, while White-headed Vultures were quite common along the Bubye and Mwenezi Rivers.

Priest (1933) witnessed the arrival of Lappet-faced Vultures in the Wedza district in June 1931, when he saw "exactly 30" of them approaching a young cow that had died about an hour earlier. He also remarks how astonished he was to have seen so many of them, since they were generally said to be solitary or occurring in pairs. He thought more might have come if he had not disturbed them – possibly by collecting one as a specimen (later sent to the Natal Museum). This is certainly an unusual sighting, and surely even Priest could have distinguished this species from any of the others.

Brooke (1963) updated Marshall (1900) for birds around Harare, noting that White-backed, Lappet-faced and Hooded Vultures had all declined, becoming "irregular visitors." White-headed Vultures were not recorded by Marshall or Brooke and they may never have been numerous in Mashonaland. However, Brooke's view was contradicted by Jackson (2015) who only reported a single Cape Vulture in the 1960s, but noted that this gave a wrong impression of vulture abundance around Harare (1730 D) because a farm manager noted that large numbers of vultures appeared whenever an animal died. An experiment carried out with a donkey carcass showed that 45 birds, mostly non-adult, congregated around the carcass within an hour. They included 30 White-backed, 14 Cape and 1 Lappet-faced Vultures. Hodgson (1966) recorded 150 vultures close to Harare in March 1966, while elsewhere in Mashonaland, White-backed and Lappet-faced Vultures were reported at Chivhu (1930 A) on the highveld in 1975 (Barnes 1975).

In the Bulawayo area Vernon (1967) reported the presence of Cape Vultures, usually in association with White-backed Vultures. Of the latter, he remarked rather cryptically that "Townsend found this species very common, so the position has obviously changed" from which it can be assumed that they had declined. [The reference is to unpublished notes made by S.F. Townsend from 1878-1925.] Vernon also noted that Plowes had seen Lappet-faced and Hooded Vultures just outside his study area and listed them as species likely to occur. In the 1973-82 Bulawayo garden bird survey Cape and White-backed Vultures were recorded species "incidental to gardens"; the former in two months and the latter in five (Feather 1986). They were presumably flying overhead, as they did over KH's house in Hillside in the early 1990s.

Ron Thomson (personal communication to KH) provided some insights into the situation in the Sebungwe in 1964-1968: "When I went to Binga in 1964 (through to 1965) I don't recall ever seeing a White-backed Vulture's nest anywhere in the district. Then, after the Tsetse Ops started in the Sebungwe (November 1964), the very next breeding season (winter 1965) in all the very tall *Acacia* trees that used to grow in the flatlands that lies between Lusulu (1827 B) and the Mzolo Forest Reserve (1828 B), practically every tall thorn tree that you could see carried a White-backed Vulture's nest. These colonies remained, apparently breeding successfully every year, until I left the district in late 1968. They appeared to be opportunistic breeders taking advantage of the game killing that was going on in the Sebungwe Tsetse Fly Corridor (1965-1968)."

"For the five years that I was in the district, a small colony of Hooded Vultures (around 10 pairs) used to breed in high tree forks, just under the canopies, of the giant *Mimusops zeyheri* trees, in well-spaced out nests at Muchaninga Springs (1727 C). White-headed Vultures were seen irregularly there and no nests were found. A Lappet-faced Vulture was found breeding in Chizarira National Park close to Manzituba Spring (1727 D)."

Cooper (1970) recorded White-backed, Hooded, Lappet-faced and White-headed Vultures, in this order of abundance at a carcass in Mana Pools National Park and Moore (1972) found Hooded Vultures breeding at Chizarira at a different location to that found by Ron Thomson.

White-backed Vultures were unexpectedly scarce as breeding birds in Gonarezhou National Park, with one loose colony close to the Chilojo Cliffs (2132 A) being reported (Thomson 1974). They were regular at carcasses but, unfortunately, there is no indication of their numbers or proportions in relation to other species. Hooded and White-headed Vultures did breed in the park, but were quite localised in specific habitats. Lappet-faced Vultures were found in scrubland and were close together on occasion. White-headed Vultures were widely spaced with an estimated 20 pairs, while Hooded Vultures were localised, breeding in suitable riparian vegetation.

Hwange National Park raptor survey 1972-1984

This survey was carried out using a fixed wing aircraft and developed from the need to get accurate data on the state of the game water supply in the park, which is 14 500 km^2 in extent. Monitoring flights began in April/May (the exact timing was determined by the amount of rain the previous season), with a follow-up flight in August/September. Long distances were covered in a short space of time, mostly at low level, and at that time of year, most trees had no leaves and nests were easily examined from the air. The nests were plotted on 1: 50 000 maps which were carried on the lap of the recorder in the backseat of the aircraft, as this was the pre-GPS era. Nests were checked along a series of routes that were pre-determined on the maps in order to optimise fuel use and time.

The survey specifically targeted large resident eagles, i.e. Tawny *Aquila rapax*, African Hawk *Aquila spilogaster* and Martial Eagles *Polemaetus bellicosus* (Howells & Hustler 1984; Hustler & Howells 1986, 1987, 1988a, 1989, 1990) but the survey was extended to include solitary nesting White-headed, Lappet-faced and Hooded Vultures (Hustler & Howells 1988b, 1988c, 1990).

White-backed Vulture nests were very numerous in the *Acacia*-lined watercourses in the basalt soils in the north and extreme south, where every watercourse had colonies of varying densities. These colonies were not monitored, as the emphasis was to line the aircraft up with the next eagle nest on the route and to avoid a potentially catastrophic collision with a vulture at these low levels. The locations of the numerous solitary nesting birds encountered in the featureless central part of the park were not plotted on the maps, because without GPS technology, there was little chance of re-locating them.

Lappet-faced Vulture nests were difficult to re-locate in the featureless terrain in which they were located. Hooded Vultures were found occasionally along the watercourses because they were in atypical sites or using known eagle nests (Hustler & Howells 1988c). Their nests were mostly located in

the northern part of the park and gathering data from them was a low priority, so they were probably under recorded. The number of flights was reduced in 1983/84 owing to a lack of funds and the survey was terminated in 1985. The survey maps were left in the ornithology department of the NMZB, but unfortunately, they have since been lost.

Some details of the abundance and breeding success across the country were given in Mundy (1982), and for the Lappet-faced Vulture in Gonarezhou (Anthony 1976).

Results of atlas data 1987-1992

The White-backed Vulture was the most commonly recorded species (n = 2 638), followed by the Lappet-faced (n = 1 085), White-headed (n = 880), Hooded (n = 810) and Cape (n = 179) Vultures. This amounted to 21.1; 8.6; 7.0; 6.4 and 1.4 % of cards having records of these vulture species on them, nationally.

Within the Parks and Wildlife Estate only, the number of records per HDS for White-backed and Lappet-faced Vultures (*c*. 50% and 25% of cards respectively) were similar in most areas, although numbers were slightly lower in the Sebungwe region (Table 1). White-headed and Hooded Vultures were recorded most frequently in the Zambezi Valley (*c*. 50% of cards), compared to the northwest and Sebungwe (*c*. 25% of cards) and the other conservation areas (*c*. 10% of cards). This was unexpected and it was not clear why there should have been such a difference between areas. The relative abundance of vultures outside the Parks and Wildlife Estate was low, with the White-backed Vulture being the only one to have been recorded on just over 10% of cards. Although the Cape Vulture was the least abundant species, it was recorded more frequently than the White-headed and Hooded Vulture in areas outside the Parks and Wildlife Estate.

Table 1. The relative abundance of each vulture species in the selected areas of Zimbabwe (see Figure 1). The values are expressed as the percentage of cards on which each was recorded; N = number of cards from each area.

	White-backed	Lappet-faced	White-headed	Hooded	Cape	N
Zambezi Valley	51	25	47	41	0	670
North West	46	18	24	21	2	1 079
Sebungwe	36	15	24	22	0	681
Gonarezhou/conservancies	44	26	10	11	3	1 448
Rest	11	3	0	1	2	8 183
National average	21	9	7	7	1	12 481

Nationally, White-backed Vultures accounted for 47% of all vulture sightings, followed by the Lappet-faced (19%), White-headed (16%), Hooded (14%) and Cape (3%) Vultures (Table 2). The White-backed Vulture was the most frequent species in the Parks and Wildlife and conservation areas with a fairly consistent proportion of 31-47% of records. The Lappet-faced Vulture accounted for 15-16% of records in the northern conservation areas, but for 28% in the Gonarezhou and southern conservancies. The proportion of White-headed and Hooded Vultures was fairly consistent in the northern conservation area (19-29%) but low in the south, where their proportion was less than half that in the northern areas. The Cape Vulture made up only a small proportion of the vulture populations and was mostly absent from the Zambezi Valley and Sebungwe regions. White-backed Vultures were the dominant species outside the conservation areas, accounting for 66% of all vulture sightings, followed by the Lappet-faced Vulture (16%). The remaining species were scarce in these areas, although the Cape Vulture made up 9% of all sightings, a much higher proportion than in the conservation areas.

Table 2. The proportions (%) of each vulture species recorded in HDS from selected areas (see Figure 1). N = number of vulture records in each area.

	White-backed	Lappet-faced	White-headed	Hooded	Cape	N
Zambezi Valley	31	15	29	25	0	1 097
North West	42	16	22	19	2	1 195
Sebungwe	37	16	24	22	0	664
Gonarezhou/conservancies	47	28	11	11	3	1 355
Rest	66	16	1	3	9	1 294
National average	47	19	16	15	3	5 647

Species accounts

White-backed Vulture

The White-backed Vulture was the most widespread and commonly recorded species and was found to breed outside of the Parks and Wildlife Estate (Figure 2). It was recorded four times as frequently in the Parks and Wildlife Estate than in the rest of the country, which probably reflects a more regular food supply in the conservation areas. The small number of records outside these areas, over a large geographical range, suggests that some birds move long distances over the countryside searching for food.

The number of records per card per HDS in each season suggests a slight increase in numbers in some areas during the hot wet season, possibly as a result of young birds dispersing from their breeding areas. This is opposite to the trend from the Zambezi Valley, where the lowest number of records was reported during the hot wet season (Figure 3a). None of the observed differences were statistically significant.

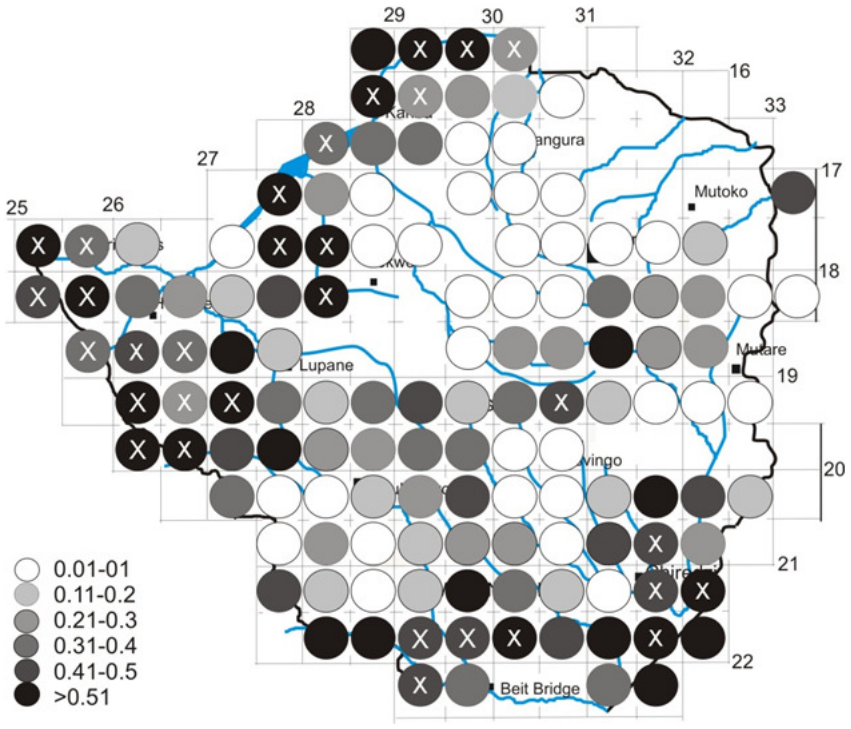

Figure 2. Distribution and relative abundance (no. of records per HDS) of White-backed Vultures in Zimbabwe between 1987 and 1992. Crosses indicate HDS with known breeding localities.

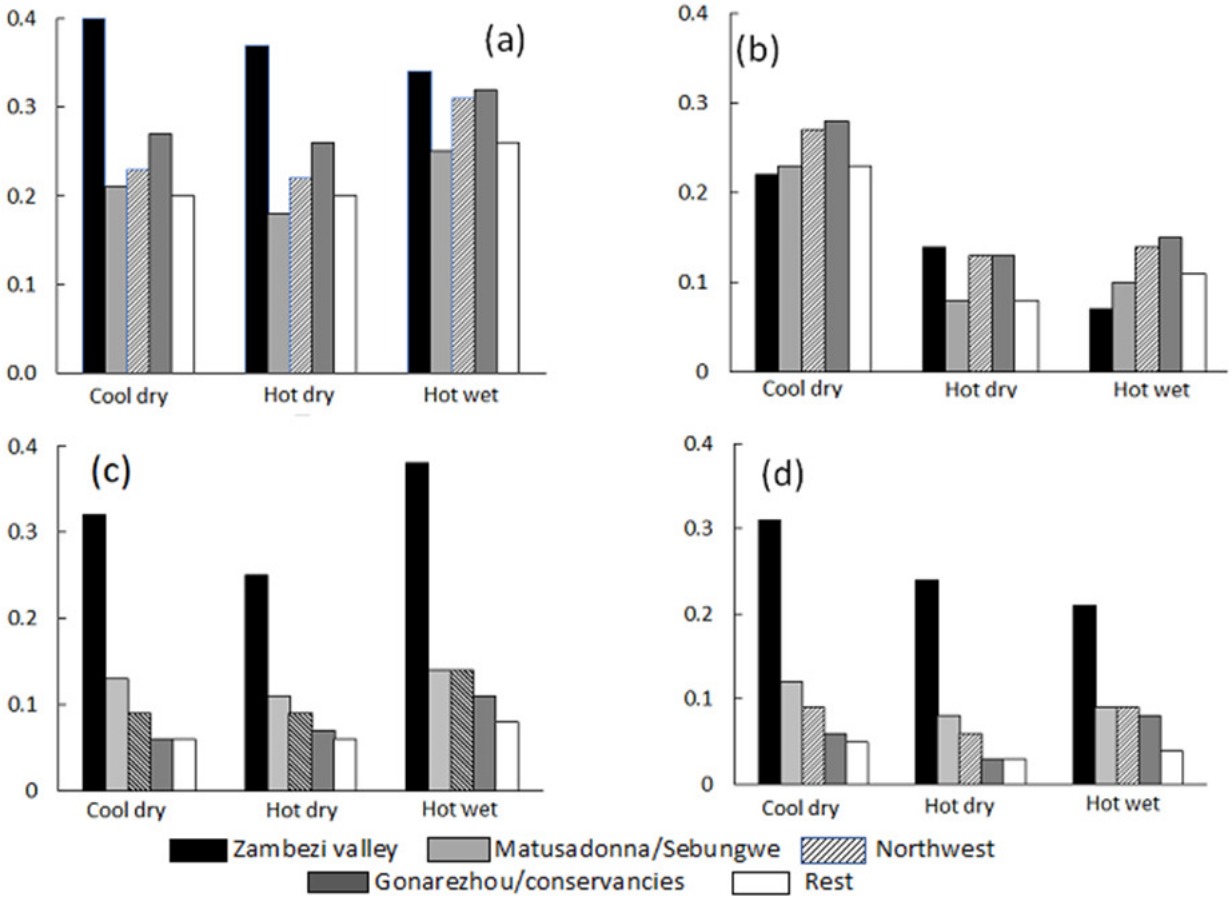

Figure 3. The mean number of records per HDS (vertical axis) of (a) White-backed, (b) Lappet-faced, (c) White-headed and (d) Hooded Vultures in the cool dry, hot dry and hot wet seasons between 1987-1992 in the selected areas of Zimbabwe shown in Figure 1.

There were large breeding colonies of this species at Kazungula and in the northwest (Sinamatella and Lukosi rivers and tributaries) and south (Gwabasibuyu drainage) of Hwange National Park. There was also an unknown number of isolated pairs breeding away from drainage lines. Some colonies in the park were very large in the early 1980s and the number of vultures attending carcasses at elephant culling often exceeded 500 individuals. The food that became available through the culling resulted in these vultures building nests close to bone refuse areas at Shapi (1926 C) at that time (KH personal observations). It is likely that the extended culling of elephants in the park attracted these vultures from elsewhere into the area at that time.

This vulture also bred on the Busi River in Chizarira National Park in 1981/1982, possibly as a result of elephant culling there, and along the Lutope, Sengwa and Manyoni Rivers in Chirisa Safari Area over the same time period. Elsewhere in Sebungwe they were probably opportunistic breeders (R. Thomson personal communication). They were inexplicably scarce as breeding birds in the Gonarezhou National Park in the early 1970s (Thomson 1974), although they were regularly reported at carcasses there. Later data suggest that it did not breed regularly in this National Park or surrounding areas.

White-backed Vultures seem to respond to local food availability and can be an opportunistic breeder when conditions allow. This probably explains the breeding records in the Lusulu district in the 1960s, the onset of breeding activity in the vicinity of meat refuse dumps during elephant culls in Hwange National Park in the early 1980s, and from the Mvuma area (HDS 1930 B) during the atlas period. It was estimated that historically there could have been more than 1 750 breeding pairs of this species in Zimbabwe, with almost 95% of them in wildlife conservation areas (Table 3).

Table 3. Historical estimates of the number of breeding records of vulture species in different regions of Zimbabwe as shown in Figure 1.

	White-backed	Lappet-faced	White-headed	Hooded	Cape	N
Zambezi Valley	500+	0	5	50+		555+
North West	100+	0	2	50		152+
Sebungwe	1000+	15	30+	30+		1 075+
Gonarezhou/conservancies	50+	70	20+	20		145+
Rest	100	5	0	0	?	105+
National average	1750+	90	57+	150+	0	2 047+

Lappet-faced Vulture

This was the second most commonly recorded species during the atlas and it was five times more frequent in the Parks and Wildlife Estate than anywhere else (Figure 4). The highest number of Lappet-faced records outside the conservation areas came from the Featherstone-Chivhu-Mvuma region (1830 D, 1831 C, 1930 A, B). This was also the area from which a high number of White-backed Vulture records were obtained, including the square with the only breeding record of that species (1930 B). This suggests the presence of local and regular food supply. The smaller geographical range of occasional sightings of Lappet-faced Vultures elsewhere suggests that fewer birds were searching for food in these areas.

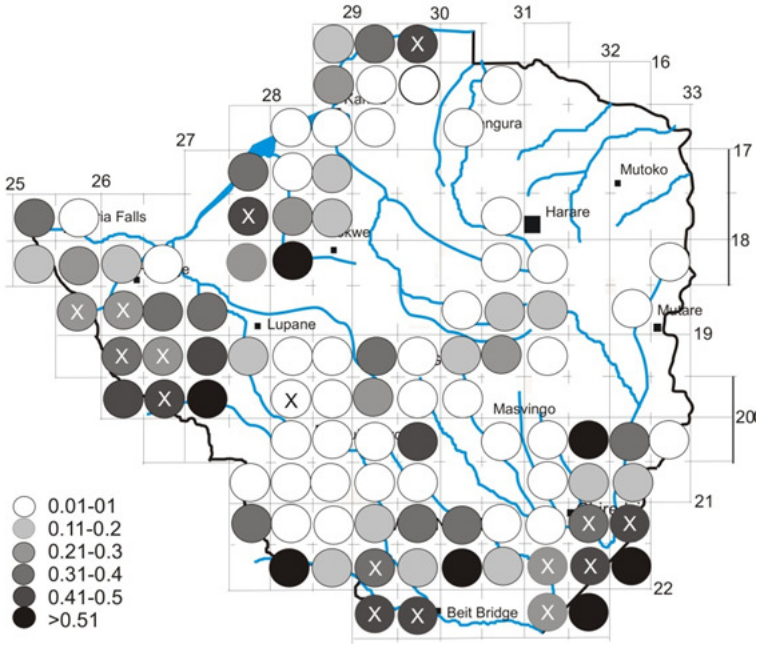

Figure 4. Distribution and relative abundance (records/HDS) of Lappet-faced Vultures in Zimbabwe between 1987-1992. Crosses indicate HDS with known breeding localities.

The number of records per HDS from all areas, during the cool dry season, was three times more than at other times of the year (Figure 3b). This suggests that birds come into the country from elsewhere because resident birds would be tied to nest sites at this time. The number of records/HDS halved in the hot dry and halved again in the hot wet seasons. The lower number of records and slight differences between the hot dry and hot wet seasons may be due to breeding birds incubating or young birds leaving nests. Trends in the Zambezi Valley were different to the rest of the country but similar to those recorded for the White-backed Vulture.

The number of reports per HDS from the Zambezi Valley and Gonarezhou were similar (Table 1) but this was not backed up by a similar number of breeding records (Table 3). There were no breeding records from the Zambezi Valley compared to 70 from the Gonarezhou. Mundy (1982) did not report Lappet-faced Vultures breeding in the Zambezi Valley and the absence of nests there was unexpected, given the high numbers of birds reported during the atlas period. This suggests that mostly non-breeding and perhaps immature birds lived there, a supposition confirmed by the seasonal increase in the number of reports per HDS during the cool dry season (Figure 3b) when breeding birds would be tied to nest sites. This suggests major differences between the two areas, as presumably the carrion provided by large carnivores would be enough to sustain breeding birds in both areas. We could find no data on game densities for each area. Plant communities in Gonarezhou, where Lappet-faced Vultures nest in loose colonies, are mostly absent in the Zambezi Valley and this might explain the lack of breeding records there.

Its breeding status in the Sebungwe is similarly uncertain although it was considered to be regular there between 1980-2004 (A. Dunkley personal communication). The only breeding records were from Chizarira National Park (Ron Thomson personal communication.; Ian Broderick personal communication; KH, personal observations). All known nests were in trees, which were enveloped in a thorny *Capparis* creeper similar to one illustrated by Chombe *et al.* (2013) in Lochinvar National Park, Zambia. It bred in the southern Chirisa Safari Area before 1970 (Jacobsen 1979), but the localities of any nests there are unknown. It was scarcely recorded there in 1981 (KH personal observations) and there are no recent breeding records.

Forty nests were found in Gonarezhou National Park (Anthony 1976), which was the largest known concentration of breeding birds in the country at that time. Hustler & Howells (1988c) revised the estimated number of 125 breeding pairs in HNP (Howells & Hustler 1984) downwards because it bred irregularly and in clusters. Data on the breeding pairs in the southwest of the country at this time were unavailable. It was estimated that there were about 90 breeding records for Zimbabwe as a whole, with 70 of them (*c.* 80%) being in Gonarezhou and 15 (*c.* 16%) in the northwest (Table 3).

White-headed Vulture

Most records of this species came from the Parks and Wildlife Estate or its immediate vicinity only. It was recorded most often in the Zambezi Valley, four times more frequently than in the northwest and Sebungwe and 10 times more than in the Gonarezhou region (Figure 5). This was unexpected, given the similar protected status for each of these areas, and probably reflects ecological differences between these areas.

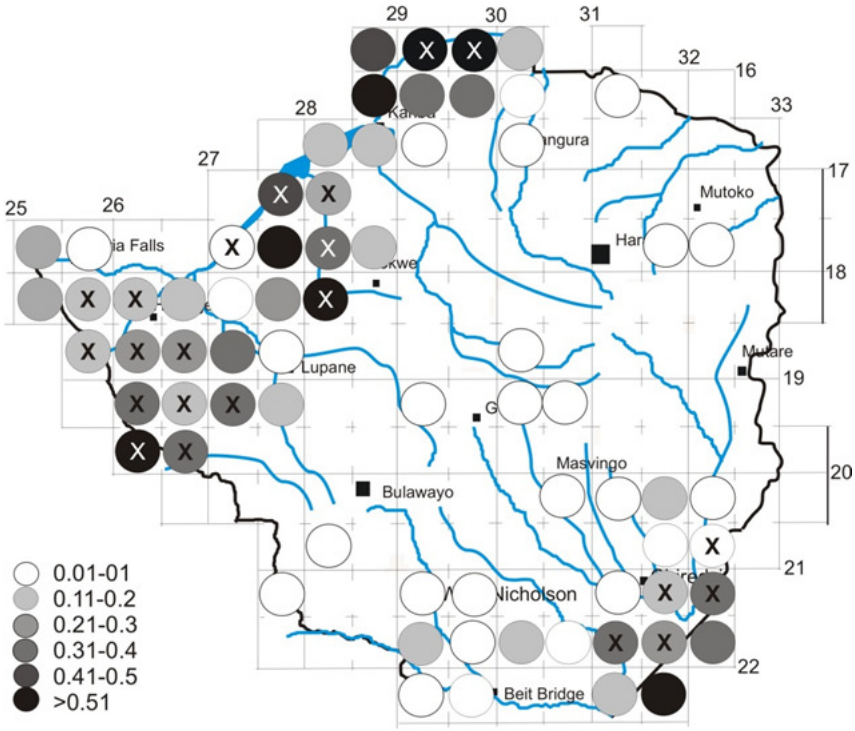

Figure 5. Distribution and relative abundance (records/HDS) of White-headed Vultures in Zimbabwe between 1987-1992. Crosses indicate HDS with known breeding localities.

There were no significant differences in the reporting rates for any season (Figure 3c). The slight increases in the number of records in the hot wet season may indicate the fledging of young birds. The lowest number of records was in the hot dry season across the country and this might reflect breeding, when incubating birds would be less visible, which would reduce the number of sightings by half.

Mundy (1982) reported inter-nest distances of 7-8 km in Gonarezhou, on which he based an estimate of 300 breeding pairs in the country. This was likely to be an overestimate because their breeding density in Gonarezhou, and in the other conservation areas, was not uniform (Ron Thomson personal communication; Hustler & Howells 1988b). The only substantive breeding data from Zimbabwe is from Hwange National Park, where 35 breeding pairs were monitored between 1973-1984 (Hustler & Howells 1988). They appeared to be territorial, with alternate nests close by and with the number of nests being determined by ecological productivity (Hustler & Howells 1988b, 1990). Nest site fidelity was very strong and nests found in the early 1970s were still occupied in the early 1980s (Hustler & Howells 1988b). The number of historical breeding records was estimated to be 42 with 30 (*c.* 70%) of them coming from the north-western conservation areas (Table 3).

Hooded Vulture

This species was largely confined to the Parks and Wildlife Estate and its immediate vicinity, with very few records from elsewhere in the country (Figure 6). It was recorded most often in the Zambezi Valley, four times more frequently than in the northwest and Sebungwe (4 times as often), and 10 times more frequently than in the Gonarezhou region. This was unexpected and the reasons for this are unknown. These records show the same trend as those of White-headed in the same parts of the Parks and Wildlife Estate and there were no significant seasonal differences in the number of records per HDS (Fig. 3d).

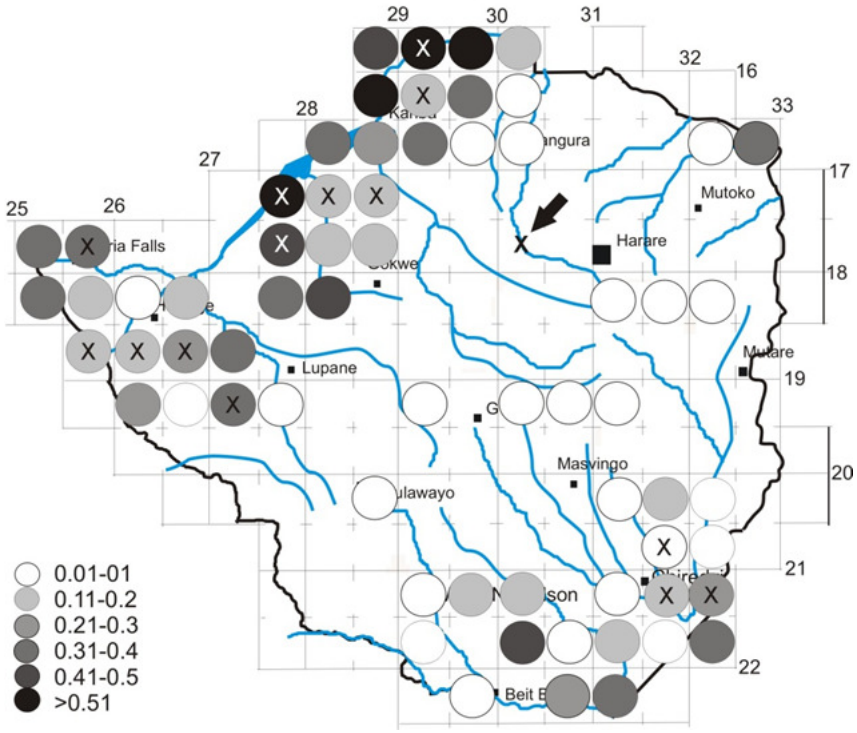

Figure 6. Distribution and relative abundance (records/HDS) of Hooded Vultures in Zimbabwe between 1987-1992. Crosses indicate all known breeding localities. The arrow indicates a recent (2018) breeding record not included in the atlas database or *Honeyguide* Field Observations.

Numerous nests were found prior to and in the 1990s just outside but close to Chizarira National Park and there were likely to be some pairs in suitable habitat in the Chirisa Safari Area, but there are no confirmed breeding records from there. Most of the nests in Hwange National Park were along the drainage lines in the northern part of the park and were found incidentally during the raptor survey, mostly because of their unusual positioning. Suitable riparian habitats between the Lukosi and Inyantue rivers could reveal more breeding pairs and there was one breeding record from the *Baikiaea* woodland. There were some breeding records in suitable habitat on the islands in the Zambezi River upstream of Victoria Falls. In 1962 a nest was found in the riparian fringe of the Runde River in Gonarezhou (Hughes & Vernon 1964) but the number that may have bred there is unknown and the habitat there has been severely degraded since then (B. Marshall pers. comm.). The estimated number of historical breeding records from the country as a whole was 150+ of which 130+ (*c.* 87%) came from the northern protected areas (Table 3).

Cape Vulture

This species was widely but thinly distributed across the south and west of Zimbabwe (Figure 7) and, unlike the other vulture species, it was not concentrated in the Parks and Wildlife Estate. Most records were in close proximity to the only known breeding colony at Wabai Hill on Debshan Ranch, Shangani. There was also a concentration of records around abattoirs in the Midlands, possibly of birds from Wabai. Two birds collected at Sentinel Ranch in 1960 were in breeding

condition (Irwin & Donnelly 1960) but it is not clear whether these came from the Wabai colony or from the large (at that time) colony at Blouberg on the western edge of the Soutpansberg in South Africa. An egg held in the collection of the Western Foundation of Vertebrate Zoology was collected from the Wabai colony in 1964. No breeding was reported during the atlas period and it bred sporadically at this colony prior to 1987, but specific details are lacking.

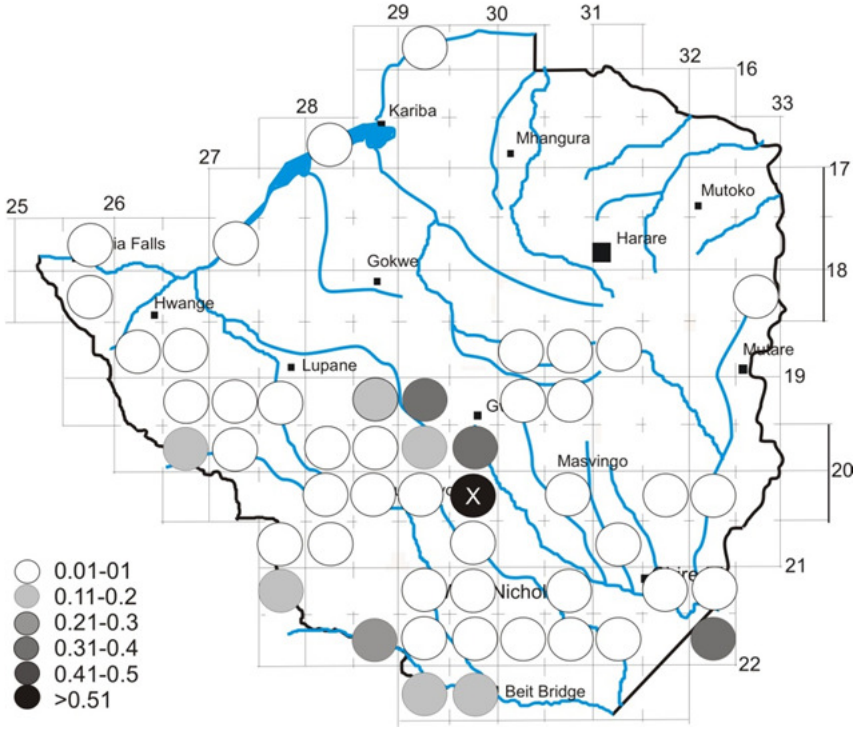

Figure 7. Distribution and relative abundance (records/HDS) of Cape Vultures in Zimbabwe between 1987-1992. The cross indicates the only known breeding colony.

Discussion

The atlas is a snapshot and historical record of the distribution and status of vultures (and other species) in Zimbabwe between 1987-1992. There is information on vultures from different parts of the country at different times but none are as comprehensive, in terms of coverage, as the atlas database. It is not, of course, without issues. The ideal situation would be that all observers were equally competent and that coverage for the whole country was the same, which was not the case (Cizek 2019). Vultures spend a lot of time quite high up in the sky and are not readily seen except when they are perched, feeding or bathing. There were identification issues, which involved the White-backed, Cape and Hooded Vultures, and other brown raptors, and there was no facility to record the numbers of birds, an unfortunate omission. It was not possible to record the ages of the birds concerned either, although most observers who were birdwatchers rather than professional ornithologists who would, in any case, have been unable to determine their ages.

Observer coverage also had an impact, since only one card from a HDS where a vulture was seen once would result in a high relative abundance, with the opposite effect on relative abundance if no vultures were recorded on that card. Some observers were able to confidently identify vultures and others not and this would have influenced the relative abundance value for that species. Many commercial farmers contributed atlas cards, so we are confident that the relative abundance of vultures from those areas is reliable. Similarly, visitors to the National Parks also contributed data from the areas they visited.

White-backed, Lappet-faced and Cape Vultures were the only species recorded with any regularity outside the conservation areas. The occurrence of vultures outside these areas was entirely due to food availability as a result of the land use practices in operation at that time. Sometimes, food was adequate enough to initiate breeding for White-backed Vultures and also provided focal points for Lappet-faced and Cape Vultures.

The Hooded and White-headed Vultures were rarely recorded outside of the Parks and Wildlife Estate and it must therefore be assumed that the health of these two species is determined by the conditions operating within the estate. The wide variation in their relative abundance in different parts of the estate was unexpected, and suggests that not all areas meet the ecological requirements of these species in the same way. For example, Lappet-faced Vultures were recorded more often in Gonarezhou than anywhere else, while White-headed and Hooded Vultures were recorded there least often. Since these areas all contained suites of large mammal carnivores and their prey in different densities and diversity, it is unlikely that the availability of large carcasses would determine this distribution pattern. This suggests that other, presently unknown, factors that influence the distribution of vultures were in operation here.

The White-backed and Cape Vultures appear to have a different ecology to the other species. Both appear able to make use of locally available food sources, suggesting that they range over much wider areas than the other species. Lappet-faced Vultures are seasonal and also make long distance movements into areas where food is locally abundant but appear to be quite specific in their nesting requirements.

White-headed Vultures are territorial and the only long-distance movement that occurs is probably of young birds. The few breeding pairs in the country indicate that the chances of seeing a White-headed Vulture wandering outside of the conservation estate are quite slim. The situation is less clear for Hooded Vultures and it might be the regularity of food in a limited area that determines their occurrence there.

It is assumed that historically all vulture species were widespread across the country. The limited evidence suggests this may have been true for the White-backed Vulture only (Jonasi 1994; Jackson 2015). In Mashonaland, there are historical declines of Cape, Lappet-faced and Hooded Vultures and there appears to be no historical evidence of the occurrence of White-headed Vultures with any regularity here at all. The data presented here suggests that these declines have continued to the extent that Cape, Lappet-faced and Hooded Vultures are now vagrants to the highveld. There also appear to have been major changes inside the conservation areas as indicated by the different proportions of vulture species in these areas to the north and south of the main watershed. This confirms the suggestion in Irwin (1981) that numbers have been reduced and the distribution of vultures in the country has changed. The data also suggest that not all areas within the Parks and Wildlife Estate are equally suitable for all vulture species, in spite of their supposed similarities in terms of the presence of large carnivores, which provide carcasses from a variety of ungulates. This was unexpected and is a potential avenue for future investigation.

Acknowledgements

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References

Alexander, B. 1900. An ornithological expedition to the Zambesi River. *Ibis*, 7th series, **6**: 424-457.

Anon, 2018. African vultures SAFE action plan. Denver Zoo, North Carolina Zoo, and San Diego Zoo Global, USA. https://www.speakcdn.com/assets/2332/safevulture_actionplan2018-2020.pdf

Anthony, A.J. 1976. The breeding biology of the Lappet-faced Vulture in Gonarezhou National Park. Certificate in Field Ecology dissertation, University of Rhodesia.

Barnes, R.P. 1975. Marabou Storks and vultures in Enkeldoorn District. *Honeyguide* No. 81: 43-45.

Brooke, R.K. 1963. Birds round Salisbury, then and now. *South African Avifauna Series* No. 9: 67 pp.

Chombe, C., M'simuka, E. & Nyirenda, V. 2013. Patterns of nest placement of Lappet-faced Vulture (*Torgos tracheliotus*) in Lochinvar National Park, Kafue Flats, Zambia. *Open Journal of Ecology* **3**: 431-437. http://dx.doi.org/10.4236/oje.2013.36049.

Churchill, Lord Randolph. 1892. *Men, Mines and Animals in South Africa.* Appleton, New York.

Cizek, A. 2019. Variation in geographical coverage of sampling in Zimbabwe during the SABAP1 Period. *Honeyguide* **65**: 81-88.

Cooper, J. 1970. Relative abundance of four species of vulture at Mana Pools. *Honeyguide* No. 61: 32-33.

Feather, P.J. 1986. The Bulawayo garden bird survey 1973-1982. *Honeyguide* **32**: 13-33.

Harrison, J.A., Allan, D.G., Underhill, L.G., Herremans, M., Tree, A.J., Parker, V. & Brown, C.J. (eds.) 1997. *Atlas of Southern African Birds*, Volume 1. BirdLife South Africa: Johannesburg.

Hodgson, C.J. 1966. Vultures in Mashonaland. *Honeyguide* No. 49: 8.

Howells, W.W. & Hustler, C.W. 1984. The status and breeding success of eagles and vultures in the Hwange National Park, Zimbabwe. *In*: Mendelsohn, J.M. & Sapford, C.V. (eds.) *Proceedings of the second symposium on African predatory birds*. Natal Bird Club: Durban; p. 99-107.

Hughes, D. & Vernon, C. 1964. Ornithology Report. *In*: Gonarezhou Expedition 1962 and Malimbasimbi Expedition 1964. Rhodesian Schools Exploration Society, Bulawayo: pp. 72-75.

Hustler, K. & Howells, W.W. 1986. A population study of Tawny Eagles in the Hwange National Park, Zimbabwe. *Ostrich* **57**: 101-106.

Hustler, K. & Howells, W.W. 1987. Breeding periodicity, productivity and conservation of the Martial Eagle. *Ostrich* **58**: 135-138.

Hustler, K. & Howells, W.W. 1988a. The effect of primary production on breeding success and habitat selection in the African Hawk Eagle. *Condor* **90**: 583-587.

Hustler, K. & Howells, W.W. 1988b. Breeding biology of the White-headed Vulture in Hwange National Park, Zimbabwe. *Ostrich* **59**: 21-24.

Hustler, K. & Howells, W.W. 1988c. Breeding biology of the Hooded and Lappet-faced Vultures in the Hwange National Park, Zimbabwe. *Honeyguide* **34**: 109-115.

Hustler, K. & Howells, W.W. 1989. Habitat preference, breeding success and the effect of primary production on Tawny Eagles *Aquila rapax* in the tropics. *Ibis* **131**: 33-40.

Hustler, K. & Howells, W.W. 1990. The influence of primary production on a raptor community in Hwange National Park, Zimbabwe. *Journal of Tropical Ecology* **6**: 343-354.

Irwin, M.P.S. 1981. *The birds of Zimbabwe*. Quest, Harare.

Irwin, M.P.S. & Donnelly, B. 1960. Ornithological report. *In*: Sentinel Expedition, Rhodesian Schools Exploration Society, Bulawayo: p. 66-70.

Jackson, H.D. 2015. Bird notes from Retreat Farm, Harare, 1950-1970. Part 1. Non-passerines. *Honeyguide* **61**: 131-172.

Jacobsen, N.H.J. 1979. Birds of the Sengwa Wildlife Research Area, Zimbabwe Rhodesia. *Southern Birds* No.6: 28 p. Witwatersrand Bird Club: Johannesburg,

Jonasi, G. 1994. Concentration of White-backed Vultures at McIlwaine Game Park. *Honeyguide* **40**: 93.

Marshall, G.A.K. 1900. Notes on Mashonaland birds. *Ibis*, 7th series, **6**: 221-270.

Moore, R. 1972. The breeding of the Hooded Vulture (*Necrosyrtes monachus*) in the Chizarira wilderness area. *Honeyguide* No. 69: 36-38.

Mundy, P.J. 1982. *The comparative biology of southern African vultures*. Vulture Study Group: Johannesburg.

Ogada, D., Shaw, P., Beyers, R.L., Buij, R., Murn, C., Thiollay, J-M., Beale, C.M., Holdo, R.M., Pomeroy, D., Baker, N.

Kruger, S.C. Botha, A., Virani, M.Z., Monadjem, A. & Sinclair, A.R.E. 2016. Another continental vulture crisis: Africa's vultures collapsing towards extinction. *Conservation Letters* **9**: 89-97.
Priest, C.D. 1933. *The Birds of Southern Rhodesia*, Volume 1. William Clowes: London.
Selous, F.C. 1908. *African Nature Notes and Reminiscences.* MacMillan: London. Pp.285-286.
Swynnerton, C.F.M. 1907. On the birds of Gazaland, Part II. *Ibis*, 9th series, **1**: 278-311.
Thomson, W.R. 1974. The common vultures of the Gonarezhou. *Honeyguide* No. 79: 29-35.
Vernon, C.J. 1967. The acacia savanna avifauna of Bulawayo, Rhodesia. *South African Avifauna Series* No. 43: 45 pp.
Vogel, S.W. & Heyne, H. 1996. Rinderpest in South Africa – 100 years ago. *Journal of the South African Veterinary Association* **67**: 164-170.

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Notes on African Paradise Flycatchers Nesting at Victoria Falls

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On the morning of 24 January 2020 my wife noticed the beginnings of a small nest in a teak *Baikiaea plurijuga* tree in our Victoria Falls garden (17° 55.732S 25° 49.253E). This teak is one of nine that extend along part of our northern boundary. The nest was sited in a fork towards the end of a thin downward sloping branch about 2.5 m above ground and a similar distance from our kitchen window. The branch on which the nest was being built faced south.

Nest Building

From its size it seemed likely that work on the nest had only begun the previous day. After first noticing the nest, a pair of African Paradise Flycatchers *Terpsiphone viridis* was seen during the day bringing nesting material and working it in. The male was a short-tailed individual, but was distinguishable from the female by a much bluer bill and a more pronounced wattle around the eye.

Over the next five days, nest building by both birds continued with the female often sitting in the nest and compacting the sides and bottom by pushing herself downwards. She called occasionally while doing so. It was not possible to monitor the nest continually but it was apparent that their main work for the day was carried out during the morning then easing off between 13h00 and 14h00. On 26 January, however, the female was seen adding to the nest and compacting at 15h20 and 15h46.

On 28 January the male came to the nest at 15h15 calling in agitated fashion. The female arrived within 30 seconds and sat on the nest for a minute or two while compacting the inside. It is not known what caused the male's agitation.

Nest building by both birds continued on 29 January and was completed either that day or on the morning of the 30th. Assuming that building commenced on 23 January, the nest was completed in about eight days. The finished nest was a small, tight, shallow cup composed mainly of fine twigs or stems and bark fragments. During construction spider webs were frequently used to bind the other materials and to secure the nest to the branch. Sticky white plant down was attached to the outside of the nest.

Incubation

We were not able to view the nest on the 30th before 13h40 when the female was sitting tightly. She left the nest at 14h02 and the nest was left unattended for about an hour. Thereafter both birds were seen on the nest at different times with periods in between when both were absent. The last time the female was seen on the nest that afternoon was at 17h16, and the nest was unattended when checked again at 19h20 and 21h00. In this species the first egg may be left uncovered for 24 hours after being laid, and it seems likely one egg was laid during the morning 30th.

On 31 January the nest was unoccupied when checked at 05h15 and 05h39. The female was then seen on the nest at 05h59 and she sat at various times until 10h49 with short periods of absence. The first time the male was noted on the nest was at 11h05. For the remainder of the daylight hours the birds alternated their sitting with the nest sometimes being left unoccupied for a few minutes at a time. The female was seen on the nest during the evening and presumably remained overnight.

It was not possible to view the inside of the nest without causing disturbance and so it is not known how many eggs were laid.

The same pattern of alternate sitting continued on 1 February with the nest being left unattended only for brief periods. Intermittent heavy rain fell during the day with the sitting bird remaining in place until it stopped or eased off. The female's shifts were generally longer than the male's whose stints lasted an average of 25 minutes. The female was on the nest overnight.

On the morning of 2 February two African Golden Orioles *Oriolus auratus* moved into the middle canopy of the teak trees. The female remained seated on the nest while the male noisily mobbed the Orioles, and the intruders moved on after five minutes or so. The parents alternated the sitting during the day with the male in place on one occasion for nearly an hour. This was the male's longest stint noted during the incubation period. The female sat overnight until nearly 06h00.

The regular sitting pattern continued over the next few days with the female taking the night shift. On 4 February a pair of Dark-capped Bulbuls *Pycnonotus tricolor*, along with at least three African Paradise Flycatchers, including a long-tailed male, were particularly active as they leaf-gleaned in the upper strata of the teak trees. The female was sitting and the male was highly agitated and aggressive, especially so when a juvenile flycatcher's curiosity caused it to venture to within a

metre or so above the nest. The male took over nest-sitting duty a short time later, still agitated and vociferous. Two days later the male attacked a pair of Fork-tailed Drongos *Dicrurus adsimilis* that came into their tree. The interlopers subsequently moved on without incident.

Although the nest was not monitored for sustained periods between 4 and 11 February, the female was noted to sit on two occasions in dry weather for 73 and 74 minutes. It was also noticeable that the male's presence on the nest increased slightly over this period.

On 12 February, estimated to be the 13th day after the first egg was laid, the nest was more closely monitored between 06h49 and 18h59. Change-over between the birds was continuous, with the sitter leaving only as its partner arrived. Only on one occasion was the nest left unattended, that being for about 30 seconds. During this twelve-hour period, time spent sitting on the nest was split at a ratio of 59.6% female and 40.4% male. Their longest shifts amounted to 57 minutes and 33 minutes respectively. On one stint of 51 minutes, the female became agitated and called frequently for the last 15 minutes. The female's night shift commenced at 18h59.

Nestlings

On 13 February at 06h05 both birds were noisily active around the nest. They stood on the rim, peered in and flew short distances only to return immediately. During this frantic activity the female removed a shell from the nest, flew off to dispose of it and returned shortly afterwards. At least one egg had therefore hatched, an estimated 14 days from laying. The nest was monitored for two hours from 12h54 during which time both birds brought a total of six food items. Most were unidentified, but one large fly and possibly a smaller one were seen.

On 14 February (Nestling Day 2) in the three hours between 11h55 and 14h55 food was brought to the nest twelve times. The parents fed alternately, leaving the nest unattended occasionally for up to two minutes although they were absent once for eight minutes. White and brown larvae of about 2.5 cm in length comprised the bulk of the food offered at the nest.

On the morning of 15 February (Nestling Day 3) both parents were seen on one occasion standing together on the rim of the nest with food items. Between 15h58 and 18h00 the parents fed seven times, mostly with larvae. For the first time a yellow tip to the bill was seen above the nest edge but the number of chicks still remained unknown.

Both parents aggressively repelled two Fork-tailed Drongos in the teak trees during the morning of 17 February (Nestling Day 5). In the three hours between 12h15 and 15h20 ten food items were brought to the nest, including a large black fly. The nest was left unattended for 27 minutes from 12h30. Heavy rain fell from 13h41 to 13h54 while the female was sitting and the male brought food at 14h19, some 44 minutes after the previous feed. Only one bright yellow bill and gape was seen when food was brought.

On 18 February (Nestling Day 6) the nest was monitored from 12h20 until 15h55. Both parents brought large flies and larvae with seven visits being made to the nest in all. Only one chick was seen each time food was offered and was large enough for its dull orange head and part of the neck to be seen. In this 215-minute observation period the nest was left unattended six times for a total of 101 minutes (47%) with the longest period of absence being 28 minutes. A heavy thunderstorm began at 15h01 and the female remained on the nest for 42 minutes until the rain had eased off. An hour and twelve minutes elapsed between feeds during this fall of rain.

On the morning of 19 February (Nestling Day 7) a juvenile African Goshawk *Accipiter tachiro* ventured into the middle canopy of the Teak trees. It was fiercely attacked by both flycatchers. Twice it moved a short distance away only to return almost immediately. It eventually moved off after about ten minutes. The nest was watched for two hours from 09h18, during which food was brought to the nest nine times. It included white larvae and what seemed to be dragonflies, some with wings removed. The female provided six of the food items and remained on the nest each time for between three and nineteen minutes. The male did not remain at the nest on any of his three visits. In the two hours it was monitored, the nest was left unattended for a total of 69 minutes (57.5%). Only one chick was noted. Its head and neck were still bare dull orange and the bill and gape bright yellow. The base of the neck was a dull purple colour. Both parents swallowed faecal sacs.

The nest was watched for two hours on 20 February (Nestling Day 8) from 09h55 and the chick was fed nine times, with dragonflies and flies of various sizes making up most of the diet. No larvae were seen. The female fed five times and the male made four visits. During the first hour food was brought six times and three times in the second hour. The amount of time the nest was left unattended increased from the previous day to 93 minutes (77.5%). The male always left the nest immediately after feeding the chick. The female sat on the nest on two visits for 4 minutes and 19 minutes, otherwise she lingered no more than a minute or two. The female swallowed one faecal sac during this two-hour period.

On 21 February (Nestling Day 9) nine feeds were made in two and a half hours from 11h45. The chick was fed only once in the first hour and eight times in the following 90 minutes. Six of the feeds were made by the female. Three times the parents fed the chick within a few minutes of each other. Both parents left immediately after feeding, neither of them sitting on the nest at any time. After being fed, the chick was often active in the nest with its head and shoulders showing well above the rim. The chick's upper parts were covered in short bristle-like feathers although the pink-red face was still bare. Both parents fed the chick at 18h35 and left the nest. The female returned about 5 minutes later and remained for the night.

The female left the nest at 06h01 on 22 February (Nestling Day 10) and the first feed was brought two minutes later. Both parents attacked Fork-tailed Drongos in the teak tree during the morning. The nest was watched for 130 minutes from 13h45. Eleven feeds were brought to the nest, nine of them in a 55-minute period. Both parents, on one occasion each, brought food twice within a minute. On most visits, food was thrust into the gape immediately on alighting thus making identification of the meal difficult. A dragonfly, a large black fly and possibly a moth with the wings removed were noted however. Both parents left the nest immediately after offering food. The female removed a faecal sac on one visit. The chick's face showed the beginnings of feathers while the throat was still bare. It spent lengthy periods looking out of the nest with head and bill showing. It preened itself five times, mostly after being fed, and vigorously flapped its wings on three occasions. It stood two or three times showing dusky brown feathers on the wings and body.

The nest was monitored for 150 minutes from 12h05 on 23 February (Nestling Day 11). Ten feeds were made, eight of them within a 59-minute period. Two faecal sacs were removed and the female swallowed another. The chick was extremely active in the nest. It stood for 80 consecutive

minutes, frequently preening itself, stretching and wing-flapping. Once while wing-flapping it over balanced but managed to hang on to the edge of the nest. A short stubby tail was seen as the chick moved around. When not standing the chick sat in the nest, staying alert and looking out, its head and bill visible.

Fledgling

At about 14.55, 20 minutes or so after I had stopped monitoring the nest, we were surprised to see the chick gripping the rough wall of an outside storeroom about five metres from the nest and close to the ground. It flapped its wings vigorously while trying to maintain its position. The parents were close by, calling and flying around and seemingly agitated. The chick dropped to the ground. It appeared exhausted and remained there for some while. It then flew at low level into bushes about 15 metres away with the parents flying after it. The chick frequently called in a piping, squeaky whistle. It is not known if the chick accidentally fell from the nest or if the parents enticed it to leave, if indeed they would do so in mid-afternoon. My wife and I went out for a short while at that point but saw the chick again at 17h05 resting outside our bedroom on the windowsill. After it flew from there into cover, we did not see it again that evening.

From about 01h00 until late morning on the following day, 24 February, heavy incessant rain fell with over 125 mm recorded in the Victoria Falls area. We were therefore not at all optimistic on the chances of the chick's survival, particularly as its departure from the nest may have been premature. With rain falling continuously, we did not go into the garden during the morning, but several times the adults were seen and heard. We saw no sign of the chick. At 13h40, however, after the rain had stopped, it was seen flying rapidly across the garden into some bushes, shepherded by an adult. The other adult followed a few seconds later. It was seen again after that, once on the same windowsill as the previous day and then flitting around high in the upper canopy of the teak trees with the adults. When perched on the windowsill its tail could be seen protruding about 20mm beyond its folded wings.

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Editor's note: I was interested to read that the parent birds swallowed the faecal sac because this behaviour may not be invariable. When I lived in Kariba in the 1980s, a pair nesting in our garden dropped the faecal sacs into a nearby bird bath. These accumulated quite rapidly, necessitating a regular clean-out. They would probably have disappeared if deposited in running water and this must be an effective way of disposing of the chick's faeces to prevent predators from locating the nest.

The chick was not seen again thereafter. Adult Flycatchers were seen leaf-gleaning three times in the garden during the next seven days although the short-tailed male was not positively identified.

Discussion

In most respects these observations comply with the breeding data contained in Hockey *et al*. (2005. *Roberts' birds of southern Africa*, 7th ed., pages 687 and 688). They do differ, however, in some areas and may also add additional information.

Hockey *et al*. give the average time during incubation that either parent will sit on the nest as 20 minutes with the longest shift lasting 60 minutes. Changeover will not take place during rain. The female was noted on the nest in dry conditions for 73 consecutive minutes on day 5 of the incubation period and for 74 minutes on day 10. She also sat for 71 minutes on day 10 during which time heavy rain fell.

Hockey *et al*. indicate that the adults will swallow faecal sacs up to nestling day 5 and carry them away thereafter. Both parents swallowed sacs on day 7 and the female swallowed one on day 8. On the morning of day 11, the day the chick left the nest, two sacs were removed and the female swallowed one.

The nest was monitored on ten of the eleven days of the nestling cycle for a total of nearly 25 hours. Food was brought to the nest 91 times during those observations. The chick was given an average of 3.9 feeds per hour with the feeding visits split 57% by the female and 43% male. In the first half of the cycle, food was brought to the nest at a rate of 3.5 visits per hour and increased to 4.3 visits per hour in the second half. The only comparable data in Hockey *et al*. refers to two chicks in Zimbabwe that were given an average of five feeds per hour in a three-day period with the adults alternating visits.

At no time was the chick seen to eject faeces over the side of the nest which, according to Hockey *et al*., occurs towards the end of the nesting cycle. This may support my belief the chick left the nest prematurely.

Male incubating in heavy rain, 2 February. *Photo © C. Baker*

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Birds Feeding on Termites in the Matobo Area

Termites only emerge from their nests for feeding, and for a courtship flight from which few of them survive to form a new colony. They are an occasionally abundant food source in African savannahs but very few animals specialise on termites, among them the Aardwolf *Proteles cristata* (Bothma & Nel 1980). However, many vertebrates also take advantage of the occasional opportunity; for example, a Black-backed Jackal *Canis mesomelas* was observed on Cyrene with its mouth over the emergence point allowing the termites to fly directly into its throat. Even amphibians take advantage of the resource (Poynton & Pritchard 1976). Some invertebrates take some as well, for example on 28 Dec 1975 dragonflies were observed catching them on the Matopos Research Station, eating the abdomens and then dropping the thoraxes which were snatched up by Southern Masked Weavers, Red-billed Queleas and White-browed Sparrow-weavers. The calorific value of termites has been discussed by Brooke *et al.* (1972) and the importance of this resource is further emphasised by the numbers of raptors that migrate to Southern Africa and mainly eat termites (Jensen 1972).

Harvester termite *Hodotermes* workers were foraging on the Matopos Research Station (MacDonald 1984) at the time of this study from May and October. The few bird species seen feeding at this time were all feeding on the ground, suggesting they were feeding on these termite workers (Kok & Hewitt 1990).

The birds seen feeding at 71 termite emergences in the Matobo area were listed during the period 1971/76 with the addition of a few from 1949/51 (Plowes, personal communication). They were recorded in every month except October with half the records coming from November and December. Three termite genera were recorded: *Hodotermes* (19 records with 57 bird species), *Macrohodotermes* (2 records with 14 bird species) and *Odontotermes* (2 records with 9 bird species). Not all of these termite genera were recorded on each occasion but *Hodotermes* was the most frequent of them.

Brooke (1970) divided feeding methods into seven categories according to how the prey was dealt with after capture but here it was just recorded whether they were captured in the air, on the ground or at the hive (not recorded for all species). Both workers and alates were captured.

A total of 87 species was recorded taking termites (Table 1), with 30 of them catching them in flight, 23 taking them on the ground and in the air. The three most frequently recorded species were recorded feeding actually at the hive. The number of species peaked in November and December, the period when most flights were recorded. The number of species at an emergence was typically low with a mean (± SD) of 3.7 ± 9.7 species. The largest number of species (17) was recorded on 8 Nov 1972 and 2 Dec 1975. A total of 40 species were recorded at an emergence in Hwange National Park in December 1989, although some appeared to be attracted to the birds rather than the termites, such as the Lanner Falcon *Falco biarmicus* that caught a bee-eater and departed (Bing 1993).

The largest number of raptor species was six, on 27 Nov 1973 at six, while seven species were recorded at a swarm in the Matobo National Park (Banfield 1993). Hundreds of Black Kites and Steppe Eagles have been recorded feeding on termite alates on the Matopos Research Station (Brooke *et al.* 1972).

The most frequently recorded species was the Barn Swallow at twelve emergences, followed by the Dark-capped Bulbul and Fork-tailed Drongo, found at nine emergences. Species recorded at five or more termite swarms included the Lilac-breasted Roller, Black Kite, Steppe Buzzard, Red-backed Shrike, Blue Waxbill, Red-billed Quelea, Steppe Eagle, White Stork, Cape Glossy Starling, Green-winged Pytilia and Yellow-fronted Canary. Other species were recorded less frequently, with 66 (71.4%) being recorded on three or fewer occasions.

Species that were not listed as taking termites in Brooke *et al.* (1972) but did so during this study include the White Stork, Peregrine Falcon, Crowned Plover, Cape Turtle Dove, Yellow-billed Hornbill, African Cuckoo, House Martin, African Pipit, White-throated Robin-chat, Acacia Grey Tit, Boulder Chat, Arrow-marked Babbler, Southern White-crowned Shrike, Cape Glossy Starling, Cut-throat Finch, Red-headed Weaver and Scaly-feathered Finch.

These data clearly indicate the highly opportunistic utilisation of this unpredictable resource, which is utilised by many bird species when it becomes available. A number of migratory bird species are highly nomadic in pursuit of these resources. Most of the breeding species have chicks either in the nest or just fledged in November and December (Irwin 1981) so termites are a further useful food source for the chicks.

Acknowledgment

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References

Banfield, G.E.A.1993. Matobo Raptor Research Group report – 1992. *Honeyguide* **39:** 34-35.

Bing, M. 1993. A feast of termites. *Honeyguide* **39**: 150-151.

Bothma, J. du P & Nel, J.A.J. 1980. Winter food and foraging behaviour of the aardwolf *Proteles cristata* in the Namib-Naukluft Park. *Madoqua* **12**: 141 - 149.

Brooke, R.K. 1970. Birds eating winged termites. *Honeyguide* No. 64: 17-18, 38.

Brooke, R.H., Grobler, J.H., Irwin, M.P.S. & Steyn, P. 1972. A study of the migratory eagles *Aquila nipalensis* and *A. pomarina* (Aves: Accipitridae) in southern Africa, with comparative notes on other large raptors. *Occasional Papers of the National Museum of Rhodesia* B **5**: 61-114.

Irwin, M.P.S. 1981. *The birds of Zimbabwe*. Harare: Quest Publications.

Jensen, R. A. C. 1972. The Steppe Eagle *Aquila nipalensis* and other termite-eating raptors in South West Africa. *Madoqua* **1**: 73–76.

Kok, O.B. & Hewitt, P.H. 1990. Bird and mammal predators of the harvester termite *Hodotermes mossambicus* (Hagen) in semi-arid regions of South Africa. *South African Journal of Science* **86**: 34-37.

Macdonald, I.A.W. 1984. The influence of short-term climatic fluctuations on the distribution of savanna organisms in southern Africa. MSc thesis, University of Natal.

Poynton, J.C. & Pritchard, S. 1976. Notes on the biology of *Breviceps* (Anura: Microhylidae). *Zoologica Africana* **11**: 313-318.

Table 1. The bird species seen feeding on termite alates in the Matobo area, and they number of times they were seen doing so (N).

Species	N	Species	N
Abdim's Stork *Ciconia abdimii*	8	Black-headed Oriole *Oriolus larvatus*	3
White Stork *Ciconia ciconia*	5	Acacia Grey Tit *Melaniparus afer*	6
Marabou Stork *Leptoptilos crumenifer*	1	Southern Black Tit *Melaniparus niger*	2
Black Kite *Milvus migrans*	8	Dark-capped Bulbul *Pycnonotus tricolor*	9
Yellow-billed Kite *Milvus aegyptiacus*	1	Arrow-marked Babbler *Turdoides jardineii*	1
Lesser Spotted Eagle *Aquila pomarina*	1	Kurrichane Thrush *Turdus libonyana*	1
Wahlberg's Eagle *Hieraaetus wahlbergi*	1	White-throated Robin-chat *Cossypha humeralis*	1
Steppe Eagle *Aquila nipalensis*	1	Familiar Chat *Oenanthe familiaris*	1
Steppe Buzzard *Buteo buteo*	8	African Stonechat *Saxicola torquata*	1
Shikra *Accipiter badius*	1	Boulder Chat *Pinarornis plumosus*	1
Amur Falcon *Falco amurensis*	1	Spotted Flycatcher *Muscicapa striata*	4
Peregrine Falcon *Falco peregrinus*	1	Southern Black Flycatcher *Melaenornis pammelaina*	4
Greater Kestrel *Falco rupicoloides*	1	African Paradise Flycatcher *Terpsiphone viridis*	1
Eurasian Hobby *Falco subbuteo*	1	Willow Warbler *Phylloscopus trochilus*	3
Swainson's Spurfowl *Pternistis swainsonii*	3	Tawny-flanked Prinia *Prinia subflava*	2
Helmeted Guineafowl *Numida meleagris*	1	Red-backed Shrike *Lanius collurio*	5
Crowned Plover *Vanellus coronatus*	1	Southern Fiscal *Lanius collaris*	1
Laughing Dove *Spilopelia senegalensis*	3	Magpie Shrike *Urolestes melanoleucus*	3
Cape Turtle Dove *Streptopelia capicola*	2	White-crested Helmet-shrike *Prionops plumatus*	2
Klaas's Cuckoo *Chrysococcyx klaas*	1	S. White-crowned Shrike *Eurocephalus anguitimens*	1
Diderick Cuckoo *Chrysococcyx caprius*	1	Southern Puffback *Dryoscopus cubla*	2
Jacobin Cuckoo *Clamator jacobinus*	1	Scarlet-chested Sunbird *Chalcomitra senegalensis*	7
African Cuckoo *Cuculus gularis*	1	African Pipit *Anthus cinnamomeus*	1
Grey Lourie *Corythaixoides concolor*	1	Plum-coloured Starling *Cinnyricinclus leucogaster*	3
White-rumped Swift *Apus affinis*	1	Red-winged Starling *Onychognathus morio*	2
Little Swift *Apus caffer*	1	Cape Glossy Starling *Lamprotornis nitens*	6
Common/Black Swifts *Apus apus/barbatus*	4	House Sparrow *Passer domesticus*	3
Palm Swift *Cypsiurus parvus*	1	White-browed Sparrow-weaver *Plocepasser mahali*	4
European Roller *Coracias garrulus*	1	Yellow-throated Bush Sparrow *Gymnoris superciliaris*	1
Lilac-breasted Roller *Coracias caudatus*	6	Scaly-feathered Finch *Sporopipes squamifrons*	1
Purple Roller *Coracias naevius*	2	Red-headed Weaver *Anaplectes rubriceps*	3
S. Yellow-billed Hornbill *Tockus leucomelas*	4	Southern Masked Weaver *Ploceus velatus*	6
African Grey Hornbill *Tockus nasutus*	3	Red-billed Quelea *Quelea quelea*	7
European Bee-eater *Merops apiaster*	2	Southern Red Bishop *Euplectes orix*	1
Green Wood-hoopoe *Phoeniculus purpureus*	1	Black-faced Waxbill *Estrilda erythronotos*	3
Cardinal Woodpecker *Dendropicos fuscescens*	1	Cut-throat Finch *Amadina fasciata*	2
Black-collared Barbet *Lybius torquatus*	1	Green-winged Pytilia *Pytilia melba*	2
Yellow-fronted Tinkerbird *Pogoniulus chrysoconus*	1	Violet-eared Waxbill *Uraeginthus granatina*	1
Crested Barbet *Trachyphonus vaillantii*	2	Blue Waxbill *Uraeginthus angolensis*	8
Barn Swallow *Hirundo rustica*	12	Yellow-fronted Canary *Crithagra mozambica*	5
Red-breasted Swallow *Cecropis semirufa*	5	Black-throated Canary *Crithagra atrogularis*	1
Lesser Striped Swallow *Cecropis abyssinica*	1	Streaky-headed Seedeater *Crithagra gularis*	4
House Martin *Delichon urbica*	3	Golden-breasted Bunting *Emberiza flaviventris*	1
Fork-tailed Drongo *Dicrurus adsimilis*	9		

D.A. Ewbank, *Ely, UK.* [edited posthumously]

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Unusual Feeding Habits of African Fish Eagles at Kanga Pan, Mana Pools, Zimbabwe

Paul Hubbard, Mariet Mashonganyika, Reginald Mafa, Cliffy Mandu, Rinzilani Majoko and **Liberty Ibasa**

The African Fish Eagle (*Haliaeetus vocifer*) is renowned for its hunting abilities over water and its call remains one of iconic sounds of Africa. It is commonly assumed it feeds almost exclusively on fish, but its opportunistic, kleptomaniac behaviour is well-recorded, as is its occasional favouring of different prey in other areas of Africa (Brown 1960; Green 1964; Thiollay & Meyer 1978). In this short note, we record observations about some apparently unusual and undocumented feeding behaviour noted inland from the Zambezi River at Mana Pools National Park.

Kanga Pan, once seasonal but now perennial because water is pumped into it, is located in the south-western portion of Mana Pools National Park, close to the Rukomechi River. Today the pan is the centrepiece of a private concession granted to African Bush Camps. The pan is surrounded by *jesse* thickets, with only small clear patches in between the scrub. The annual rainfall is approximately 700mm, falling mainly between November and March, during which time numerous small, scattered waterholes form, many lasting until winter sets in. Once these smaller water sources are dry, Kanga Pan is the only waterhole for a radius of at least 10km. There is a resident breeding pair of Fish Eagles at the pan, and they can be seen all year round.

Lungfish *Protopterus annectens* and African catfish (Barbel) *Clarias gariepinus* are the largest fish found in the pans in this area. They are most visible in the wet season after the rains have fallen (November to March), feeding and breeding within the pans. Once the pans dry up in the area, lungfish are able to survive by burrowing into the mud, encasing themselves in a mucilaginous cocoon and aestivating until the rains come again. The catfish do not do this, and although there are a few reported cases of them surviving in moist sand, most will die if the pan dries up completely (Donnelly 1973, 1978). Thus, fish are only available to the Kanga eagles for perhaps seven or eight months of the year, in a good rainy season. Thus, they would presumably either need to relocate to an area where fish are available, or change their feeding habits for part of the year in order to survive year-round without moving.

In the dry months between August and November, the Fish Eagles at Kanga regularly hunt doves, i.e. Laughing Dove *Spilopelia senegalensis* (80-130g), Red-eyed Dove *Streptopelia semitorquata* (190-300g), Cape Turtle Dove, *S. capicola* (100-160g), and Emerald-spotted Wood-dove *Turtur chalcospilos* (55-70g), that come down to drink at the muddy waterhole. The eagles wait for the massive congregations of the doves that occur in the morning and evening and dive down into the horde, often emerging with a victim in their talons. We have not yet had the opportunity to determine exactly which species of doves are taken, although each of them has been killed and eaten by the eagles at various times.

As a matter of record, we would also like to note that Mandu observed a Fish Eagle hunting and killing a White-faced Whistling Duck *Dendrocygna viduata* at Matusadona National Park in 2009.

Each adult Fish Eagle usually hunted and ate its kill alone, despite them being a breeding pair. They hunt the doves every day, which is similar to their behaviour when hunting fish. They only require approximately 150g of food a day (Brown 1980) and thus the doves, which vary in weight from 80 to 300g will meet these requirements. On occasion, the eagles have been seen to snatch doves from the talons of African Goshawks *Accipiter tachiro*.

One of us (Mafa) has observed a Fish Eagle eating carrion on the Kanga Concession in the early dry season of July 2016. An adult was observed perched on the carcass of a kudu, killed by lions, stripping pieces of meat and swallowing them. It did this for at least 10 minutes. This unusual behaviour may be an important and overlooked source of food for these birds in difficult times, such as drought.

At Kanga Pan, it would seem that the resident pair of African Fish Eagles have adapted to the changing fortunes of the fluctuating pan. The rise and fall of water has an impact on the fish population, which is not visible in the dry months between August and October, having burrowed deeply and protectively into the mud. By developing a more varied diet in the dry season, the Fish Eagles are perhaps able to avoid competition for breeding space along the Zambezi River. Similar behaviour has been noted at other water bodies in Africa (Thiollay & Meyer 1978).

Additionally, we suggest that these eagles may take bird prey more often than is recognised or appreciated in southern Africa, as there are several references to such behaviour in East Africa (Brown 1960, 1980; Green 1964; Eltringham 1978), while only a few in this region (Hockey *et al*. 2005, p. 482). More observations are needed on African Fish Eagles in Zimbabwe, not least along permanent water bodies to better appreciate the true complexity of their feeding habits.

Acknowledgements

Thanks to Brian Marshall for comments on lungfish and barbel that informed this note and to Denzel Sofula for his kind interest and assistance at Kanga. The support of African Bush Camps is acknowledged and appreciated.

References

Brown, L.H. 1960. The African Fish Eagle *Haliaetus vocifer* especially in the Kavirondo Gulf. *Ibis* **102**: 285-297.

Brown, L.H. *The African Fish Eagle*. Cape Town: Purnell.

Donnelly, B.G. 1973. Aspects of behaviour in the catfish *Clarias gariepinus* (Pisces: Clariidae) during periods of habitat desiccation. *Arnoldia (Rhodesia)* **6**(9): 1-8.

Donnelly, B.G. 1978. Evidence of fish survival during habitat desiccation in Rhodesia. *Journal of the Limnological Society of Southern Africa* **4**: 75-76.

Eltringham, S.K. 1978. Territory size and distribution in the African Fish Eagle. *Journal of the Zoological Society of London* 175: 1-13.

Green, J. 1964. The numbers and distribution of the African Fish Eagle *Haliaetus vocifer* on the eastern shores of Lake Albert. *Ibis* **106**: 125-128.

Hockey, P.A.R., Dean, W.R.J. & Ryan, P.G. (eds.) 2005. *Roberts' Birds of Southern Africa VIIth Edition*. John Voelcker Bird Book Fund, Cape Town.

Thiollay, J.M. & Meyer, J.A. 1978. Densité, taille des territoires et production dans une population d'Aigles pecheurs, *Haliaeetus vocifer* (Daudin). *La Terre et la Vie* **32**: 203-219.

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Editor's note: Most sea eagles (*Haliaeetus* spp.) have varied diets that include carrion. Some of them, like the Bald Eagle *H. leucocephalus,* survive harsh winters by feeding almost entirely on carrion, such as dead sheep (DellaSella *et al*., 1989. *Northwest Science* **63**: 104-108) or wild ungulates (Grubb *et al*. 2018. *Journal of Raptor Research* **52**: 471-483). Steller's Sea Eagle *H. pelagicus*, which also experiences extreme winters, has a very varied diet and one study found that it took birds, fish, mammals and carrion, in that order of importance (Utekhina *et al*., 2000. *First Symposium on Steller's and White-tailed Eagles in East Asia*. Wild Bird Society of Japan, Tokyo: p. 71-82). Some controversy has arisen over proposals to re-introduce the White-tailed Eagle *H. albicilla* to parts of England because of fears that they would kill lambs or piglets, and game birds (*The Guardian*, 21 March 2010, "The war of the sea eagles"). Efforts are also being made to reduce lamb mortality in parts of Scotland where these eagles have now become established and their numbers are growing (BBC News, 24 May 2019, "Scottish trials to stop sea eagles stealing lambs").

An inland pair of White-bellied Sea Eagles *H. leucogaster* in Australia ate fish, waterbirds and freshwater turtles, but had been seen feeding on the carcasses of feral pigs (Debus, 2008. *Australian Field Ornithology* **25**: 165-193). African Fish Eagles may feed more exclusively on fish than the other species, possibly because African rivers and lakes support more of them, but they readily take dead fish and scavenge around fishing villages. In some areas they utilise birds, most famously flamingos in some Kenyan lakes (this can be seen on BBC videos available on YouTube). On Lake Naivasha, their numbers fell and they failed to breed because of a drastic decline in their main prey, fish and Red-knobbed Coots *Fulica cristata* (Haroer *et al*., 2002. *Hydrobiologia* **488**: 171-180). This behaviour has not been widely reported in Zimbabwe, however, and the report above is therefore of considerable interest.

SHORT COMMUNICATIONS

Ringed White Stork Recovered in South-eastern Zimbabwe

A member of the Mahenye community recently employed by Chilo Gorge Safari Lodge as a tracker, revealed that he had been walking back late one evening on 14 February 2018 from Chitove on the Runde River (21°18'S, 32°16'E), when he noticed a large white bird on the bank. This bird approached him, allowing him to capture it which he then took back to his village. His efforts the next day to feed it proved unsuccessful, and it later died.

The villager then removed the ring that was placed on one of the legs, which he kept. It was only after his employment at Chilo that this information became known to me. The ring was brought to me on 13 October 2019 and I immediately emailed the address on the ring (No. BGS B6093). The bird proved to be a first-year White Stork *Ciconia ciconia* that had been ringed on 8 August 2017 at Opan, Stara Zagora, Bulgaria (42°13'N, 25°41'E). It had been taken as a nestling on 27 July 2017 from Obruchishte, a neighbouring village about 20 km SE of Opan, to the Wildlife Rehabilitation Centre run by "Green Balkans" Federation in Stara Zagora to be cared for until fledging. It was released 8 August 2017 at Opan village. The bird was therefore found 7 096 km from where it was ringed, after an interval of 190 days. The fact that it had to be reared at a rehabilitation centre suggests that it may not have been in good condition from the beginning.

Thanks to the Bulgarian Ornithological Centre, Sofia, Bulgaria, for the information about its ringing.

Clive Stockil, *Chilo Lodge, Chiredzi*. ✉ clive@chilogorge.com

A Leucistic Lappet-faced Vulture at Mana Pools National Park

On 15 July 2019, I was on my way into Mana Pools National Park to guide at Bushlife Safaris, Vundu. At 12h40, approximately 200m before the Nyamepi Camp reception, I observed a number of vultures feeding off a dead impala, and amongst them was a very white bird on the ground. Closer inspection revealed that it was a leucistic Lappet-faced Vulture *Torgos tracheliotus*. It was accompanied by a normal-coloured bird and there were also eight White-backed Vultures *Gyps africanus* in attendance. I managed to take a number of photos of this unique bird.

I later heard that a similar bird, probably the same one, was observed in Zambia opposite Nyamepi Camp feeding on a dead elephant.

Jim Mackie, *Bushlife Safaris* ✉ jimjenmackie@mweb.co.zw

Figure 1. The leucistic Lappet-faced Vulture (left) and the normally coloured bird (right) observed at Mana Pools. Photo: © Jim Mackie.

Hooded Vultures Drinking and Bateleur Behaviour

The Hooded Vulture *Necrosyrtes monachus* is said to drink only rarely (Mundy *et al*. 1992. *The vultures of Africa*. Acorn Books and Russel Friedman Books). On 15 September 2019 at 09h40, two birds alighted at Kavinga Safaris pan in Mana Pools National Park along with a juvenile Bateleur *Terathopius ecaudatus*. Both vultures drank by inserting the whole of the bill in the water and presumably sucked the water up, as they did not tilt the head back to let it flow down.

The Bateleur was either acting aggressively or was in a playful mood. It fluffed up its head and neck feathers as it watched the vulture close to it drink and sometimes tilted the head forward. A group of impalas *Aepyceros melampus* that came down to drink surrounded the birds and at one stage it 'alarmed' a male impala by leaping up at it with its wings spread.

I.C. Riddell, *Harare*. ✉ gemsaf@mango.zw

Figure 1. Two Hooded Vultures, a juvenile Bateleur, and some impala at the Kavinga Safaris Pan. Photo © Ian Riddell

An Undocumented Feeding Behaviour of the Yellow-billed Kite

At about 11h 00 on 21 December 2019, I was birdwatching from the platform at Nyamandhlovu Pan, Hwange National Park. A mixed flock of approximately 50 Yellow-billed *Milvus aegyptius* and Black Kites *M. migrans* was seen around the pan – some flying, some standing on the ground and several walking around searching for food.

Just before leaving the pan I witnessed a Yellow-billed Kite pick up a substantial piece of elephant dung in its talons. It then flew in a circular motion to a height of about 7 or 8 metres and released the dung, allowing it to fall to the ground. The dung broke on impact and the kite descended immediately and proceeded to pick out what I assume were insects or other types of food. Other kites were in close proximity and a couple of them took advantage of the scattered pieces and foraged in the same manner.

I was at the pan for only about 20 minutes and as many other birds were present my attention was not always focussed on the kites. I only noticed this behaviour once and it was not apparent at any other locations within the Park during this visit.

This observation has been recorded as this method of feeding is not mentioned in Hockey *et al*. (2005. *Roberts' birds of southern Africa*, 7th edn. p. 479-481).

Debbie Swales, *Harare*. ✉ birddogs@zol.co.zw

An Unusual Pied Gabar Goshawk

On 28 July 2019 an astonishing colour phase of a Gabar Goshawk *Micronisus gabar* spent about half an hour at a birdbath in the garden in Newlands, Harare. The bill was black, the cere red, the eye dark red-brown and the legs reddish with black scaling on the front and top of the toes. The plumage showed a combination of leucism and melanism; the head and neck were mainly black with some partially white feathers. The mantle was largely white and the rest of the upperparts a mix of black and white. The upper tail was similar to a normally plumaged pale morph, the underwing coverts black and white and the flight feathers mainly white with black barring. It is easier for the reader to examine the accompanying plates; see *Front Cover* and *Inside Front Cover*.

This pied-phase appears most unusual though perhaps recorded before. Day (1987. Birds of the upper Limpopo Valley. *Southern Birds* **14**) mentions an intermediate but without a description. Van Someren (1922. Notes on the birds of East Africa. *Novitates Zoologicae* **29**: 1-246) says "…in the Nairobi Museum is a specimen which is parti-coloured."

I.C. Riddell, *Harare*. ✉ gemsaf@mango.zw

Figure 1: The Pied Gabar Goshawk at a birdbath in Newlands, Harare. Photo © Ian Riddell

Unusual Sighting of Eleonora's Falcon

On 11 February 2020, we were on a quest to find the Red-rumped Swallow *Cecropis daurica* that had been seen near Penhalonga. Richard Crawshaw and I picked up Morgan Saineti at the bottom of Christmas Pass and set off.

On the way Morgan said the weather seemed to be very good for sightings of Eleonora's Falcon *Falco eleonorae* and we stopped two or three times to look at falcons but they were all Eurasian Hobbies *Falco subbuteo*. We reached the swallow site and quite quickly thereafter we did find the bird. Whilst Richard was running around desperately trying to photograph it, Morgan shouted and pointed skywards. On looking up we saw four falcons flying around hawking but with a definite south-easterly movement. They were large falcons, very dark in colour, and I could just make out a chocolate brown colour on the leading edge of the wing, which was darker than the flight feathers. Their flight was rather slow and 'lazy' with shallow wing beats. We watched them for a few minutes and all of us concluded that they were indeed Eleonora's Falcons. We saw another two, about 10 minutes later, but decided they may have been from the original four.

The weather was blustery with mist and very low cloud at about 150 m and the falcons were probably at about 100 m, occasionally flying through swirling *guti* – according to Morgan "perfect for Eleonora's." Regrettably, the light rainfall and terrible light conditions made it impossible to take any photographs.

Tony Wood, *Harare* ✉ tonyzw@gmail.com

A Red Phalarope in Hwange National Park

On 20 January 2020 I was birding at Shumba Pan in Hwange National Park (18°48'S, 26°20'E). At 12h44 I noticed a mostly white bird swimming around the pan and immediately knew it was something unusual. It was on its own and did not associate with any of the other species that were present. As it swam closer a dark patch behind the eye, grey back and short broad bill were clearly visible, and when it flew, I could see its wing pattern and plain grey back. These features, together with previous experience of phalaropes while birding in Israel, led me to the conclusion this was a Red Phalarope *Phalaropus fulicarius* in its non-breeding plumage. I took numerous photographs from which colleagues later confirmed this identification.

Jean-Michel Blake, *Hwange National Park* ✉ frenchyjb@gmail.com

Figure 1. The Red Phalarope photographed at Shumba Pan, Hwange National Park. Photo © Jean-Michel Blake

More on the Range Expansion of the Eastern Nicator

Recent records suggest that the Eastern Nicator *Nicator gularis* is expanding its range in Zimbabwe. An early report came from Hwange National Park (Riddell, 1998. *Honeyguide* **44**: 222-223), followed by more records from the Munyati River near Empress Mine (Riddell, 2006, *Honeyguide* **52**: 64). A more unusual record came from Harare (Hyslop, 2011. *Honeyguide* **57**: 136) and these changes were mapped by Riddell (2014, *Honeyguide* **60**: 25-26). This note reports yet another new distributional record of this species.

In January 2020, Jim Mackie saw five and heard other Eastern Nicators on Poker Ranch (also known as Nyamuswa), about 20 km southwest of Lion's Den (QDS 1729B4) on the western flank of hills and high ground with tributaries draining west to the Sanyati River, from where the birds have no doubt spread. The habitat was thickets of flame acacia *Senegalia ataxacantha,* and Narina Trogons *Apaloderma narina* and African Broadbills *Smithornis capensis* were present in the same area.

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Records of Yellow-billed Kites: July to November 2019

C.T. Baker

Yellow-billed Kite *Milvus aegyptius* records submitted for inclusion in Field Observations and sightings drawn from elsewhere are shown separately here. No **Black Kite** *Milvus migrans* records were noted.

The first Yellow-billed was reported on 14 July. This was two weeks earlier than the previous year's first record although the second sighting this year was only reported after 16 days had elapsed. It therefore seems likely only a small number arrived between mid-July and month end. But as the number of observers submitting records in this period was less than usual, the true arrival pattern is not at all clear.

The table below contains the first sighting of the season at Victoria Falls and only records of large flocks seen thereafter are included. Daily counts in and around the town were made by CB and JB and it is interesting that only nine were noted between the first on 11 August and the end of the month. Thereafter the average number of birds seen per day was: September 2.2, October 3.1 and November 2.4.

Included in the table below, but worth highlighting, are journeys made in November by ND between Harare and Lake Kyle. On the downward trip only two kites were noted whereas on the return leg four days later no less than 25 were seen. Such are the vagaries of matters ornithological! And lastly, an observation from RR described Yellow-billed Kites as being abundant in Hwange NP in the last week of November following heavy rain.

The sightings shown below are of single birds except where noted otherwise.

14 July	Rifa Camp, Chirundu (1628 B2)	NG
30 July	Camp Hwange (1826 C4)	J-MB
3 Aug	Kavinga, Mana Pools NP (1629 A2)	LMcD
10 Aug	Hatfield, Harare (1731 C3)	PT
	Kariba Bream Farm (1628 D2)	CN
11 Aug	Victoria Falls (1725 D4)	CB, JB
25 Aug	Three at CCC Pig Farm, Norton	IR
25 Aug	Nyamatusi, Mana Pools NP (1529 C2)	CM
2 Sept	Mongwe Camp, below Chirundu (1528 D4)	BM
5 Sept	Binga (1727 C2) (number recorded not given)	NC
13 Sept	Near Victoria Falls Airport (1825 B2)	CB
	21 km along the Hwange-Msuna road (1826B1)	CB
	Msuna (1826 B2)	CB
	Nyamepi, Mana Pools (1529 C2)	IR
	Three on Harare to Tokwe-Mukozi Dam road, a 382 km trip	ND
14 Sept	Two at Msuna	CB
	Eight in Devil's Gorge (1726 D4)	CB
	Gwayi/Zambezi confluence (1726 D4)	CB
	At least two at Tokwe-Mukozi Dam (2030 D4)	ND
15 Sept	Msuna-Hwange road (1826 A4)	CB
16 Sept	Eight on the Tokwe-Mukozi Dam to Harare road	ND
25 Sept	Victoria Falls-Kazungula road:	CB
	40 km, 46 km (1725 D3)	
	57 km (1725 C4)	
8 Oct	At least 13 flocked together at Victoria Falls at 18h30 before heading to roost	CB, JB
10 Oct	Many at Livingi Pan, Hwange NP (1826 D2)	JV
12 Oct	Two caused havoc at a Carmine Bee-eater colony east of Trichilia Camp, Mana Pools NP (1529 C4)	TA
22 Oct	Late afternoon flock of about eight at Victoria Falls	JB
23 Oct	Victoria Falls-Kazungula road:	CB
	24 km peg (1725 C4)	
	38 km peg (1725 D3)	
24 Oct	Late afternoon flock of about ten at Victoria Falls	JB, CB
3 Nov	Siganda Gorge, Chizarira NP (1727 D1)	IR
4 Nov	Siabuwa Communal Lands at the base of the escarpment (1727 D1)	IR
	Near Impampa, Siabuwa Communal Lands (1727 D1)	IR
6 Nov	Near Sinampande, Siabuwa-Binga road (1727 B4)	IR
14 Nov	Only two on the Harare-Lake Mutirikwe road	ND
18 Nov	25 on the Lake Mutirikwe-Harare road, including five together 15 km after Chivhu (1830 D4)	ND
18 Nov	Near Victoria Falls airport (1825 B2)	CB
20 Nov	Victoria Falls-Bulawayo road, morning:	CB, JB
	45 km from Victoria Falls (1825 B2)	
	16 and 14 km before Hwange (1826 A4)	
	49 km after Hwange (1826 B4)	
	78 km and 88 km after Hwange (1827 C3)	
	12 km before Lupane and 2 km after Lupane (1827 D3)	
	4 km after Kenmaur (1827 D4)	
	82 km from Bulawayo (1928 C2)	
20 Nov	Bulawayo-Victoria Falls road, afternoon	CB, JB
	76 km from Bulawayo (1928 C2)	
	48 km and three 45 km before Kenmaur (1928 A3)	
	At Kenmaur (1927 B2)	
	Two 3 km after Victoria Falls airport	
23 Nov	Umguza, north of Bulawayo (1928 D3)	JV
28 Nov	Chamabonda vlei, west of Victoria Falls (1725 D3)	CB

Observers

TA – Tessa Arkwright, CB - Colin Baker, JB – Julia Baker, J-MB – Jean-Michel Blake, NC – Ngoni Chiweshe, ND – Neil Deacon, NG – Nyasha Gomwe, LMcD – Luke MacDonald, CM – Cliffy Mhandu, BM – Bev Morgan, CN – Carl Nicholson, RR – Rob Rees, IR – Ian Riddell, PT – Pete Taylor, JV – James Varden.

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Field Observations: June to November 2019

C.T. Baker

The demise of 537 **Vultures**, namely 468 **White-backed** *Gyps africanus*, 28 **Hooded** *Necrosyrtes monachus*, 17 **White-headed** *Trigonoceps occipitalis*, 14 **Lappet-faced** *Torgos tracheliotus* and 10 **Cape** *G. coprotheres* (along with two **Tawny Eagles** *Aquila rapax*), at poisoned elephant carcasses south of Chobe, Botswana, on about 20 June 2019 has been well documented. Such birds cover vast distances in their search for food and in the weeks that followed various observers reported reduced numbers of **White-backed** along the Zambezi. At Rifa Camp, Chirundu (1628 B2), for example, 96 and 103 were counted on 4 and 11 June, before this incident. Thereafter, only 36 were seen on the 26th, 42 on 3 July and 76 on 14 July; 58 and 34 visited on 3 and 10 September and 52 on 8 October (NG, EB). Vulture numbers will fluctuate from day to day but these counts over an extended period were significantly less than those recorded immediately before the poisoning. On a more positive note, at least as far as vultures are concerned, several participants in the Hwange Game Count on 13-14 October reported large numbers of vultures on elephants that had died in drought conditions there.

In November, with temperatures in the forties, IR carried out a survey in the Siabuwa Communal Lands along the Chizarira NP boundary. This dry area is over-utilised with people and cattle even venturing up the escarpment gorges into the National Park. Raptor numbers were low and not one **Bateleur** *Terathopius ecaudatus* was seen. Extensive poisoning of small birds apparently takes place in resettled parts of Chirisa Safari Area, southeast of Chizarira, and the knock-on (knock-off?) effect no doubt accounts for the low raptor count. In the Siganda QDS (1727 D1) a large number of sightings were obtained which, on the face of it, represent range expansion. This square, however, was probably under-recorded during the Atlas years and no comment is made in the text against such sightings unless considered necessary.

The country received below average rainfall in the 2018-19 season. As a result, wetlands rapidly dried out during the winter and suffered further under high temperatures from September onwards. Relief was only felt when heavy early-season rain fell in some areas. Harare received up to 50 mm on 2 November; Kavinga, Mana Pools NP (1529 C4), recorded about 80 mm and Rifa 75 mm on the night of 12 November; in the southeast, Chipinda Pools received its first significant rainfall on the night of 14 November.

Where mention is made in the text to the Atlas it refers to Harrison *et al*. 1997. *The atlas of southern African birds* and not to the current SABAP2 exercise. Records submitted by Ian Riddell from input to SABAP2 are identified with the observers' initials. Reports have also been obtained from BLZ's Special Species site on WhatsApp.

* Denotes a species on the Zimbabwe Rarities List.

† A Quarter Degree Square in which the relevant species was not recorded in the Atlas nor subsequently in Recent Reports and Field Observations.

Waterbirds and allied species

Little Grebe *Tachybaptus ruficollis* sightings from Lake Kariba have not been mentioned in these reports for over 20 years. A record from Musango (1628 C4) on 27 June (SE) is therefore exceptional.

About seven **Great White Pelicans** *Pelecanus onocrotalus* regularly visit the Kariba Bream Farm (1628 D2) but 25 appeared on 7 June. Numbers continued to increase with 39 by 1 July, about 50 a week later and 65 or more on 6 August. They were probably drought-displaced wanderers and at least 50 were still there on 13 September (CN). Flocks found elsewhere were 17 over Makwa Pan, Hwange NP (1827 C3), on 24 June (SH), about 20 at Long Pool, Mana Pools (1529 C2), on 19 October (TAr), 16 at the Salt Pan, Hwange NP (1826 C1), on 23 October (J-MB), at least 13 at Lake Manyame (1730 D3) on 8 November (AD) and *c*. 20 at Kent Estate Dam, near Norton (1830 B1), on 21 November (GL). A flock of **Pink-backed Pelicans** *P. rufescens* was seen by a number of observers upstream of Victoria Falls (1725 D4†) from mid-August, presumably having moved in from the Chobe River, Botswana. They were monitored by CBr who photographed an adult feeding a chick in the nest on 17 October. There can be little doubt this is the first, and long awaited, Zimbabwe breeding record.

Thousands of **Reed Cormorants** *Microcarbo africanus*, 30 **Grey-headed Gulls** *Chroicocephalus cirrocephalus* and about 50 **White-winged Terns** *Chlidonias leucopterus*, fed off what was assumed to be a shoal of kapenta at Musango on 22 October. The shoal moved continually and the birds leap-frogged each other as they gave pursuit. This feeding frenzy occurred over a 300-metre stretch of water (SE).

A group of 14 **Grey Herons** *Ardea cinerea* was at the Marimba River mouth, Lake Chivero (1730 D4), on 19 November (IR). **Black-headed Herons** *A. melanocephala* are uncommon on Lake Kariba but one was at Bumi Hills (1628 C4), on 21 August (SCh). Nearby at Musango one taking up more permanent residence was perhaps drought-displaced from the nearby Communal Lands in search of a better food source (SE).

An over-wintering **Black Heron** *Egretta ardesiaca* was on Melbury Dam, Borden Farm, Mhondoro (1830 A2), on 24 August (*The Babbler*). On the Zambezi at Kazungula (1725 C4) in November, single **Slaty Egrets** *E. vinaceigula* were reported on the 16th (SC) and 28th (J-MB). A **Rufous-bellied Heron** *Ardeola rufiventris* at Lanark Farm, Harare South (1830 B2), on 22 September was considered to be resident there (*The Babbler*). One was on a drainage area below Victoria Falls water treatment works (1725 D4) on 9 November (CB) and a **Little Bittern** *Ixobrychus minutus* was upstream of the Falls (1725 D4) on 29 November (SE).

Lone over-wintering **White Storks** *Ciconia ciconia* were at The Hide, Hwange NP (1827 C3) on 10 June, Camp Hwange (1826 C4) on 27 July (SH) and Mare Dam, Nyanga (1832 B4), on 23 June (AD). A large winter flock of up to 60 was on the University Farm, Chinhoyi, on 30 July (SE). Newly-arrived birds were recorded on 20 October at Mana Pools (1529 C2) where about 100 at Chisasiko Pool and 60 at Long Pool fed on stranded barbel as these pools rapidly dried out (NH). On 16 October in QDS 1832 A3†, individual **Black Storks** *C. nigra* headed north near the Headlands-Rusape road tollgate and 5 km east of Halfway House (DS).

It took over an hour for thousands of **African Openbills** *Anastomus lamelligerus* to fly in from the north to roost on the Gache Gache River, Lake Kariba (1628 D2), on 6 and 16 August (SE *et al*.). 116 were on Martin Spur Textile Ponds,

mid-way between Chegutu and Kadoma, on 21 September (*The Babbler*). A **Marabou Stork** *Leptoptilos crumenifer* with a chick in the nest on Spurwing Island (1628 D1) on 10 August (JP) corresponds with the May to July breeding period given in Irwin (1981, p. 43).

At Msuna (1826 B2) about 50 **Yellow-billed Storks** *Mycteria ibis*, including many juveniles, were on sand bars in the rapidly receding Zambezi River on 14 September. At the same locality six **African Spoonbills** *Platalea alba* fed together at a small pool the following day (CB). Hundreds of **Glossy Ibis** *Plegadis falcinellus* flew into Musango creek early on the morning of 24 June having roosted out on the lake (SE); over 70 were counted at Lake Chivero on 15 and 19 November (IL, IR).

A **Greater Flamingo** *Phoenicopterus roseus* at Deteema Dam, Hwange NP (1826 C1), on 9 July (SWi) follows a February 2016 record from there, and four were on Martin Spur Textile Ponds on 21 September (*The Babbler*). The Atlas contains no **Lesser Flamingo** *Phoeniconaias minor* records from Hwange NP but a few have been posted since then. One over Camp Hwange (1826 C4†) on 7 June (J-MB) had drifted across from Botswana. Other wanderers were an individual at Vundu Camp, downstream of Ruckomechi (1529 C3†), on 8 June (NH), two immatures on the Runde River near the Chilojo cliffs, Gonarezhou (2132 A3†), on 13 July (EvdW) and ten on the river estuary at the Kariba Crocodile Farm (1628 D2†) on 4 July (SE).

Thousands of **White-faced Ducks** *Dendrocygna viduata* gathered on Mazvikadei Dam, Banket (1730 A2), early in August (BM) and 323 were at Martin Spur Textile Ponds on 21 September (*The Babbler*). **Fulvous Ducks** *D. bicolor* at unusual localities were a single at the Salt Pan (1826 C1†) on 1 June (SWi) and four on the Suri Suri River near Chakari Mine (1829 B2†), on 6 July (*The Babbler*).

A **Yellow-billed Duck** *Anas undulata* on Gletwyn Dam, Mandara (1731 C3), on 23 July (TW) and 3 October (JBa) was possibly the same individual reported from Ballantyne Park the previous year. **Cape Teal** *A. capensis* were not recorded in the northwest during the Atlas years but records have occurred since and are increasing. In Hwange NP, two were at Grannies Pan, Nehimba Concession (1826 C4†), on 26 July (BJ) and ten were at Guvalala Pan (1826 D3) on 11 August (DK). Most notably, however, the Park's first confirmed breeding record was obtained at the Salt Pan on 5 August where a group of eight, then two with six chicks, were seen (J-MB). West of Victoria Falls one was on Chamabonda vlei (1725 D3), on 18 September (LW). In the Midlands, seven **Hottentot Teal** *A. hottentota* were on Martin Spur Textile Ponds and one on Mandalay Dam near Eiffel Flats on 13 July (*The Babbler*). The following day two **Cape Shoveler** *A. smithii* were at the Lake Chivero Bird Sanctuary (1730 D4) where last noted in 2013 (RD).

Ten **African Pygmy Geese** *Nettapus auritus* were at Biri Dam, Portelet farm, Chinhoyi (1730 A3†), on 28 November (JMk). Most of the *c*. 200 **Spur-winged Geese** *Plectropterus gambensis* on Reedbuck vlei, Camp Hwange (1826 C4), on 7 June were in primary moult (J-MB).

Raptors

Two **Secretarybirds** *Sagittarius serpentarius* were 300 m west of Afdis, Stapleford (1730 D2), on 2 July (JWd), one flew alongside the Victoria Falls-Kazungula road at the 13 km peg (1725 D3) on 28 August (CB, JB) and two were on Lanark Farm on 22 September (*The Babbler*).

A juvenile **Egyptian Vulture** *Neophron percnopterus** photographed at Dom Pan, Hwange NP (1826 D4), on 1 November (DP) is the tenth record since October 2016, most of which have been juveniles undergoing post-fledging dispersal. Encouraging signs for the future when compared to the situation cited in Irwin (1981) page 57 that this vulture has 'declined to virtual extinction throughout the sub-continent'.

A **White-backed Vulture** *Gyps africanus* approximately 10 km downstream from Chikwenya, Mana Pools (1529 D1) on 18 October was tagged Z013 (SN). Details obtained by NC show it was ringed in August at Munyamadzi Game Reserve, southern Luangwa Valley, Zambia. A leucistic **Lappet-faced Vulture** *Torgos tracheliotus* in the Nyamepi area of Mana Pools (1529 C2), on 1 August and near Mcheni 1, Rukomechi (1529 C4), on the 15th was probably the same bird (TAr). On 26 October a fledgling was on a nest at the Cawston Block Wildlife Ranch (1928 C2) with a parent nearby (SN).

Vultures seen in the Chizarira/Siabuwa area in November were two **Hooded** *Necrosyrtes monachus* over Access Gorge, Chizarira (1727 D2), on the 2nd; one and four **White-backed** over Siabuwa CL (1728 A3) on the 4th and 6th respectively, and five over the same Communal Lands in QDS 1727 B4 on the 5th; a **Lappet-faced** and a male **White-headed** *Trigonoceps occipitalis* flew together over Siabuwa (1727 D2) on the 4th (IR).

The largest **Vulture** flocks reported comprised *c*. 150 **White-backed**, seven **Hooded**, four **Lappet-faced** and three **White-headed** on an impala (scant pickings for so many?) near Dolilo, Hwange NP (1826 C1), on 21 August (J-MB), and 97 **White-backed**, nine **Lappet-faced** and 13 **Hooded**, along with 16 **Marabou Storks**, on an elephant carcass between Trichilia and Mcheni (1529 C4) on 25 August (NH).

The most noteworthy of the few **African Cuckoo Hawks** *Aviceda cuculoides* reported was one at the Salt Pan on 14 August (SWi). A **Bat Hawk** *Macheiramphus alcinus* was on Hillside Golf Course, Mutare (1932 B1†), on 10 June (RK); in Chisipite, Harare (1731 C3), a pair was seen twice in June and one was on a nest on 26 September (JBa, TW); and one was over Victoria Falls town on 19 July (J-MB). An extraordinary record concerns one at Rhino Safari Camp, Matusadona (1628 C4), on 25 October that caught a bat at 15h00 in the afternoon (PTe). Bat Hawks are almost entirely inactive between dawn and dusk but this opportunistic individual benefitted from excessive heat that tempted its unfortunate prey to dip in a plunge pool.

Arriving **European Honey Buzzards** *Pernis apivorus* were at Haka Park, Harare (1731 C3), on 13 November (TW), Lake Chivero on the 16th (TH) and Mazvikadei on the 20th (BM).

A **Verreaux's Eagle** *Aquila verreauxii* was in Devil's Gorge, downstream of Msuna (1726 D4), on 14 September (CB). Early in November at Chizarira NP, pairs were in Mucheni Gorge (1727 D1) and at the mouth of Ruzuruhuru Gorge (1727 D2), and one was at Siganda (1727 D1) (IR). Three **Steppe Eagles** *A. nipalensis* about 5 km along the Mvuma-Chivhu road (1930 B3) on 14 November (ND) were the first reported this season albeit a little later than normal. An early **Lesser Spotted Eagle** *Clanga pomarina* was noted in Gonarezhou NP at the beginning of October (DB). This is a couple of weeks ahead of their normal arrival while several seen in Hwange NP in mid-month (PD) were on schedule. Three at the Umguza Irrigation Scheme (1928 D3†) on 23 November (JV) added another square to their fragmented distribution.

A pair of **Wahlberg's Eagles** *Hieraaetus wahlbergi* added sticks to a long-standing nest at Stapleford, Mount Hampden, on 8 August. They apparently arrived about two weeks previously. The first arrivals reported elsewhere were at Nyazura (1832 C1) on 3 August (ND) and Gonarezhou on 21 August (CS). Of interest at Siabuwa was one feeding on a **Southern Yellow-billed Hornbill** *Tockus leucomelas* at a settlement north of Tundazi on 5 November (IR). They were common between Harare and Lake Kyle on 14 November with three pairs and nine individuals noted. Nine, including two pairs, were seen on the return trip on the 18th (ND). An **Ayres's Hawk-eagle** *H. ayresii* in Siganda gorge (1727 D1†) on 3 November was probably the same bird seen an hour later 500 m to the south (IR). A **Long-crested Eagle** *Lophaetus occipitalis* near Crocodile Pools on the Deka River, Robins area (1826 C1†), on 6 August (J-MB) was an uncommon Hwange NP record.

A **Martial Eagle** *Polemaetus bellicosus* was in the Gleneagles Forest, Honde Valley (1832 B4) on 31 July (MS). In the northwest, a pair flew at low altitude over Chamabonda vlei (1725 D3) on 23 August (CB), an adult was over the Inyantue bridge, Bulawayo-Victoria Falls road (1826 B3), on 10 October (JV) and another was at a nest in Hwange NP between Deteema and Dolilo (1826 C1), on 19 October (BN). One was in Siabuwa Communal Lands (1727 D2) on 5 November. Two immatures were at Kent Estate, Norton (1830 D3) on 25 August (IR) where an **African Crowned Eagle** *Stephanoaetus coronatus* was seen on 1 August (GL). **Crowned Eagles** in new areas were at Whitewaters, northwest of Cashel 1932 B3†), on 11 August (IR) and near Kavinga Camp, Mana Pools (1529 C4†), indicating range expansion inland from the Zambezi, on 20 November (LMcD).

Several **Western Banded Snake Eagles** *Circaetus cinerascens* were reported from known localities while a juvenile at Manzimbomvo Pan, Hwange NP (1826 C3†) on 3 July (SWi) and one at the Gache Gache River (1628 D2) on 20 October (CN) were in less usual areas.

Adult female **Bateleurs** *Terathopius ecaudatus* were over the Umguza River on Cawston Ranch on 16 June (JV) and in the Umfurudzi Safari Area (1731 B2), on 1 September together with an immature (GP). In the Victoria Falls area an adult male was over Chamabonda vlei (1725 D3) on 16 June where an adult male and adult female were seen separately on 23 August; an adult male was in Zambezi NP (1725 D4) on 1 September and adult females were at Masuwe Lodge (1725 D4) on 13 October and 44 km along the Victoria Falls-Kazungula road (1725 C4) on 23 October (CB, JB). Twelve noted at Kavinga between 13 and 15 September comprised four adult males (including a cream-backed), four adult females, three juveniles and an immature (IR).

Two observations of **African Fish Eagle** *Haliaeetus vocifer* behaviour are of interest. In September and October, two at Kanga Pan, Mana Pools (1529 C4), took one or two **Cape Turtle Doves** *Streptopelia capicola* per day as they came to drink even though bream and barbel were available (CM, LMcD). During October, as Lake Kariba receded, Fish Eagle territories in the estuaries and upper reaches also shrank forcing them to 'poach' from their neighbours. This resulted in aggressive fighting although it seems the interlopers were eventually accepted (SE).

A total of eight **Steppe Buzzards** *Buteo buteo* were counted between Lake Kyle and Harare on 18 November (ND).

A **Black Sparrowhawk** *Accipiter melanoleucus* flew from mopane scrub into teak woodland near the Manzimbomvo road (1826 C1), Hwange NP, on 11 November (J-MB). Tall dense woodland is its preferred habitat although it can adapt to more open country. A few years ago, **African Goshawks** *A. tachiro* were regular in Newlands but have since become scarce, perhaps undergoing temporary localised movement. Unusual therefore were one on 21 July and three sightings in October (IR). One hunted fruit bats before sunrise in Trichilia Camp (1529 C4) on 14 October (TAr) and another in Ruzuruhuru Gorge attempted to catch a **Natal Spurfowl** *Pternistis natalensis* on 4 November (IR).

A melanistic **Gabar Goshawk** *Melierax gabar* was seen occasionally at Newlands between 11 October and 20 November with a normally plumaged bird. Presumably they nested in a neighbouring garden as three noisy juveniles were around continually from 25 November (IR). Another raptor expanding its range across the Zambezi Valley floor was a **Dark Chanting Goshawk** *M. metabates* at Kavinga (1529 C4†) on 28 October (LMcD). One was on the Siabuwa-Karoi road (1727 D2) on 5 November (IR).

Around Harare single **African Marsh Harriers** *Circus ranivorus* were at Marlborough vlei (1730 D2) on 22 July (RC) and Komani Farm (1730 D2) on 19 November (IR). A **Montagu's Harrier** *C. pygargus* 6 km upstream of Victoria Falls (1725 D4†) on 31 October (CBr) was a scarce record from this stretch of the Zambezi. An adult male **Pallid Harrier** *C. macrourus* at Big Toms (1825 D2†) on 16 November (J-MB *et al*.) and nearby at Reedbuck Seep two days later (JV) were early-season records of this uncommon visitor to Hwange NP.

Ospreys *Pandion haliaetus* wintering around Musango were noted three times between 1 June and 14 July (SE) and at Rhino Safari Camp on the former date (PTe). Two at Musango on 8 and 13 August may also have over-wintered while one or two there between 6 September and 17 October (SE) and at Rhino Safari Camp on 9 and 22 September (PTe) had probably recently arrived. There are no records in the entire 20°S 30°E full degree square in the Atlas so one at Tokwe-Mukozi dam (2030 D4†) on 14 September (ND) is of significance. Singles were in Zambezi NP on 11 October and 24 November (CB), at the Lake Manyame slipway (1730 D3) on 13 October (ND), Mazvikadei Dam on 20 November (BM) and Biri Dam, Chinhoyi, on 28 November (JMk).

In Harare, a **Peregrine Falcon** *Falco peregrinus* was in the Lewisam/Highlands area (1731 C3) on 1 June (TW). A **Lanner Falcon** *F. biarmicus* was on a farm 6.6 km southwest of Goromonzi (1731 C4†) on 21 July (IR), and a wanderer from the Bulawayo/Matopos population was at Umguza (1928 D3†) on 23 July (JV). Two **Red-necked Falcons** *F. ruficollis* flew into an ebony tree about 400 metres upstream of the Victoria Falls (1725 D4) on 24 October (CBr).

Rock Kestrels *F. rupicolus* are under-reported these days but one was on Kent Estate on 25 August (*The Babbler*). Out of range **Greater Kestrels** *F. rupicoloides* were on the Harare-Marondera road at Ruwa (1731 C4†) on 12 June (GD) and at Camp Hwange (1826 C4†) on 14 July (J-MB).

Gamebirds, Rails and Cranes

Shelley's Francolins *Scleroptila shelleyi* found in QDS 1727 D1† during the Chizarira/Siabuwa November survey were in the Manjolo Communal Lands and at Mucheni View. **Swainson's Spurfowl** *Pternistis swainsonii* seem to be increasing within Harare and were recorded on Boundary Road, south of Country Club Golf Course, Eastlea (1731 C3), on 21 July (IR). Three **Crested Guineafowl** *Guttera pucherani* at

Kazungula (1725 C4†) on 2 July (SC) represent movement westwards from the adjoining square. About 25 between Manzimbomvo and Dandari Pans (1826 C3†) on 10 July (J-MB) follow a 2018 record from the neighbouring 1826 C4 square indicating genuine range expansion within Hwange NP.

A **Wattled Crane** *Grus carunculatus* and a **Grey Crowned Crane** *Balearica regulorum* were together at a dry dam on the Gwebi River about 20 km northwest of Harare (1730 D2) on 22 October (JBe). A female **Corn Crake** *Crex crex* photographed on 2 November at Kavinga (1529 C4†) (LMcD) was unusual for its early arrival date and locality. This is not a Zambezi Valley bird so was just passing through perhaps. 11 **Kori Bustards** *Ardeotis kori* congregated on a burnt area of Chamabonda vlei on 20 August (CBr) and ten were there on 11 November (MA).

Waders, Gulls and Terns

An **African Jacana** *Actophilornis africanus* in the Burma Valley (1932 B1†) on 20 October (PM) had probably wandered north from the adjacent 1932 B3 square. **Lesser Jacanas** *Microparra capensis* were noted at Muchaniwa Pan, Gonarezhou (2132 A4), on 27 June (DMacD), Musango (1628 C4) on 3 and 13 August and upstream of Victoria Falls (1725 D4) on 29 November (SE). A **Greater Painted Snipe** *Rostratula benghalensis* was at Gletwyn Dam on 5 July (JBa), three females were at Musango on 13 August (SE), two at Haka Park on 2 October and 21 November (AD) and a male was on the Victoria Falls water works marsh on 9 November (CB).

Lone **Common Ringed Plovers** *Charadrius hiaticula* were at Mandavu Dam, Hwange NP (1826 C2), on 8 October (J-MB) and Lake Chivero Sanctuary on 12 November (IR). A **Chestnut-banded Plover** *C. pallidus* appeared at Massasanya Dam, Gonarezhou (2131 B4†) on 14 and 15 September (DMacD) and 30 November (EvdW). Another record came from the Save-Runde confluence, Gonarezhou (2132 A4†), around the same time (JZ). These are probably the first records for the Park, no doubt involving movement from Mozambique, but whether they relate to one or more individuals is uncertain. A **Caspian Plover** *C. asiaticus* was about 500 m below Deteema Dam wall (1826 C1†) on 2 October (J-MB). A **Grey Plover** *Pluvialis squatarola* was seen in front of Old Ndungu 2 Camp, Rukomechi (1529 C4), on the early date of 26 September (JMk). Numbers of this scarce migrant vary from year to year with most southbound birds passing through during November.

Crowned Lapwings *Vanellus coronatus* over Newlands on the night of 18 July was evidence of dry season movement to or from Country Club Golf Course (IR). A large group of about 20 **Long-toed Lapwings** *V. crassirostris* was at the Kariba Bream Farm on 11 August (CN) and up to five were upstream of Victoria Falls (1725 D4) on 13 October (LW) and 29 November (SE).

A **Ruddy Turnstone** *Arenaria interpres* at the Fishans crossing, Gonarezhou (2132 A3†), on 15 October (DS) became the Park's first record. Another was found at Kazungula (1725 C4) on 16 November (SC). A **Green Sandpiper** *Tringa ochropus* foraging unperturbed on the very edge of Devil's Cataract, Victoria Falls (1725 D4) from 28 to 30 November was reported by several observers. One or two over-wintering **Common Greenshank** *T. nebularia* were noted at Musango from 2 to 27 June while seven in the same area on the Nyamasango River on 14 July (SE) had most likely just arrived. The earliest birds noted elsewhere were at Mazvikadei on 4 August (BM) and Mandavu Dam on the 8th (J-MB).

Single **African Snipe** *Gallinago nigripennis* were at Haka Park on 19 June (AD) and Komani on 19 November (IR). In Hwange NP a **Pied Avocet** *Recurvirostra avosetta* was at the Salt Pan on 1 June (SWi) and 5 August (J-MB) and two were seen at Deteema Dam on 9 July (SWi). About 70 were at the Chivero Bird Sanctuary on 14 July (RD) and one on 26 September was the first record from Victoria Falls sewage ponds (1725 D4†) for many years (CB). About 200 **Black-winged Stilts** *Himantopus himantopus* took to the air at Lake Chivero on 15 November startled by what sounded like a gunshot (IL, PS).

Following Harare's heavy storm on the afternoon of 2 November a **Spotted Thick-knee** *Burhinus capensis* appeared in a Chisipite garden (JW). Two **Bronze-winged Coursers** *Rhinoptilus chalcopterus* were seen in Zambezi NP on 17 September (LW) and they were heard near the now-defunct Chizarira Lodge (1727 D2) on the night of 1 November (IR). Two **Collared Pratincoles** *Glareola pratincola* were at Msuna (1826 B2†) on 14 September (CB), an under-reported stretch of the Zambezi during the Atlas years. Many were at Gwebi Dam, Arden Farm, Nyabira (1730 D2), on 5 October (ND).

A **Grey-headed Gull** *Chroicocephalus cirrocephalus* at Chipinda Pools (2131 B4†) in mid-October (EvdW) constitutes another first for Gonarezhou and follows a November 2018 record from south of Triangle (2131 A4). Two at Smallbridge Dam, Sheba Estates (1832 D3†), on 29 October (GD) were also in unfamiliar territory. Vagrants visit the Connemara Lakes (1832 B2) occasionally but this gull is otherwise little known along the eastern border.

Solitary **Caspian Terns** *Hydroprogne caspia* were on Lake Chivero on 14 July (RD) and 17 November (DS) and a number of **Whiskered Terns** *Chlidonias hybrida* were there on 12 and 19 November (IR). Keeping Gonarezhou in the news was a full-plumaged **Whiskered Tern** at Muchaniwa Pan (2132 A4†) on 19-21 October (MA), apparently another new entry for the Park. At the same Pan, a **White-winged Tern** *C. leucopterus* on 26 July (TM) had either over-wintered or recently arrived.

Three **African Skimmers** *Rynchops flavirostris* were at Kariba Bream Farm on 11 August (CN) and a large group of about 25 was upstream of Victoria Falls on 13 October (LW). At Mana Pools they are subject to disturbance by tour operators and a flock on a sandbar north of Nyamepi became highly agitated when a Zambian party invaded their space on 12 September (IR).

Other non-Passerines

Feral Pigeons [Rock Doves] *Columba livia* were abundant and nesting on buildings in Chipinge town (2032 B1†) on 9 August (IR). Further to the August 2018 **African Mourning Dove** *Streptopelia decipiens* record of two at Umguza, one appeared on a neighbouring property (1928 D3) during July. Large Acacias and the nearby Umguza River may account for this bird, and possibly one or two more, still being there in November (JV). On 13-15 September three were at Msuna (CB) and others were at Siabuwa Centre (1728 A3) on 5 November (IR).

Three **Grey-headed Parrots** *Poicephalus fuscicollis* flew near Chilo Gorge (2132 A2) on the morning of 7 August (IR). A spate of Harare records involved individuals over Hillside (KW) and Avondale (GL) at the end of August and in a Glen Lorne garden on 1 September (GH). In cold, windy weather at Musango (1628 C4) on 3 October a flock of **Lilian's Lovebirds** *Agapornis lilianae* was SE's first record for the

Camp although there are previous records from the same QDS at the Tiger Bay (KW) and Tashinga (GD) airstrips.

A **Thick-billed Cuckoo** *Pachycoccyx audeberti* was at Hippo Pools on 20 June (TN); mid-winter records are uncommon and mainly concern juveniles. One at Musango (1628 C4†) on 6 November was an unusual Lake Kariba record and a new bird for the Camp (SE). An **African Emerald Cuckoo** *Chrysococcyx cupreus* at Seldomseen, Vumba (1932 B2) on 11 August (KW) had most likely remained during the winter. The first arrival noted was at Aberfoyle Tea Estates, Honde Valley (1832 B4), on 17 September (MS). The only South African **Klaas's Cuckoo** *C. klaas* reported wintering here was at Timot's Pan, Chamabonda vlei (1725 D3), on 22 June (CB). A **Diderick Cuckoo** *C. caprius* was seen and heard in a Mount Pleasant, Harare (1730 D4) garden on 5 July (LS). Only very occasionally do they over-winter here.

Before now, only three **Green Malkoha** *Ceuthmochares australis* records were known from the middle Zambezi Valley; an individual near the Gwase/Manyame confluence, Dande Communal Area (1630 B2) in December 1997 (Masterson and Parkes, 1998, *Honeyguide* **44**: 89), another near Nyamepi, Mana Pools NP (1529 C2) over July-October 2010 (Bruce, 2012, *Honeyguide* **58**: 68) and AC's sighting at Mwanja Camp, Chewore Safari Area (1529 D2), in October 2012 (Baker, 2013, *Honeyguide* **59**: 59). The records of individuals seen in the reed island at Vundu Camp, Mana Pools (1529 C3†), on 8 June and at the Rukomechi River mouth (1529 C2†) on 20 October (NH) are therefore of considerable interest. As these latest records occurred over four months apart, this Malkoha could well be establishing in the Valley. Another wanderer was in the Save Valley Conservancy on the Save River at Sango (2032 A2†) on 18 October (PTe). This is further west than recorded previously in the lowveld.

A **Senegal Coucal** *Centropus senegalensis* in a Newlands garden on 1 September held a white dove-size egg in its beak. **Burchell's Coucals** *C. burchellii* were around Musikavanhu School Bush Camp, Ndowoyo Communal Lands (2032 C2), at 448 metres on 7 August with a **Senegal Coucal** seen the next day 5 km to the north at 804 metres in the same QDS (IR).

Marlborough vlei continues to support good numbers of **Marsh Owls** *Asio capensis* with *c*. 15 noted on 2 November (JP). A **Southern White-faced Scops Owl** *Ptilopsis granti* heard in Newlands on 5 August (IR) may have been breeding at that time.

An **African Scops Owl** *Otus senegalensis* and an **African Barred Owlet** *Glaucidium capense* were both out of range at Whitewaters (1932 B3†), northwest of Cashel, on 11 August (IR), the Scops in particular having moved eastwards by some distance. Extraordinary **African Barred Owlet** records are of individuals found in Harare at Milton Park on the evening of 25 August (MB) and on a large Hatfield property (1731 C3†) a few days later (PT). They stray onto the central watershed occasionally, as at Kent Estate in August and Lanark Farm, Harare South, in September (*The Babbler*), but to encroach into Harare's suburbs is entirely unexpected.

Of interest was a **Verreaux's Eagle Owl** *Bubo lacteus* that drank from Kavinga Pan at 04h35 on 15 September (IR). On the middle Zambezi a juvenile **Pel's Fishing Owl** *Scotopelia peli* was at Little Vundu Camp (1529 C3) on 24 July, then in August pairs were seen twice and a single adult once (JMk, NH); an individual was at Ilala Camp, Chikwenya (1529 D1), on 12 August (JMk). In the southeast one was at the Runde River Bopomela crossing on 26 August (NM), a pair at the Save-Runde confluence on 24 September (TM), and another at Sango on 17 November (DB). One was recorded twice in November on Tsowa Island, about 40 km upstream of Victoria Falls (1725 D3) (FL).

On the night of 2 November calls of **African Wood Owl** *Strix woodfordii*, **Spotted Eagle Owl** *Bubo africanus*, and **Fiery-necked** *Caprimulgus pectoralis* and **Rufous-cheeked** *C. rufigena* **Nightjars** were heard in Manjolo Communal Lands at the base of the escarpment (1727 D1†); **African Black Swifts** *Apus barbatus* had been seen in the area earlier the same day (IR). Thousands of **Common Swifts** *A. apus* feeding on termite alates at Umguza (1928 C4) on 23 November (JV) were the first of the season. An **Alpine Swift** *Tachymarptis melba* drank from the river at Chirundu (1628 B2) on 16 September (JeF) and some were noted in QDS 1727 D2† at Chizarira Lodge on 1 November and Mucheni View on the 5th (IR).

A **Narina Trogon** *Apaloderma narina* was at the Ngamo gate (1927 A2†), on 21 November (RR). There are no Atlas records south of 19°S in Hwange NP. Another November wanderer was on Portelet Farm, Chinhoyi (1730 A3†) (JMk), presumably having moved a considerable distance from the north. A **Half-collared Kingfisher** *Alcedo semitorquata* was just north of Harare at Bally Vaughan Game Park (1731 C2) on 23 July (GP). Southbound movement of **Woodland Kingfishers** *Halcyon senegalensis* was spread across the country over an eight-day period, being noted on 14 November at Rifa Camp (EB), 15 November Chipinda Pools (EvdW), 16 November Sango (DB), 20 November Lake Kariba (CN), and 21 November at Umguza (AR).

The first **European Bee-eaters** *Merops apiaster* were reported on 14 September (see Arrivals below), but worth highlighting was a large flock of about 300 at Sango on 16 November (DB). On most days in mid-October **Southern Carmine Bee-eaters** *M. nubicoides* flew over Umguza (JV) on their annual south-westerly post-breeding dispersal across Matabeleland.

A **Racquet-tailed Roller** *Coracias spatulatus* was in Fuller Forest (1825 B2†) on 19 October (LW). After an absence of many years, **Trumpeter Hornbills** *Bycanistes bucinator* appeared in the Musango Lodge garden on 7 August. They are more frequently found in that area on the Gubu and Shenga Rivers (SE).

Little is known of the **Pallid Honeyguide's** *Indicator meliphilus** breeding habits so a report of one being chased by a **White-eared Barbet** *Stactolaema leucotis* at a nest site on Katiyo Estate, Honde Valley (1833 A3), on 24 October (DK) is exceptional. This barbet is assumed to be a host only on the strength of a suspected **Pallid Honeyguide** egg being found in a nest at the Haroni-Lusitu confluence followed by interaction between the two species (Hockey *et al*. (2005. *Roberts' birds of southern Africa*, VIIth ed., p. 126). This latest sighting adds considerable weight to that assumption.

Brown-backed *Prodotiscus regulus* and **Green-backed** *P. zambeziae* **Honeybirds** were only reported from Harare with the exception of a **Brown-backed** in the Chizarira Access Gorge (1727 D2) on 1 November (IR).

Passerines

An **African Broadbill** *Smithornis capensis* in riverine thickets in the Lomagundi College area, Chinhoyi (1730 A3†), between 5 September and 14 October (JMk) represents movement from the adjoining QDS to the north. One was found in Siganda Gorge (1727 D1†) on 3 November (IR). Arriving **African Pittas** *Pitta angolensis* noted within a few days of each other were at Masoka Camp, Zambezi Valley

(1630 A1), after a good shower of rain on 15 November (JWd), Kanga Pan (CM) and the Kariba Bream Farm (CN) on 17 November, and at Kavinga the following day (LMcD).

A northbound **Dusky Lark** *Pinarocorys nigricans* stopped off at Musango on 21 June (SE). **Chestnut-backed Sparrowlarks** *Eremopterix leucotis* have a patchy distribution pattern and some found at Umguza (1928 D3†) between 29 June and 31 July (JV) registered a slight expansion of range.

Blue Swallows *Hirundo atrocaerulea* arrived at Nyanga on 6 September (JeF). Sizeable flocks noted thereafter were over 20 at Aberfoyle on the 8th and 18 at the Mtarazi Falls, Nyanga (1832 B4), on the 21st (MS). A pair of **Mosque Swallows** *Cecropis senegalensis* near Msuna (1826 B2†) on 14 September represents range expansion upstream from Milibizi. Over-wintering migrants were a **Sand Martin** *Riparia riparia* in Zambezi NP on 29 June (CB) and a **Black Cuckooshrike** *Campephaga flava* on a Ruwa-Goromonzi farm on 21 July (IR).

Roadside **Cape Crows** *Corvus capensis* were seen at Nyazura (1832 C1) on 1 June and 28 October (SW). In QDS 1727 D1† in November, two **Pied Crows** *C. albus* were around a goat pen and huts in Manjolo Communal Lands, and northeast from there one was on a nest on top of a baobab (IR).

Two **African Red-eyed Bulbuls** *Pycnonotus nigricans* were at Big Toms Pan (1825 D2) on 13 August (J-MB). They are seldom reported from the Robins Camp area these days. In August **Miombo Rock Thrushes** *Monticola angolensis* were in the Ndowoyo area, Chipinge (2032 C2†) and at Whitewaters, near Cashel (1932 B3†), both sightings indicative of localised range expansion along the south-eastern border. They bred again this year at the Mukuvisi Woodlands, Harare (1731 C3), adults being seen with a juvenile on 13 and 16 November (IR).

Two seemingly unconnected **Red-capped Robin-chat** *Cossypha natalensis* records should perhaps not be viewed in isolation. The first concerns one that flew into a Chisipite (1731 C3†) window on 3 November (JW) to become, almost certainly, Harare's first record of the species. The stunned bird was photographed but recovered sufficiently to fly off shortly thereafter. But being so far out of range, where did it go? The second record was an individual at Hippo Pools on 7 November (TN) that followed a sighting there six months previously. The species was classified as uncommon by Rockingham-Gill (2010. *Honeyguide* **56**: 119), but perhaps it has become more established since then. It certainly raises the question whether the Chisipite bird had been subject to bad-weather wanderings from there as many parts of the country experienced heavy storms early in the month. Situated on the Mazowe, approximately 120 km downstream of Harare, the Umfurudzi is the closest area to the capital this species is known to occupy.

During the Atlas years, an isolated **Boulder Chat** *Pinarornis plumosus* population inhabited the Whitewaters (1932 B3) area and an August record confirmed they are still a presence there. In early November, **Bearded Scrub Robins** *Erythropygia quadrivirgata* were widespread at Siabuwa and Chizarira (1727 D1† and D2†) and **Yellow-breasted Apalises** *Apalis flavida* were found in the Siganda area (1727 D1†) (IR). The only **Pale-crowned Cisticola** *Cisticola cinnamomeus* reported was at Haka Park on 21 November (AD).

A **Collared Flycatcher** *Ficedula albicollis* at Miombo Safari Lodge, Dete (1826 D2), on 29 October (RR) was an early arrival. **Grey Tit-flycatchers** *Myioparus plumbeus* are occasional visitors to Hippo Pools, the latest being seen on 27 September (TN). Around Harare in QDS 1731 C3, **Black-throated Wattle-eyes** *Platysteira peltata* were at the National Botanic Gardens on 13 July (*The Babbler*) and Hillside Park on 3 October (RC). A record from Kariba Bream Farm (1628 D2†) on 26 October (CN) is a surprising Lake Kariba record. Early in November **Livingstone's Flycatchers** *Erythrocercus livingstonei* were noted a few times in the Siganda area at the base of the escarpment (1727 D1†) (IR).

A male **African Paradise Flycatcher** *Terpsiphone viridis* seen on a few days towards the end of June at Kwali Camp, Malilangwe, would be of the South African subspecies *granti* that winters in small numbers in the southeast before returning south to breed. Its tail was about a third longer than normal and, surprisingly for mid-winter, it was in full breeding plumage. A female was not seen in the area however (GD). August records are difficult to classify and reports from the low-lying localities of Kavinga on the 17th (LMcD) and Matusadona NP on the 25th (PTe) could relate to over-wintering or arriving birds.

Two **Mountain Wagtails** *Motacilla clara* were on a stream below Chizarira Lodge on 1 November. They are known to occur in the Park's gorges but this record represents local movement within QDS 1727 D2 (IR). Actively expanding their range in the Lomagundi area, **Rosy-throated Longclaws** *Macronyx ameliae* were at the Mazvikadei marina (1730 A2†) on 3 November (BM) and Biri Dam, Chinhoyi (1730 A3†) on the 28th (JMk). All three **Longclaw** species occur at Komani, as was the case on 19 November, but oddly enough a **Rosy-throated** and a **Cape** *M. capensis* were found together, appearing as a pair (IR).

Lesser Grey Shrikes *Lanius minor* moved through the country in the second half of November being recorded at Tambahata Pan, Gonarezhou (2132 A4) (TM) and Kavinga (LMcD) on the 16th, Umguza (2028 B1) on the 23rd (JV) and on Chamabonda vlei on the 28th where six were seen along a 500 metre stretch of track including four in one tree (CB). **Retz's Helmet-shrikes** *Prionops retzii* joined a **White-crested Helmet-shrike** *P. plumatus* flock in the Ruwa-Goromonzi area on 21 July (IR).

A number of **Common Mynas** *Acridotheres tristis* were in Gokwe town (1828 B2†) on 31 October and two were in the Manjolo Communal Lands (1727 D1) on 4 November. Wintering **Violet-backed Starlings** *Cinnyricinclus leucogaster* were in a Newlands garden on 18 June (IR) and at a fig tree in Chisipite on the 22nd (BM). A **Burchell's Starling** *Lamprotornis australis** at Big Toms (1825 D2†) on 18 November (JV *et al*.) appears to be the second Hwange NP record, some 31 years after the first! Few records have been obtained in this country, most of which have come from the Botswana border area in the northwest.

Although the Atlas contains no **Yellow-billed Oxpecker** *Buphagus africanus* records in the Zambezi Valley east of 28°E, infrequent sightings around Bumi in QDS 1628 C4 have subsequently been made. Five on buffalo at Musango on 13 August (SE) is the latest report from there. A wayward **Red-billed Oxpecker** *B. erythrorynchus* flew over Monavale vlei (1731 C3†) on 16 November (TW). Another wanderer at Imire Game Park (1831 B3†) on 24 November (JP) was at least in a game park but was also way out of range. How do such wandering individuals contrive to be found so far removed from their established territories? Also of interest were some on a donkey in the Siabuwa Communal lands (1727 D1) on 4 November (IR). A male **Copper Sunbird** *Cinnyris cupreus* photographed at Kavinga (1529 C4†) on 28 October (LMcD) was a scarce Zambezi valley record.

Red-billed Buffalo Weavers *Bubalornis niger* in Gokwe North Communal Lands (1728 C2†) on 31 October were marginally out of range. In another under-reported area, **House Sparrows** *Passer domesticus* were thriving on Chipinge's streets (2032 B1) on 9 August (IR). Following the December 2018 record of **Thick-billed Weavers** *Amblyospiza albifrons* breeding at Kariba Bream Farm, they arrived again in mid-November and began nest-building (CN). We are still none-the-wiser regarding the provenance of these Kariba birds but they are believed to be a range extension from Chinhoyi-Lion's Den (IR). **Weavers** slightly out of range in communal areas were **Southern Masked** *Ploceus velatus* at Ndowoyo on the eastern border (2032 C4†) on 7 August and **Golden** *P. xanthops* at Siganda (1727 D1†) in November (IR).

An **Orange-winged Pytilia** *Pytilia afra* was in Fuller Forest (1825 B2) on 29 September (LW). A male **Lesser Seedcracker** *Pyrenestes minor* was photographed on Katiyo Estate, Honde Valley (1833 A3), on 16 November (DK). **Red-throated Twinspots** *Hypargos niveoguttatus* were found at a couple of places at the base of the escarpment in the Siganda area (1727 D1†) early in November (IR). A notable report of the seldom-recorded **Brown Firefinch** *Lagonosticta nitidula* was a party of five at the Kandahar Picnic Site, Zambezi NP (1725 D4), on 3 August (CBr).

At Newlands on 27 June about ten **Red-backed Mannikins** *Lonchura nigriceps* roosted in a **Bronze Mannikin** *L. cucullatus* nest, and a large flock of *c*. 30 was nearby at Country Club on 20 July (IR). **Magpie Mannikins** *L. fringilloides* were reported from Ewanrigg Botanical Gardens (1731 C2) on 23 June (RD) and the National Botanic Gardens on 13 July (*The Babbler*). A flock of at least 100 **Village Indigobirds** *Vidua chalybeata* on the floodplain below Kavinga Camp (1629 A2†) on 15 September (IR) is another record denoting range expansion on the Valley floor.

Black-eared Seedeaters *Crithagra mennelli* were noted in miombo woodland in the Ruwa-Goromonzi area on 21 July (IR). A small flock of **Lark-like Buntings** *Emberiza impetuani* was at Ngezi Recreational Park (1830 C2†) during June (JD) and some drank at Chipinda Pools (2131 B4) on 16 August (JoF). In the northwest, one was in Fuller Forest (1825 B2†) on 18 September (LW), and in QDS 1825 D2†, Hwange NP, one was at Little Toms on 30 September (J-MB) and two at Deka Camp on 19 November (SN).

Arrivals

Abdim's Stork *Ciconia abdimii* 29 October Harare (AE), 2 November Kavinga (LMcD), 10 November Umguza (JV), 11 November Chinhoyi (JMk); **Steppe Buzzard** 8 October Hwange NP (J-MB), 20 October Harare (JM), 27 October Smallbridge Dam (1832 D3) (GD), 30 October Chamabonda vlei; **Lesser Kestrel** *Falco naumanni* 2 November Chamabonda vlei (CB); **Common Sandpiper** *Actitis hypoleucos*, **Marsh Sandpiper** *Tringa stagnatilis* and **Little Stint** *Calidris minuta* 5 August Salt Pan, Hwange NP (J-MB); **Wood Sandpiper** *T. glareola* 13 August Umguza (JV) and Mazvikadei (AMacD); **Curlew Sandpiper** *C. ferruginea* 11 August Hwange NP; **Ruff** *Philomachus pugnax* 8 August Hwange NP (J-MB), 15 August Musango (SE); **Rock Pratincole** *Glareola nuchalis* 4 September Victoria Falls (CBr); **African Skimmer** 19 June Kazungula (SC), 23 June Victoria Falls (CBr), 1 July Mana Pools NP (NH).

African Cuckoo *Cuculus gularis* 19 September Harare (SW), 6 October Checheche, Chisumbanje (2032 C3†) (JeF); **Red-chested Cuckoo** *C. solitarius* 14 September Nyanga (SH), 5 October Harare (TA), 10 October Chinhoyi (JMk), 14 October Chipinda Pools (EvdW), 19 October Hippo Pools (TN); **Black Cuckoo** *C. clamosus* 16 October Gache Gache River, Lake Kariba (1628 D2†) (CN), 7 November Sango (DB), 9 November Masoka (MZ); **Great Spotted Cuckoo** *Clamator glandarius* 10 November Umguza (JV), 17 November Mana Pools (AK); **Levaillant's Cuckoo** *C. levaillantii* 22 October Gache Gache River (CN), 25 October Harare (JBa), 1 November Victoria Falls (JB), 9 November Umguza (1928 D3) (AR); **Jacobin Cuckoo** *C. jacobinus* 26 October Kazungula (SC), 9 November Dete (1826 D2) (RR) and Masoka (MZ); **Klaas's Cuckoo** 1 September Harare (DW); **Diderick Cuckoo** 28 October Chipinda Pools (EvdW), 12 November Mutare (JC), 13 November Umguza (AR), 23 November Harare (RC); **Black Coucal** *Centropus grillii* 21 November Nyabira (1730 D2) (LG), 23 November Harare (RC) and Umguza (1928 D3) (JV).

Rufous-cheeked Nightjar *Caprimulgus rufigena* 14 September Msuna (CB); **African Pygmy Kingfisher** *Ispidina picta* 27 October Fuller Forest (1825 B2†) (LW); **Grey-headed Kingfisher** *Halcyon leucocephala* 22 September Lake Kariba (PTe); **European Bee-eater** 14 September Harare (PT), 16 September Chirundu (JeF) and Sango (DB), 19 September Mazvikadei (DK), 27 September Bulawayo (JV) and Kanga Pan (CM); **Southern Carmine Bee-eater** *Merops nubicoides* 31 July Ruckomechi Camp (DMacD), 4 August near Trichilia Camp (TC), 7 August Kavinga (LMcD), 31 August Lower Runde, Gonarezhou (EvdW), 1 September Musango (SE) and Gokwe North Campfire Site (1728 C2) (NC); **Broad-billed Roller** *Eurystomus glaucurus* 30 September Harare (SSS), 6 October Umguza (JV) and Lake Chivero (TC), 12 October Chipinda Pools (EvdW), Victoria Falls (CB) and Mana Pools (3 separate records LMcD, PTe, TAr), 15 October Gache Gache River (CN), 17 October Gwanda (SN).

Barn Swallow *Hirundo rustica* 26 September Victoria Falls (CB), 2 October Umguza (JV), 8 October Hwange NP (J-MB); 11 October Harare; **Red-breasted Swallow** *Cecropis semirufa* 16 July Harare (RC), 18 July Victoria Falls (CB); **House Martin** *Delichon urbicum* 6 October Checheche, Chisumbanje (2032 C3†) (JeF), 13 October Victoria Falls (CB); **Banded Martin** *Riparia cincta* 2 October Umguza (JV); **Eurasian Golden Oriole** *Oriolus oriolus* 19 October Hippo Pools (TN); **Garden Warbler** *Sylvia borin* 29 September Harare (JeF); **Common Whitethroat** *S. communis* 30 November Hwange Bush Camp (1826 C1) (J-MB); **Barratt's Warbler** *Bradypterus barratti* 7 September Nyanga (JeF); **Broad-tailed Warbler** *Schoenicola brevirostris* 21 November Harare (AD); **Willow Warbler** *Phylloscopus trochilus* 16 September Chirundu (JeF), 22 September Harare South (*The Babbler*), 27 September Harare (IR), 7 October Umguza (JV); **Spotted Flycatcher** *Muscicapa striata* 20 October Victoria Falls (LW), 27 October Lake Kariba (CN); **African Paradise Flycatcher** 1 September Harare (DW), 9 September Rifa Camp (EB), 4 October Umguza (AR), 7 October Victoria Falls (JB); **Yellow Wagtail** *Motacilla flava* 23 November Crowborough Farm (IL) and Biri Dam (1730 A3) (SSS); **Tree Pipit** *Anthus trivialis* 29 November Vumba (1932 B2) (BMb); **Red-backed Shrike** *Lanius collurio* 14 November Chinhoyi (JMk) and Victoria Falls (CB), 16 November Tambahata Pan, Gonarezhou (TM) and Sango (DB), 19 November Harare (JBa); **Violet-backed Starling** 22 September Victoria Falls (CB).

Departures

Swallow-tailed Bee-eater *Merops hirundineus* 29 November Victoria Falls (SE); **Capped Wheatear** *Oenanthe pileata* 30 October Chamabonda vlei (CB), 19 November Hwange NP (CBr).

Observers

TA – Tony Alegria; TAr – Tessa Arkwright; MA – Matt Austen; EB – Elspeth Baillie; CB – Colin Baker; JB – Julia Baker; JBa – James Ball; JBe – Jamin Bews; J-MB – Jean-Michel Blake; MB – Mark Brewer; CBr – Charles Brightman; DB – Dylan Browne; RC – Ronnie Chirimuta; SCh – Steve Chinhoi; NC – Ngoni Chiweshe; SC – Stan Chizipi; AC – Antony Cizek; JC – Jane Clegg; TC – Tracey Couto; AD – Asher Dare; ND – Neil Deacon; PD – Paula Dell; JD – Jordan Delourie; RD – Richard Dennison; GD – Gary Douglas; SE – Steve Edwards; AE – Ant Elliott; JeF – Jen Francis; JoF – Jonathan Francis; LG – Luke Gilmour; NG – Nyasha Gomwe; TH – Trevor Hardaker; GH – Gerald Harrison; SH – Sean Hind; NH – Nkululeko Hlongwane; BJ – Brendan Judge; AK – Abigail Karimanzira; RK – Dr Ralph Kitkat; DK – Doug Kok; IL – Innes Louw; GL – Geoff Lowe; FL – Francie Luxton; JMk – Jim Mackie; AMacD – Ali MacDonald; DMacD – Doug MacDonald; LMcD – Luke McDonald; PM – Peter Magosvongwe; NM – Norman Mellett; CM – Cliffy Mhandu; BM – Bev Morgan; BMb – Buluwesi Murambiwa; JM – Jimmy Muropa; TM – Thomas Mutombeni; BN – Bhekizulu Ncube; TN – Tadious Ndadzira; CN – Carl Nicholson; SN – Sean Nicolle; DP – Dan Peel; JP – Julia Pierini; GP – Gordon Putterill; AR – Ali Randell; RR – Rob Rees; IR – Ian Riddell; MS – Morgan Saineti; PS – Patrick Shadwell; CS – Clive Stockil; LS – Lowden Stoole; DS – Debbie Swales; PT – Pete Taylor; PTe – Peter Tetlow; EvdW – Elsabe van der Westhuizen; JV – James Varden; DW – Dorothy Wakeling; JW – Johnny Whitfield; SWi – Spike Williamson; LW – Luke Wilson; JWd – Jan Wood; TW – Tony Wood; KW – Ken Worsley; SW – Sue Worsley; MZ – MacKenzie Zirota; JZ – John Zvinashe.
The Babbler – Newsletter of BirdLife Zimbabwe
SSS – WhatsApp Special Species Site, contributor unidentified

Colin Baker, *Victoria Falls*. ✉ pratincole306@hotmail.com

TRAVEL

Roadside Birding in the Mana Pools National Park

Between 2007 and 2018 I made eight intermittent visits to the Mana Pools National Park, and noting the birds seen along the dirt roads to and in the park has raised my awareness of the distribution of various species. Birds were noted along three main routes below: (1) east-west (and return): 'Nyakasanga gate' (1st control gate) and the Rukomechi River gate (2nd control gate); (2) northwards (and return/southwards), then northwards towards the Mana Pools National Park reception office and Nyamepi camp site, and (3) roads running approximately parallel to the Zambezi River.

The overall vegetation is dry scrub, with baobabs being well represented and thick jesse bush covers a fair percentage of the park, and one drives through it for some distance on the way to the river. Similarly, a section of tall mopane trees is bisected by the north-south road starting near the 2nd gate. Closer to the river, vast tracts of trees have been totally destroyed by elephants over many years and now have s sparse grass cover. Finally, some amazing riverine pockets occur closer to and alongside to the River.

Route 1.

At the Nyakasanga gate I have recorded Crowned and Southern Red-billed Hornbills, White-fronted Bee-eaters, Cape Turtle Doves, while Bateleur and Brown Snake-eagles have on occasions circled overhead within 5 km of the gate. As one travels along this 'west-east' road near the base of the Zambezi escarpment for approximately 35 km before reaching the 2nd gate, the following species appear to be seen most more regularly, in an approximate descending order of frequency: Meves's Starlings, Southern Red-billed Hornbills, White-browed Sparrow-weavers, African Grey Hornbills, Cape Turtle Doves and Fork-tailed Drongos. Meves's Starlings, in flocks of 10-20, and White-browed Sparrow-weavers in parties of 4-10, were probably the most abundant in terms of numbers. White-backed Vultures have been recorded along this section but this is determined by the availability of a food source nearby on that specific day. Swainson's Spurfowl cross the road on occasions and Emerald-spotted Wood-doves flit past from time to time. Smaller passerines must also be present but they are difficult to see whilst travelling.

It appears that these birds are rather localised and tend to live in close proximity to the road. When our vehicle approaches, they clear off the road and roost on adjacent trees. None of the various flocks of the species listed flies away for any great distance when disturbed by our vehicle. They all generally tend to fly to the nearest tree or thicket close to the road. Their daily water intake must be extremely low, and they probably get much of it from their food, as surface water is very restricted, particularly in the drier months of the year. For these birds to remain localised, their required daily food intake must also be in close proximity.

Route 2

Once one arrives at the 2nd gate, most birders will spend a short time observing species around the offices. White-browed Sparrow-weavers, Lesser Striped Swallows and Southern Grey-headed Sparrows all seem to be attracted to human habitation. Initially, along the north-south road the chances of seeing birds seem to be rather lower. This was surprising as the vegetation for the first part is somewhat more verdant and with more trees. African Grey Hornbills and White-browed Sparrow-weavers are generally more visible but decrease as one approaches the

jesse bush. Crested Guineafowl have been recorded on most trips in this area of *jesse* bush. Raptors circling overhead are, once again, predominantly Bateleurs and Brown Snake-eagles.

On approaching the Zambezi, the trees are now dead broken stumps, in dry open spaces with very sparse grass cover. Meves's Starlings appear again as do Cape Turtle Doves and Southern Red-billed Hornbills. Other species one should see regularly are Lilac-breasted Rollers, White-fronted Bee-eaters, Brown-crowned Tchagras and an occasional Western Banded Snake-eagle. Three-banded Coursers have also been seen in the open.

Route 3

Because of its close proximity to the Zambezi River and the availability year-round water, a much wider variety of species is encountered on this route. Meves's Starlings appear to be the most frequently seen species, generally in fairly large flocks, followed next by Southern Red-billed Hornbills (in smaller flocks), many Cape Turtle Doves on the road, usually singles or pairs or small loose flocks of less than ten birds. Other species seen are occasional Lilac-breasted Rollers, Swainson's Spurfowl, Brown-crowned Tchagras, occasional African Grey Hornbills in small, loose flocks, Green Wood-hoopoes, Chestnut-backed Sparrowlarks, Emerald-spotted Wood-doves, Southern Grey-headed Sparrows, Purple Indigobirds, Fork-tailed Drongos, Red-breasted Swallows (summer migrants) and Southern Ground Hornbills. Spotting Böhm's Spinetail overhead is quite a special for the more observant. The more commonly seen raptors that enjoy the thermals include Martial and Tawny Eagles, and Bateleurs, with Yellow-billed Kites hawking insects during their migratory season. White-backed, Hooded, Lappet-faced and, less frequently White-headed Vultures, may be seen overhead whilst travelling on this route. Yellow-billed Storks are regularly seen circling overhead in fair sized flocks. Fork-tailed Drongos are common and seemed to be particularly more visible.

These observations prompted me to ask a number of questions about their lives in these drier areas. For instance, are these species evenly spread throughout the park? How often will one come across flocks of Meves's Starlings or White-browed Sparrow-weavers further away from these roads or how often will one come across Crested Guineafowl by bashing through the *jesse* some kilometres away from the road? Do flocks of birds maintain or protect their preferred areas and ward off intrusive food competing species? How much sharing of available food resources takes place in times of scarcity? Does regular vehicle traffic along these roads attract birds? Are insects drawn to the bare road, which then in turn attract these birds, or could seeds be more easily seen on the dirt roads?

Can birds adapt once their environment becomes more extreme than what they have been accustomed to? Interestingly, Meves's Starlings occur in the drier parts of the country so they are clearly adapted to these areas, and seeing them along the Mutare to Birchenough Bridge highway never ceases to amaze me as that area is severely degraded. How do they survive, feed and breed successfully under these conditions? How does their breeding success relate to the supply of food and water, and do they breed every year or only when they can 'sense' a better season will be prevailing? For that matter, has anyone camping at Mana seen juveniles and/or subadults next to the roads?

Even without actually counting the number of birds alongside the roads over an extended period, one gets the impression that the numbers are similar between years and seasons irrespective of the past season's rainfall. For that matter has anyone seen dead birds alongside the roads during the very dry and or drought periods or even road kills by vehicles? Realistically there has to be a fatality rate in very dry/drought years, and will these birds migrate towards the river or any nearby springs to survive during extreme drier years? Do we know distances they fly to go for a drink and how often? To what extent do the dietary preferences of these species reduce conflict and therefore enhance survival?

Finally, the actual bird count in this entire Mana area will be significantly higher than what is seen *only* alongside the roads mentioned, as one can walk about, visit various pools, view the River, picnic at various sites and undertake comfortable camp site birding which all will produce many more different species.

Innes Louw

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