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BIRD POPULATION TRENDS IN A PATCH OF TEMPERATE FOREST ON THE DRAKENSBERG ESCARPMENT, MPUMALANGA

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Introduction

Situated in Sappi property on the Drakensberg escarpment, north west of Ngodwana in Mpumalanga, is a large area of pristine temperate forest, bisected by a perennial stream, bordered by riverine bush, and surrounded by plantations. The Mashonamin camping site (25° 32' S 30° 29' E) is situated within the forest and riverine bush and serves as the base to conduct the ringing programme. The elevation of the campsite is 1162masl with the mountains rising to 1850masl on either side of the stream. The nets are all placed at the lower elevation over an extended area of both forest and riverine bush habitats.

Mist nets have been set up in the proximity of the picnic site in both the forest and riverine bush over a period of thirteen years from September 2003 to December 2015, with a two year gap in 2011 and 2012. The goal of the ringing project is to monitor trends in the bird population at that specific site. All the ringing sessions have been at a similar time of the year (early to mid-summer), for a similar period of time (2 nights/3 days) and with 9 nets placed in similar positions for control purposes. A ringing session was also held in July 2015.

384 birds have been ringed during the 14 ringing sessions. 43 species of birds have been captured and the data forwarded to SAFRING. 53 birds of 10 species were recaptured in subsequent

years, some on multiple occasions. A total 437 sets of data have been processed. The data relating to the capture and recapturing of each species is contained in Tables 1 and 2.



Fig. 1. Forest near Mashonamin camping site

General Observations

Some people are concerned about the effects of trapping and ringing birds on their health and welfare. The data from the large number of birds re-trapped and processed, some on multiple occasions over an extended period of time, indicates that the ringing of the birds has not been detrimental to their well-being.

Whilst the ringing sessions have been conducted at a similar time each year, the number of birds ringed each year has varied with peaks in 2003, 2009 and 2014. The cyclical nature of rainfall could be a factor influencing these peaks.

Site faithfulness is evident in the number of birds recaptured in a similar position to when they were first netted. Two Terrestrial

Brownbulbs *Phyllastrephus terrestris* (rings BD57496 and BD57497) have been re-captured after ringing on 4 and 5 occasions in the same vicinity between 2006 and 2015.

What has started to become apparent from the re-capture data is the age structure of the bird community. The Robin-Chats *Cossypha* and *Pogonocichla* spp (118 birds) and Brownbulbs *Phyllastrephus* / Greenbulbs *Andropadus importunus* (49 birds), for example, indicate a mature population of birds who have been occupying these territories for a number of years. The number of White-starred Robins *Pogonocichla stellate* (41 birds) seems to be high, indicating that the habitat is well suited to this species.

The habitat is conducive for smaller birds with numerous captures of species such as the Yellow-Throated Woodland Warbler *Phylloscopus ruficapilla* (17), Cape Batis *Batis capensis* (27), Green-backed Camaroptera *Camaroptera brachyuran* (26), Flycatcher species *Terpsiphone* and *Trochocercus* spp (22), Apalis species *Apalis thoracica* and *Apalis flavida* spp (21) and Cape White-eye *Zosterops capensis* (38). It is also to be noted that only 11 of the 53 birds recaptured are from these species, indicating that they are more transitory than the Robins and Brownbulbs/Greenbulbs.

The longevity of birds is to be noted. Three different Red-capped Robin-Chats *Cossypha natalensis* have been recaptured after 8 (ring BD57499), 7 and 5 years respectively, remembering they were adult birds when first captured, so you can add a year to that life span. A similar picture emerges with Chorister Robin-Chats *Cossypha dichroa* being recaptured after 5 (ring BE43249) and 4 years; Terrestrial Brownbulbs after 9 years (rings BD57496 and BD57497); White-starred Robin after 6 years (ring AF15883) and a Cape White-eye after 6 years (ring AF15889).

The change in Thrush species captured is interesting in that in 2003 and then again in 2007, Orange Ground-Thrushes *Zoothera guneyi* were caught. Olive Thrushes *Turdus olivaceus* were captured each year from 2003 to 2009, except for 2008. Since then I have not heard, seen or captured a Thrush of any species. Whilst I have only trapped one Southern Boubou *Laniarius ferrugineus* in 2014, they have been calling and sighted over the past 8 years. These are intelligent and inquisitive birds checking on what I am doing in the campsite and following in the bush whilst setting up/clearing the nets. They are predators of chicks and the chicks in a Thrush nest are exposed. Could they be a factor in the decline of the Thrush population?

Only nine Sunbirds have been ringed, none has been recaptured and they have only been caught in 2003, 2004, 2009 and 2015. Southern Double-collared Sunbirds *Cinnyris chalybeus* were caught in 2003, 2009 and again in 2015; a Collared Sunbird *Anthodiaeta collaris* was ringed in 2004; an Amethyst Sunbird *Chalcomitra amethystine* in 2009 and a White-bellied *Cinnyris talatala* and Scarlet-Chested *Chalcomitra senegalensis* in 2015.

Acknowledgements

Site conservation is of critical importance for these forest species. Sappi is commended for maintaining this area of natural forest and riverine bush in its present state and are requested to continue with this strategy into the future. Sappi's present policy of retaining patches of natural forest in the midst of plantations is certainly assisting these forest birds to be viable populations.

Thank you to Sappi for granting permission to ring and release the birds on your property. Your interest in and your encouragement to continue with this project is appreciated.

Appendix

A. Species list of birds ringed with the total for each species.

Bar-throated Apalis <i>Apalis thoracica</i>	16	Chorister Robin-Chat <i>Cossypha natalensis</i>	30
Yellow-breasted Apalis <i>Apalis flavida</i>	5	Red-capped Robin-Chat <i>Cossypha heuglini</i>	1
Cape Batis <i>Batis capensis</i>	27	White-browed Robin-Chat <i>Chalcomitra amethystina</i>	1
Southern Boubou <i>Laniarius ferrugineus</i>	1	Amethyst Sunbird <i>Anthodiaeta collaris</i>	1
Terrestrial Brownbul <i>Phyllastrephus terrestris</i>	21	Collared Sunbird <i>Chalcomitra senegalensis</i>	1
Dark-capped Bulbul <i>Pycnonotus tricolor</i>	3	Scarlet-chested Sunbird <i>Cinnyris chalybeus</i>	5
Golden-breasted Bunting <i>Emberiza flaviventris</i>	2	Southern Double-collared Sunbird <i>Cinnyris talatala</i>	1
Gorgeous Bush-Shrike <i>Chlorophoneus viridis</i>	1	White-bellied Sunbird <i>Tchagra tchagra</i>	1
Olive Bush-Shrike <i>Chlorophoneus olivaceus</i>	10	Southern Tchagra <i>Zoothera gurneyi</i>	4
Green-backed Camaroptera <i>Camaroptera brachyura</i>	26	Orange Ground Thrush <i>Turdus olivaceus</i>	10
Red-chested Cuckoo <i>Cuculus solitarius</i>	2	Olive Thrush <i>Mandingoa nitidula</i>	5
Black Cuckooshrike <i>Campephaga flava</i>	1	Green Twinspot <i>Tauraco corythaix</i>	1
Lemon Dove <i>Turtur chalcopilos</i>	1	Knysna Turaco <i>Zosterops capensis</i>	38
Emerald-spotted Wood Dove <i>Turtur tympanistria</i>	1	Cape White-eye <i>Phylloscopus ruficapilla</i>	17
Tambourine Dove <i>Lagonosticta rubricata</i>	6	Yellow-throated Woodland Warbler <i>Dendropicos griseocephalus</i>	4
African Firefinch <i>Muscicapa adusta</i>	1	Olive Woodpecker <i>Dendropicos griseocephalus</i>	4
African Dusky Flycatcher <i>Terpsiphone viridis</i>	8	Total new birds ringed	384
African Paradise Flycatcher <i>Muscicapa caeruleascens</i>	1		
Ashy Flycatcher <i>Trochocercus cyanomelas</i>	12		
Blue-mantled Crested-Flycatcher <i>Andropadus importunus</i>	25		
Sombre Greenbul <i>Indicator variegatus</i>	1		
Scaly-throated Honeyguide <i>Caprimulgus tristigma</i>	1		
Freckled Nightjar <i>Caprimulgus pectoralis</i>	2		
Fiery-necked Nightjar <i>Dryoscopus cubla</i>	1		
Black-backed Puffback <i>Pogonocichla stellata</i>	41		
White-starred Robin <i>Cossypha caffra</i>	3		
Cape Robin-Chat <i>Cossypha dichroa</i>	43		

B. Species list of birds re-trapped with totals for each species.

Bar-throated Apalis <i>Apalis thoracica</i>	2
Cape Batis <i>Batis capensis</i>	2
Terrestrial Brownbul <i>Phyllastrephus terrestris</i>	15
Green-backed Camaroptera <i>Camaroptera brachyura</i>	3
Sombre Greenbul <i>Andropadus importunus</i>	2
White-starred Robin <i>Pogonocichla stellata</i>	9
Chorister Robin-Chat <i>Cossypha dichroa</i>	8
Red-capped Robin-Chat <i>Cossypha natalensis</i>	8
Cape White-eye <i>Zosterops capensis</i>	3
Yellow-throated Woodland Warbler <i>Phylloscopus ruficapilla</i>	1
Total of birds retrapped	53



Fig. 3. Sombre Greenbul Ring BE43217



Fig. 2. Green Twinspot Ring W26895



Fig. 4. Orange Ground Thrush Ring CC36133