

# The Limpopo Gurney's Sugarbird Project: 2017–2023

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In the late 1970s, my late father cultivated Fynbos protea species in our suburban garden in Lydenburg, Mpumalanga. A few years later, Gurney's Sugarbirds discovered these flowering proteas (mainly *Protea neriifolia* and *Protea repens*) in suburban Lydenburg. This sparked my interest in this nectarivore, and birds in

general. While collecting data for an annotated checklist of the birds of the region, I realised that Gurney's Sugarbird may be undertaking seasonal movements between their breeding grounds in the high-lying mountain habitats

BELOW A Gurney's Sugarbird at a *Protea roupelliae* in the Wolkberg © Derek Engelbrecht.



and the lower-lying suburban areas of Lydenburg (de Swardt 1990). In 1987, I started a research project focussing specifically on the sugarbirds. The main aim of this project was to study their seasonal movements, but other aspects of the species' ecology, e.g., diet, breeding biology, and their association with proteas, were also investigated.

Long-term data of this study confirmed their seasonal movements were driven mainly by the flowering seasons of their main food source, *Protea roupelliae* (De Swardt 1991), and the flowering proteas - and other nectar-producing plants - in suburban Lydenburg. The Lydenburg study

lasted until 1998 (when I did my M.Sc dissertation on them), but continued with later visits to monitor certain populations on the Long Tom Pass (De Swardt 2014). In 2006, ringers from Birdlife Northern Gauteng, Pretoria, agreed to continue monitoring sugarbirds in the Lydenburg region, specifically the sugarbird populations at Paardeplaats and

ABOVE This was the first Gurney's Sugarbird caught in this study. We had our nets up on the north face of Iron Crown, renowned for its strong winds - as you can see from the angle of the mist nets in the background © Derek Engelbrecht.

Long Tom Pass. At present, more than 386 sugarbirds have been ringed at the Paardeplaats site, with 48 recaptures (a recapture rate = 12.4%). In total, since the start of the project in 1987, about 965 sugarbirds have been ringed at various sites in the Lydenburg area, with 134 recaptures (recapture rate = 13.9%). The relatively low overall recapture rate is probably a consequence of a combination of local dispersal and the frequency of visits to some study sites (De Swardt and Peach 2001).

In 2017, DE and I initiated a project to study aspects of

the ecology and movements of isolated populations of Gurney's Sugarbird in the Haenertsburg and Soutpansberg regions of the Limpopo Province (see De Swardt 2019, De Swardt and Engelbrecht 2019). A secondary aim of the project was to obtain genetic material for Evan Haworth's study on the genetic relationships of these isolated populations (Haworth 2020).

Between October 2017 and March 2023, 39 Gurney's Sugarbirds were ringed at various sites in the Limpopo Province, including Lajuma in the western



ABOVE Climbing mountains such as Lajuma and, in this case, Iron Crown with all your research and ringing equipment is not for the faint-hearted © Derek Engelbrecht.

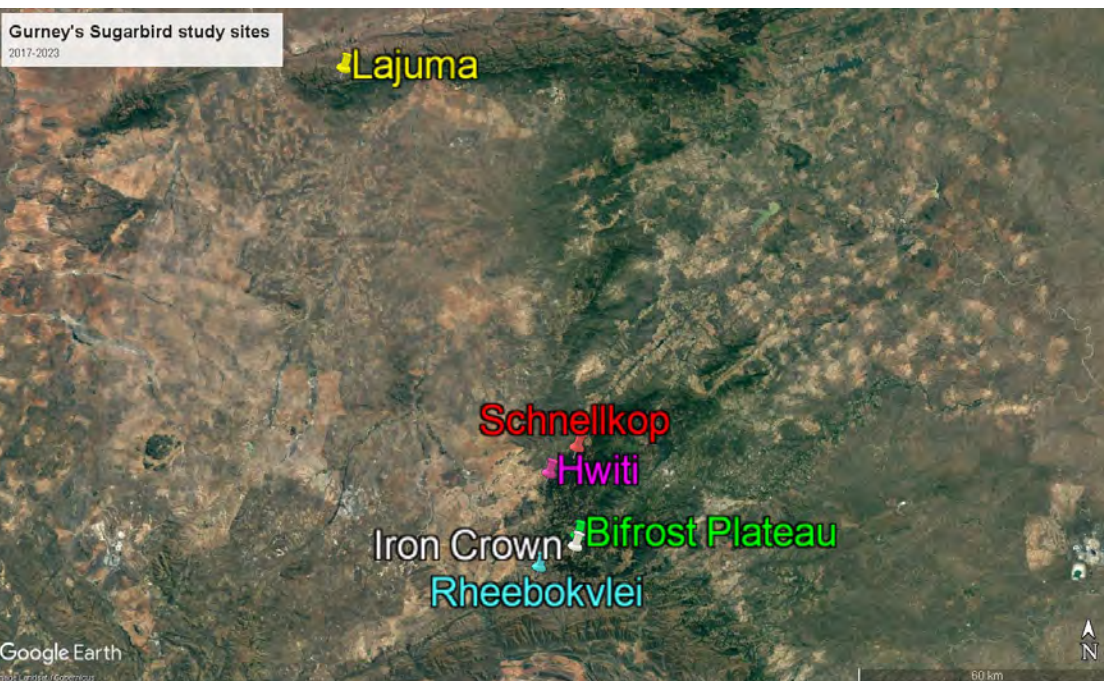
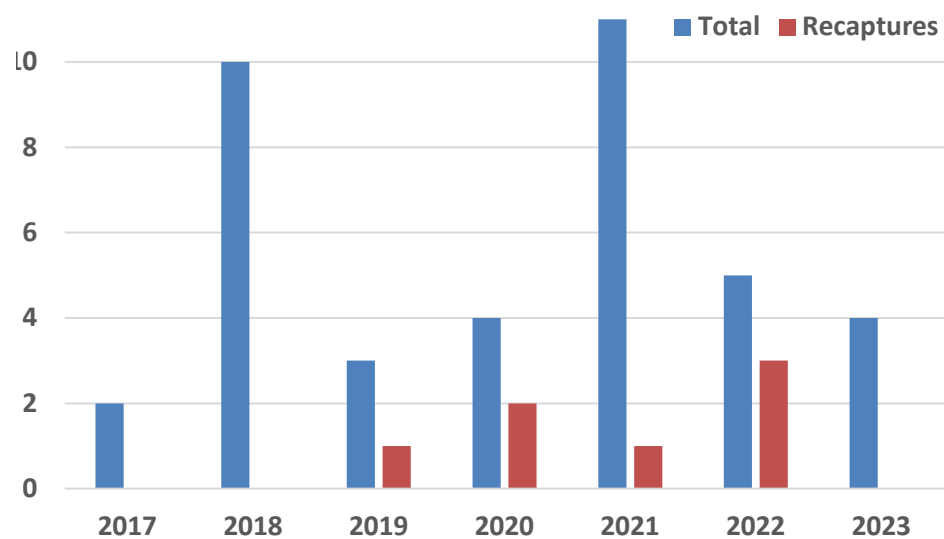


Figure 1. Study sites during the Limpopo Gurney's Sugarbird Project 2017–2023.

Soutpansberg, Iron Crown, the Bifrost Plateau, and Rheebockvlei in the Wolkberg mountains, and Hwiti and Schnellkop north of Haenertsburg (Fig. 1). The Hwiti and Schnellkop sites are situated in a mosaic of grassland and commercial plantations, and one aim of the study was to determine if any intra-population movements occur between these sites as was observed at Lydenburg (De Swardt 2014). During this time, we had seven recaptures (recapture rate = 17.9%), mostly from Hwiti (Fig. 2, Table 1). These recaptures confirm that sugarbirds in the Limpopo Province, like populations at Lydenburg, exhibit

site fidelity to the *P. roupelliae* populations at the sites they inhabit. Of the recaptured birds, the mean period between initial ringing and recapture was 1y 6m 9d, and the longest duration was two males recaptured 3 years after initial ringing (Table 1).

In addition to the 39 Gurney's Sugarbirds ringed during the study, 221 other birds were captured during ringing sessions



**Figure 2.** Numbers of Gurney's Sugarbirds ringed and recaptured at study sites in the Limpopo Province between 2017 and 2023.

**Table 1.** Details of Gurney's Sugarbirds retraps in the Limpopo Province between 2017 and 2023. All birds recaptured were males, and all were ringed and retrapped at the same locality.

Ring number	Age	Ring date	Ringing/retrap location	Recapture date	Elapsed time
CC85959	4	2018-11-18	Hwiti	2019-12-08	1y 0m 21d
CC85959	4	2018-11-18	Hwiti	2020-03-11	2y 3m 22d
CC85962	7	2018-11-18	Hwiti	2020-03-11	2y 3m 22d
CC85961	7	2018-11-18	Hwiti	2021-11-28	3y 0m 11d
CC92965	4	2021-11-28	Hwiti	2022-02-05	0y 2m 9d
4A62978	4	2021-02-25	Rheebokvlei	2022-11-14	1y 8m 21d
CV70307	4	2019-12-09	Hwiti	2022-11-16	2y 11m 8d
Mean elapsed time between initial ringing and recapture					1y 6m 9d

targeting Gurney's Sugarbirds, of which 75 were nectarivores such as sugarbirds, sunbirds and Cape White-eyes (33.9%) (Table 2). Recaptures of 17 other birds were also obtained, including Buff-streaked Chat (4), Nicholson's Pipit (5), Greater Double-collared Sunbird (2), Sombre Greenbul (3), Lazy Cisticola (2), and Cape White-eye (1). Similar results were obtained in other studies of birds associated with *P. roupelliae* woodland where nectarivores were also the most frequently captured feeding guild (De Swardt 2012).

Ringers in the Limpopo Province are encouraged to continue ringing sugarbirds to improve our knowledge of the movements and survival of sugarbirds in this region. Sugarbirds are potentially long-lived, with the longest longevity record being 13 years (De Swardt 2012).

The late Terry Oatley, SAFRING ringing coordinator in the 1980s and 1990s, always told me that bird ringing is an investment - the longer your study period, the more recaptures you will get.

#### Acknowledgements

Thanks to Ryan Van Huyssteen, Samuel Peta, Marianne McKenzie, Quentin

Hagens, and Billy Attard, who joined us at ringing sessions in the Limpopo Province. Especially Ryan and Samuel who assisted me in carrying poles and equipment to the top of Lajuma Mountain!

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Table 2: Bird species (Gurney's Sugarbird excluded) ringed in *Protea roupelliae* woodland at study sites in the Limpopo Province between 2017 and 2023. DDS = Dawie De Swardt, DE = Derek Engelbrecht, BA = Billy Attard, and MM = Marianne McKenzie.

Species	Name	DDS	DE	BA	MM	Total/species	Recaptures
337	Purple-crested Turaco	1				1	
177	Shelley's Francolin					0	
390	Speckled Mousebird	2				2	
404	European Bee-eater		1			1	
437	Yellow-fronted Tinkerbird	2	2			4	
442	Lesser Honeyguide	2		1		3	
452	Olive Woodpecker		1	1		2	
458	Rufous-naped Lark		2			2	
545	Dark-capped Bulbul	4	1	1	2	8	
551	Sombre Greenbul	7			1	8	3
569	Buff-streaked Chat	1	4	5	2	12	4
570	Familiar Chat	1	8		1	10	
581	Cape Robin-Chat	4	1	1	2	8	
588	White-browed Scrub Robin	2				2	
599	Willow Warbler			1		1	
603	Greater Striped Swallow			1		1	
618	Cape Grassbird	1				1	
622	Bar-throated Apalis	2		1		3	
627	Green-backed Camaroptera	1				1	

Species	Name	DDS	DE	BA	MM	Total/species	Recaptures
629	Zitting Cisticola		1			1	
639	Wailing Cisticola	7	12	2	5	26	
648	Lazy Cisticola	3	1	1	1	6	2
649	Tawny-flanked Prinia				1	1	
655	African Dusky Flycatcher		1			1	
672	Cape Batis	1				1	
673	Chin-spot Batis		1			1	
692	African Pipit		7			7	
693	Nicholson's Pipit		9			9	5
707	Common Fiscal			1		1	
709	Southern Boubou	3				3	
715	Black-crowned Tchagra	1				1	
717	Olive Bush Shrike	1				1	
751	Malachite Sunbird	10	4	5	1	20	
758	Greater Double-collared Sunbird	10	1	6	7	24	2
760	Southern Double-collared Sunbird	1		3		4	
772	Amethyst Sunbird	6		5	5	16	
805	Red-billed Quelea				1	1	
833	African Firefinch	3	1		1	5	
857	Cape Canary	3		2	1	6	
872	Cinnamon-breasted Bunting	1	1			2	

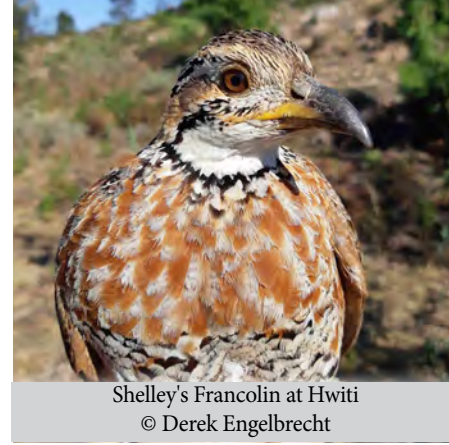
Species	Name	DDS	DE	BA	MM	Total/species	Recaptures
873	Cape Bunting			1	1	1	
1049	Drakensberg Prinia	1	1			2	
1172	Cape White-eye	6	2	3		11	1
<b>Total</b>		86	62	41	32	221	17



Dawie with a Gurney's Sugarbird at Rheebockvlei © Derek Engelbrecht



Malachite Sunbird on Iron Crown © Derek Engelbrecht



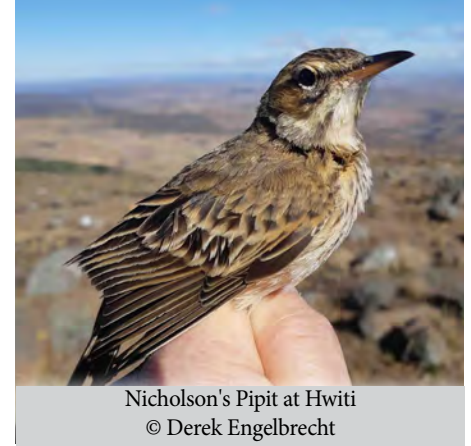
Shelley's Francolin at Hwiti © Derek Engelbrecht



Malachite Sunbird at Rheebockvlei © Derek Engelbrecht



Purple-crested Turaco at Hwiti © Derek Engelbrecht



Nicholson's Pipit at Hwiti © Derek Engelbrecht