SUNBIRD RECAPTURES AND SEASONAL MOVEMENTS AT LYDENBURG, MPUMALANGA PROVINCE

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Introduction

During a study on the seasonal movements of Gurney's Sugarbird *Promerops gurneyi* in the Lydenburg area, Mpumalanga Province, we obtained useful survival and seasonal movement data on some sunbird species (De Swardt 1989 & 1991). These birds were mainly captured in *Protea roupelliae* woodland in mountainous localities at Paardeplaats, Sterkspruit, Gustav Klingbiel Nature Reserve and Nooitgedacht as well as in suburban Lydenburg at gardens, parks, the Fisheries Institute and Hospital areas (De Swardt 1991).

Previous studies on sunbird movements were mainly concentrated in the Western and Eastern Cape Provinces where valuable movement and recapture data were obtained (Fraser *et al.* 1989; Craig & Hulley 1994), and recently also in the Free State Province (De Swardt 1995). This note presents some capture and seasonal movement data on Malachite Sunbird *Nectarinia famosa*, Black Sunbird *N. amethystina*, Greater Doublecollared Sunbird *N. afra* and Whitebellied Sunbird *N. talatala* which were not previously reported from the Lydenburg area.

Results and discussion

Since December 1988, a total of 565 individual sunbirds have been captured and ringed in the Lydenburg area. This total comprises 300 Malachite Sunbirds, 152 Black Sunbirds, 99 Greater Doublecollared Sunbirds and 14 Whitebellied Sunbirds (Table 1).

During this study, fourteen recaptures of Malachite Sunbirds were obtained, all of them in the mountainous habitat, and no records of seasonal movement were obtained from any individual (Table 2). The only movement revealed in this species, was that of a female AE 85827 caught at Sterkspruit on 5 December 1990 and recaptured (after 62 months) alongside a male AE 85816 at Gustav Klingbiel Nature Reserve (Table 2). The vegetation of the Sterkspruit locality was destroyed by a veld fire during October 1991, so the movement of this sunbird female (and of Gurney's Sugarbird from the same locality — De Swardt 1993), was due to post-fire dispersal.

Most of the retrapped Malachite Sunbirds were recaptured after a year or more at the original mountain capture sites in the

Table 1. Numbers of sunbirds ringed in the Lydenburg study area.

Sunbird species	Ringing seasons									
	88/9	89/0	90/1	91/2	92/3	93/4	94/5	95/6	96/7	Total
Malachite Sunbird	16	122	37	26	48	0	0	35	16	300
Black Sunbird	27	11	7	53	15	11	4	17	7	152
Greater DC Sunbird	7	17	11	30	2	3	2	21	6	99
Whitebellied Sunbird	0	0	4	8	0	0	1	0	1	14

Lydenburg study area. This sunbird species was absent from the mountainous areas during the cold winter months, and it probably disperses to lowerlying areas in valleys, but no movement routes have been detected for this species. Only a few individuals have been ringed in suburban Lydenburg and the origin of these birds is still uncertain.

Black Sunbirds were encountered both in the suburban and mountainous localities, but influxes seemed to occur during some years of high rainfall (De Swardt 1993). Six sunbird recaptures were obtained of which two move seasonally (Table 3). A male AB 99429, ringed during the winter (June) of 1992 in suburban Lydenburg, was controlled four months later at Klipspruit, 26 km to the south. This is the longest movement recorded for a nectarivore ringed in the Lydenburg area. Another male AB 99479, ringed as a sub-adult in a suburb of Lydenburg, was recaptured at a *Protea* clump on 11 January 1996 higher up in the same valley on Paardeplaats, 44 months later. Fidelity to *Protea* sites was also observed in two males, recaptured after 61 months at Paardeplaats (Table 3). Black Sunbirds were also observed to leave *Protea* clumps after fires in the surrounding grasslands. A male, ringed at Nooitgedacht during November 1989, was recaptured 2,5 km away at a small *Protea* clump in the same valley after the ringing site had been burnt (De Swardt 1993).

Greater Doublecollared Sunbirds were mainly captured at the mountain sites and only a few were caught in the suburban areas during the winter months. From the small recapture sample of this species the longest elapsed time was 36 months. Seasonal movements were recorded in only one individual, X 02667, a bird recaptured in a Lydenburg garden after being ringed four months earlier at Gustav Klingbiel Nature Reserve.

Table 2. Malachite Sunbird *Nectarinia famosa* recaptures in the Lydenburg study area.

Ring No.	Ringing location	Ringing date	Recapture location	Recapture date	Time lapse	Distance moved (km)
F20519	Paardeplaats	16-09-88	Paardeplaats	27-12-89	15	0
F20520	Paardeplaats	16-09-88	Paardeplaats	28-12-89	15	0
F20529	Paardeplaats	17-09-88	Paardeplaats	28-12-89	15	0
AB70157	Paardeplaats	27-12-88	Paardeplaats	25-11-89	11	0
AB81172	Paardeplaats	25-11-89	Paardeplaats	26-11-92	23	0
AB81183	Paardeplaats	25-11-89	Paardeplaats	01-11-90	12	0
AB81177	Paardeplaats	25-11-89	Paardeplaats	01-12-90	12	0
AB81160	Paardeplaats	25-11-89	Paardeplaats	02-12-90	12	0
F09563	Paardeplaats	02-12-89	Paardeplaats	01-12-90	12	0
AE85827	Sterkspruit	05-12-90	Gustav Klingbiel	10-01-96	62	1,8

Whitebellied Sunbirds were not recorded in *Protea roupelliae* woodland but were found in the thornfield areas adjacent to the Lydenburg suburbs. This sunbird is characteristically a species of *Acacia* (De Swardt 1993; Maclean 1993). Small numbers were captured in the suburban areas mainly during the winter months, although they were known to be present in Lydenburg throughout the year (see Table 1; De Swardt 1990). No recaptures have been made.

Ringing and recapture of sunbirds has so far provided evidence of largely local seasonal movement during this study at Lydenburg. It indicates that Black and Greater Doublecollared Sunbirds also move seasonally between the mountain and suburban areas of Lydenburg, as Gurney's Sugarbird is known to do (De Swardt 1991). The absence of Malachite Sunbirds in the mountainous areas during the winter months is interesting and it is still uncertain where they disperse to during this period. In the Free State Province, Malachite Sunbirds are known to move between several nectar resources and to revisit specific localities in consecutive years (De Swardt 1995; unpubl. data). In the southwestern Cape post-fledging dispersal has been shown to occur over considerable distances, with more local movements made in response to flowering periods of plants (Fraser *et al.* 1989).

One of the aims of long term studies is to obtain longevity data of a study population. The only significant longevity records obtained during this study were from two Malachite Sunbirds (62 months) and two Black Sunbirds (61 months). The oldest sunbird retraps in the SAFRING database are 120 months for Malachite Sunbird, 88 months for Black Sunbird and 67 months for Greater Doublecollared Sunbirds (T B Oatley *in litt.*). Based on these data it can be expected that 10-22 g nectarivores can survive from 5 to ten years or more; survival of over 16 years has been recorded for a retrapped Whitebellied Sunbird.

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Table 3. Black Sunbird *Nectarinia amethystina* Recaptures in the Lydenburg study area.

Ring No.	Ringing location	Ringing date	Recapture location	Recapture date	Time lapsed	Distance moved
AB81192	Nooitgedacht	26-11-89	Paardeplaats	23-12-91	25	2,5
AB99435	Paardeplaats	29-12-91	Paardeplaats	22-01-97	61	0
AB99682	Paardeplaats	29-12-91	Paardeplaats	22-01-97	61	0
AB99479	Lydenburg	07-06-92	Paardeplaats	11-01-96	44	8,0
AB99492	Lydenburg	08-06-92	Klipspruit	07-10-92	4	26,0
AB99468	Lydenburg	22-04-92	Lydenburg	02-02-93	9	0
				Mean (n=6)	34	6,1