AGEING & SEXING

GURNEY'S SUGARBIRD *PROMEROPS GURNEYI*

Biometric data for Gurney's Sugarbird are scanty. Maclean (1985) listed mensural data for only four males and two females. Nowhere could any indication be found of how to sex these birds in the hand or field. Mensural data were obtained during a long-term study of Gurney's Sugarbird in the Lydenburg area (de Swardt 1987).

SEX

Tail and wing length

The mean tail length of males is 34,1% longer than that of females (t=16,44; P<0,01 df. 140) (Table 1 on page 59).

Some overlap does occur between the sexes and although male tail lengths ranged from 94-186, birds with tail lengths shorter than 130 mm were regarded as females. Apart from the tail length criterion the presence or absence of a bulging P6 was investigated. Wing length, head length and mass were recorded and birds were then sexed taking all of these measurements into consideration (Table 1).

The mean male wing length was significantly longer than that of the females (t=11,28; P<0,01; df. 140) although there is some overlap.

Unsexed sugarbirds' tail and wing lengths are equal or shorter than those of the females.

Mass

The mean body mass of males (37,0 g) was significantly higher than those of females (32,8 g) (t=7,59; P<0,01; df. 139) although there is some overlap in the ranges (Table 1).

Total head length

This measurement was also used in an attempt to sex Gurney's Sugarbird. The mean head length of males (54,0; n=32) was significantly longer than those of the females' mean of 52,2 (n=34) (t=4,0; P=0,06).

Bulging of Primary 6

Bulging of P6 (Figure 1) was recorded in 27 males (43,5%; n=62) and very seldom in females (8,7%; n=80) and in some juvenile birds. The maximum width of the bulge in the males ranged from 13,1-15,9 and in the females between 9,9 and 12,0.

One male had a bulged P7 on the left wing and the bulging normal P6 on the right wing.

The role of the modified P6 in male Gurney's Sugarbird is to produce a 'frrt-frrt' sound in flight which plays an important role in display (Skead 1967). This sound was also heard when males were released after being handled. The combination of the presence of a bulging P6; the size of the bulging together with the wing, tail and head lengths, can thus be used to sex adult Gurney's Sugarbird in the hand with great confidence.

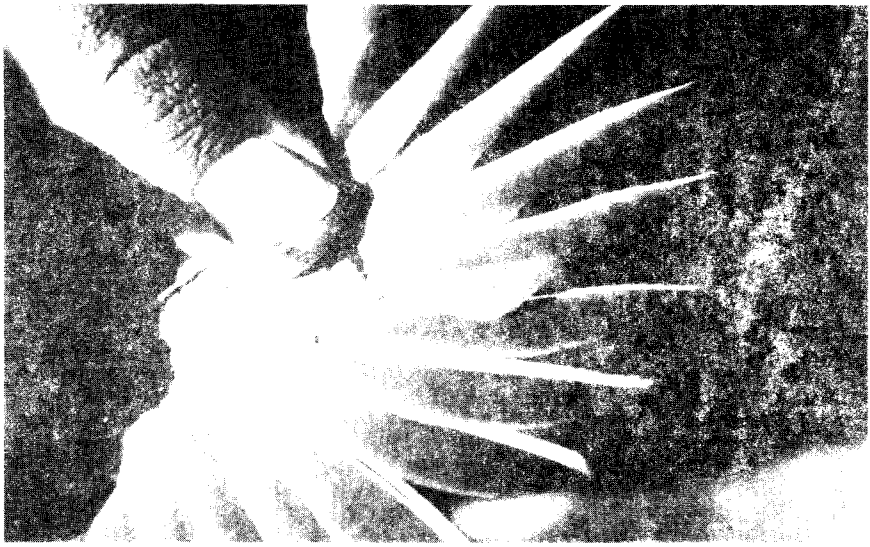

FIGURE 1

BULGING OF P6 IN MALE GURNEY'S SUGARBIRD
(PROMEROPS GURNEYI)

Broodpatch

As only the females incubate they could be sexed by the presence of a featherless broodpatch during the breeding season (November - January).

TABLE 1

MEASUREMENTS OF GURNEY'S SUGARBIRD *PROMEROPS GURNEYI*

MEASUREMENTS (mm)	MALES				FEMALES				UNSEXED			
	MEAN	RANGE	SD	N	MEAN	RANGE	SD	N	MEAN	RANGE	SD	N
WING (Max Chord)	94,5	86-101	3,39	62	87,4	79-96	3,69	80	85,7	71-96	4,32	32
TAIL	149,7	94-186	16,95	62	111,6	88-136	10,52	80	100,8	71-132	16,22	32
TARSUS	21,7	19,4-23,8	1,01	62	20,8	17,0-25,3	1,62	80	20,7	17,4-23,1	1,33	32
CULMEN (Feather line)	28,9	25,8-31,9	1,14	62	27,7	25,2-30,6	1,29	80	27,5	23,1-29,4	1,62	32
TOTAL HEAD	54,0	51,2-55,2	1,15	32	52,0	49,5-56,7	1,71	34	52,7	48,7-55,7	1,66	21
MASS (g)	37,0	30-42,8	2,69	61	32,8	26,5-43	3,53	80	33,0	26,5-40	3,96	31

AGE

Plumage

Adult sugarbirds have a deep russet crown and breast as well as a clear malar stripe. The rump feathers are yellowish-olive with faint black streaks.

Sugarbirds less than 6 months old retain their downy feathers and their breasts are a greenish-russet. Their secondaries are edged brownish and differ from the adults which are whitish.

Undertail coverts

The undertail coverts are bright yellow in the adults and greenish-yellow in juvenile birds.

Tail

The tail lengths of the juvenile and immature sugarbirds are equal or shorter than those of adult females and can be separated by their yellow gape or the absence of a broodpatch.

Gape

The gape of nestlings are yellowish with a swollen gape flange. In juveniles the gape flange become smaller and less yellowish after a few months.

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Skead, C. J. 1967. 'The Sunbirds of Southern Africa'. Cape Town: A. A. Balkema.

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