Redheaded Weaver weights from ringing records

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Maclean (1993) did not list any weights for the Redheaded Weaver *Anaplectes rubriceps*. This species is ringed in small numbers and no single ringer has ringed sufficient numbers to obtain meaningful mass data. I extracted the ringing records for this species to analyse the weight data in the SAFRING database.

DATA EXTRACTION

The ringing data are not computerised except for recovered birds (including some retraps) and data that has been submitted electronically by some ringers since July 1998. Summaries of ringing schedules have been computerised since 1975. This allows the schedules to be traced that contain the ringing details for a certain species. Looking up these schedules is labour intensive but for species ringed in small numbers is feasible. Early SAFRING schedules did not have a column to record mass data.

The only mass data for Redheaded Weavers I found in an extensive search of the literature was published in several issues of the *Wagtail*, newsletter of the Peterhouse Natural History Society in Zimbabwe (Table 1). There may be some mass data in other African newsletters that I have not yet searched, but not in any of the major handbooks. The mass data did not provide ring numbers but are probably not duplicated in the ringing records (I carefully matched data by locality and year). The published data and ringing

Table 1. Published mass data for Redheaded Weavers.

Reference	Sex	Mass	Locality
Ringing reports			
Anon. 1965	u	20 n=1	Peterhouse, Zimbabwe
Ginn 1971a	f	22 n=1	Rusape, Zimbabwe
Ginn 1971a	m	20, 22 n=2	Peterhouse, Zimbabwe
Humphreys 1976	u	23.5 n=1	Nata, Botswana
Bell 1977	f	23.5 n=1	Ofcolaco, Mpumalanga, South Africa
Anon. 1988	f	20.3 n=1	Zimbabwe
Anon. 1988	u	19.1 (14.4–20.8) n=9	Devuli ranch, Zimbabwe
Specimens			
Ginn 1971b	m	15 n=1	Nthane/Mosu, Botswana
Ginn 1971b	f	25 n=1	Mompswe, Botswana
Ginn 1971b	f	20 n=1	Nata, Botswana
Ginn 1971b	m	22 n=1	Nata, Botswana
Ginn 1974	m	25.2, 26 n=2	Makgadigadi, Botswana
Ginn 1976	f	25 n=1	Makgadigadi, Botswana
Ginn 1976	m	22.2 (15–26) n=5	Makgadigadi, Botswana
Ginn 1978	m	19.4, 20.2 n=2	Barberton, Mpumalanga, South Africa

Sex: m=male, f=female, u=unsexed
Ages not given

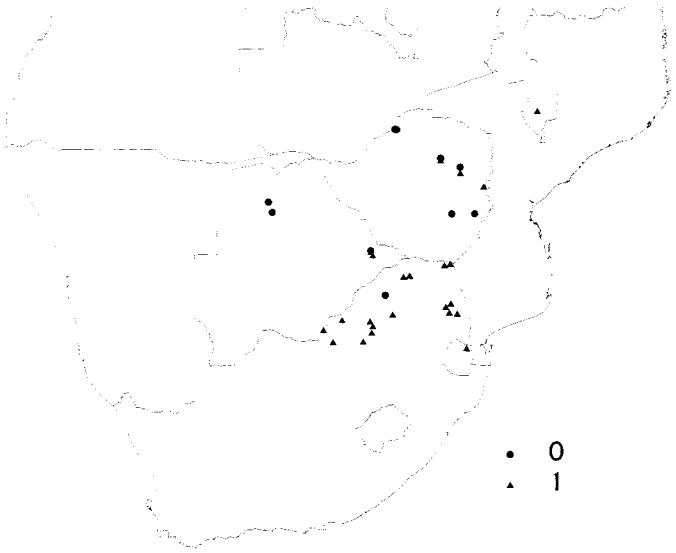

Fig. 1. Localities where Redheaded Weavers have been ringed since 1975. Circles indicate localities where mass was not recorded (n=18) and triangles indicate localities where mass was recorded (n=85).

data have been combined, although the mass values 14.4, 15 and 33 must be errors and are excluded from the analysis.

AGEING AND SEXING

Adult male and female Redheaded Weavers are easily distinguished in breeding plumage by the bright red head of the male versus the yellowish head of the female. In non-breeding plumage, however, sexes are similar (Maclean 1993). Immature males may be distinguished from immature females when the former have the head tinged with orange and the breast with red-tipped feathers (Mackworth-Praed & Grant 1963).

RESULTS

143 Redheaded Weavers have been ringed with SAFRING rings over the period 1948–1998. These have yielded no recoveries to

Table 2. Mass data of Redheaded Weavers from ringing records and published data.

Age	Sex	Mean	SD	Range	n
Imm	All, incl unsexed	22.0	2.1	19.0–25.0	14
Adult	All, incl unsexed	21.8	2.1	17.0–27.0	94
Adult	Male	23.1	1.4	19.4–26.0	37
Adult	Female	21.0	2.0	17.0–25.0	31
Adult	Male, summer	23.4	1.1	21.7–25.6	16
Adult	Male, winter	22.9	1.7	20.0–25.0	10
Adult	Female, summer	20.7	1.6	19.0–24.0	16
Adult	Female, winter	20.5	2.3	17.0–24.0	9

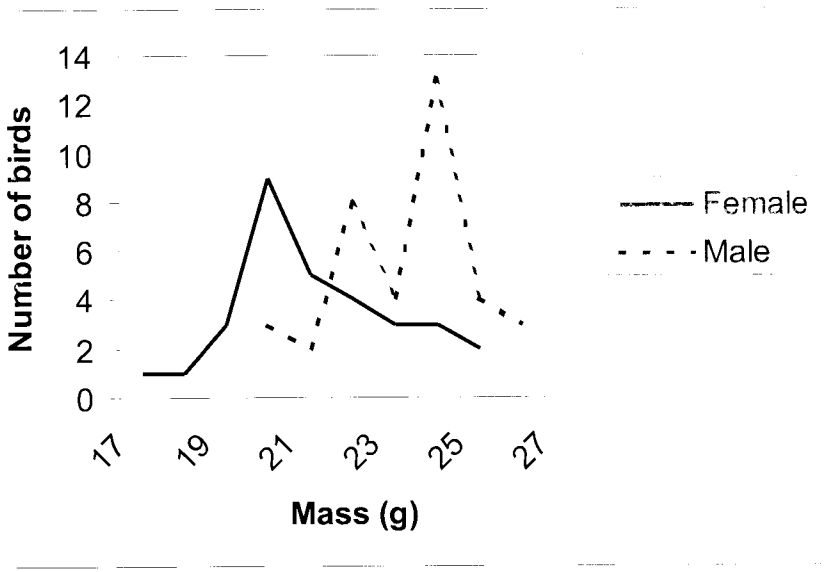

Fig. 2. Mass data of adult male and female Redheaded Weavers, from SAFRING's databank (n=85) and published data (outliers 14.4, 15 and 33 g excluded).

date. 103 birds have been ringed since 1975: 82 of these ringing records have mass data on the schedules. The earlier data cannot easily be traced.

The ringing localities (Fig. 1) refer to the nominate race *A. r. rubriceps*, which is found in southern Africa. Ringers did sex immatures in some cases but the mass data for all immatures were combined (Table 2). Males were heavier than females, though there was much overlap (Table 2, Fig. 2). The difference is significant (t=4.61, df=66, p=0.005).

To investigate seasonal differences, mass data for adult males and adult females were divided into summer (September to February) and winter (March to August) records using the ringing data. The ringing records were spread through the year, with 44 mass data from in summer (approximately the breeding season in southern Africa) and 38 records during the remaining months. In summer males were significantly heavier than females (t=5.48, df=30, p=0.005; Table 2) though there was a little overlap. In winter males were significantly heavier than females (t=2.63, df=17, p=0.01). Masses of males were not significantly different in summer and winter. Similarly masses of females were not significantly different in summer and winter.

DISCUSSION

Mass differences between the sexes were expected because wing lengths of specimens show sexual dimorphism: for instance, Maclean (1993) gave 77.6 mm (76–80, 11 females), and 82 mm (80–85, 25 males).

There may be some errors in ageing and sexing the birds, especially if a particular ringer only handled a few birds of this species, but ringers can use specific codes indicating uncertainty. Although males were heavier than females in winter and summer, there is large overlap in masses. It does not seem possible to sex adults during winter based on mass, though the data used here may not be very reliable. Wing-length may be more useful but SAFRING schedules have

not made provision for wing-length to be recorded in the past.

Ringers can contribute to mensural data for species that still lack data. The primary purpose of recording mensural data, however, is not to merely fill data gaps, but to see if new criteria for ageing and sexing birds can be found.

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