SOME RESULTS OF RINGING THICK-BILLED WEAVERS

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The breeding range of the Thick-billed Weaver, Amblyospiza albifrons in Natal is mainly along the coast but in places extends inland for as much as 100 km and up to 1 200 m A.S.L. One of these extensions includes Pietermaritzburg, and the species has been recorded breeding at a pond by Old Howick road for many years. It is rarely seen as a garden bird unless there is something definite to attract it, and it was never seen in the author's garden in a N.W. suburb of Pietermaritzburg (29 35S 30 21E) from 1967 to 1976. Early in that year an aviary was erected to house young birds of this species rescued from damaged nests and wild birds were first seen close to this aviary on 13 June 1976. Since then they have been attracted by the presence of this aviary, by sunflowers grown for the purpose and by sunflower seeds put onto a bird table and have been recorded every month except February and March, sometimes singly, sometimes in flocks of up to 20 birds. Since 15 September 1976 104 birds have been caught and ringed in the garden. In addition 57 nestlings were ringed at two breeding sites within the city boundary. To date 13 of the former and three of the latter have been recovered in the garden.

The trap used is an oblong cage of 1" x ½" mesh (75 x 45 x 20 cm) open at one end and closed by a hinged door that drops inside the trap when a small electromagnet releases a catch. This magnet is operated by a 6-volt battery acting through a condenser. The circuit is completed either with a switch in the house 20 m away or by a contact-maker on which the bird treads between the door and a dish of seeds used as bait. Cape Sparrows Passer melanurus and Cape Canaries Serinus canicollis, and rarely other birds, are sometimes caught by mistake, but doves, though numerous and fond of the seeds, rarely enter the trap. Birds are removed through a small door in a side wall; leather gloves are always worn because Thick-billed Weavers have a very powerful bite! Birds' reactions when caught vary. Some become agitated at once while many continue to feed calmly. On one occasion three birds came to the trap at once and two were caught. The only one that showed any excitement was the one that was left outside and it made a desperate attempt to get in and join its companions at their meal!

4,3 mm incoloy rings have been used throughout and have been very satisfactory. It is said that these birds can remove metal rings but no evidence was found for this, though plastic rings are soon got rid of, especially by the more powerful males. Incoloy rings soon become flattened, but this probably makes them even more difficult to remove.

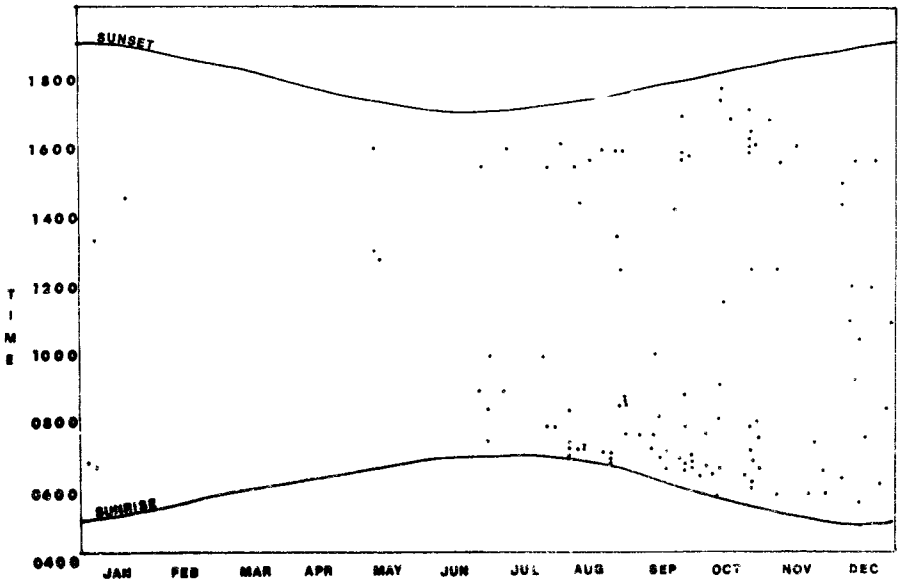

Table 1. Dates and times of ringing. Each dot represents a new capture and ringing.

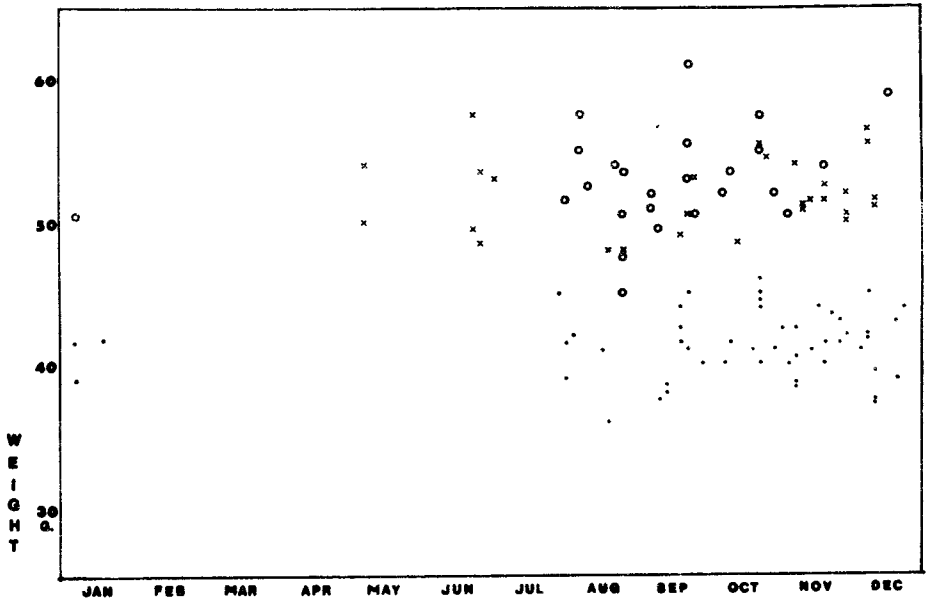

Table 2. Sex, age and weight of birds ringed. 0 = adult male, x = immature male, · = female.

There is apparently no major migration though flocks move about between patches of indigenous forest during the winter especially inland where food is scarcer than at the coast. There is a daily movement between roosts and breeding sites in reedbeds and feeding places in forests, parks, gardens and so on.

Table 1 shows the dates and times of day of new captures and indicates that most birds were caught between midwinter and mid-summer and in the early morning and, to a lesser extent, in the evening. These morning and evening visits to the garden must occur in the course of daily migration from roost to feeding place. The greater frequency of morning visits means that the birds are hungrier than after a day's foraging.

Table 2 records weight, sex and age groups of ringed birds. There is extreme sexual dimorphism, males being almost black with vivid white marks on face and wings and females brown with spotted under surface. Immature males, which have the female colour pattern, are easily distinguished by size and weight. In general females weigh 46 g or less and males 48 g or more, though there are a few exceptions. The table shows that mature males are a little heavier than immatures and much heavier than females and also that there was no marked weight variation with season during the period studied.

The numbers of birds in the three categories, mature male, immature male and female were 25, 28 and 51. It seems likely that the 51 females were made up of approximately equal numbers of sexually immature (first year) birds and mature birds as is the case with the males. It might be expected that there would be a lot more mature birds (of varying ages) than immatures. Finding the numbers about equal might be explained either by assuming that birds in the wild rarely survive into a third or fourth year or that immatures visit gardens more readily than do adults which seems more likely.

The average weights, wing and tail measurements for the three groups are summarised in Table 3.

Table 3. Weights and measurements of birds ringed.

	Weight (g)	Wing (mm)	Tail (mm)
Mature males (25 birds)	53,3 (range 45-61)	97,4 (94-100)	69,4 (66-74)
Immature males (28)	51,9 (48-57,5)	93,1 (89-97)	67,4 (60-72)
Females (51)	42,2 (36-46)	86,3 (82-92)	61,9 (58-64)

These figures may be compared with McLachlan and Liversidge (1957) who give the ranges for males as; wing 94-99, tail 65-71 and females; wing 83-90, tail 58-63.

Recovery of ringed birds

In this series 161 birds were ringed from September 1976 to mid-January 1978, 104 in the garden and 57 at reedbeds 2 and 2,5 km distant. 13 of the former and three of the latter were recovered in the garden not less than 50 days later, the interval in eleven cases being more than 200 days and the longest interval between ringing and retrapping being 484 days. Most of the 16 were recovered only once, but some were trapped repeatedly, the record being held by number 4-48215 which was trapped four times in September/October 1976, four times in July/August 1977 and once in January 1978. Table 4 summarises the data of these recoveries.

Plumage changes in recovered birds

1. Retraps at the nesting site: The three retraps had all been ringed at the nest in mid-February when aged 11, 12 13 days respectively. They were recaptured after 215, 299 and 249 days, by which time they were fully grown, one being female and two male in immature plumage. 12 days seems the ideal age at which to ring nestlings, which don't normally leave the nest before the 17th day. The distances between site of ringing and recapture were 2 km in one case and 2,5 km in the other two.

2. Other retraps: The 13 retraps showed various plumage changes. Two males, ringed as immatures, were caught again in mature plumage. Two other males, ringed when not fully mature (trace of yellow in the gape, patchy white marks on forehead, pale edges to feathers of head and under surface) were recaptured when fully mature (gape quite dark, clear white patches on forehead, pale edges to head and under surface feathers lost). Three mature males were recaptured unchanged. Five females with yellow gapes were recaptured unchanged and one ringed with a yellow gape was recaptured after all trace of this yellow gape had disappeared.

These findings are consistent with a sequence of colour changes as follows:- Male birds attain adult size but retain female colour pattern in their first year. The distinctive male pattern is acquired after the second moult in the autumn of their second year, i.e. after the second post juvenal moult. The last changes are full development of the white patches on the forehead, loss of the pale edges of feathers on head and under surface and loss of the last traces of a yellow gape.

Females retain the same pattern as immatures and even the yellow gape is retained when they start to breed, but is lost in older birds. Number 4-48215, ringed on 18 Spetember 1976 and last recaptured on 15 January 1978 still had a vivid gape.

Feather regrowth

Two retraps threw light on feather regrowth. Number 4-48215 was retrapped on 17 July 1977 with all its tail feathers intact and again on 20 July with all of them lost, presumably after encounter with a cat. Several further retraps showed that all

12 tail **feathers** were fully regrown by the 34th day. By contrast **Number 4-49550**, ringed on 5 October 1977 had two tail feathers broken off short. Retrapped ten weeks later there was no change, showing that feathers are only replaced after total avulsion and not after partial loss.

Health

Practically all birds caught were healthy and no ectoparasites were found. Only one (Number **4-50914**) showed evidence of a skeletal injury, a tibial fracture firmly united with a 30° angulation but no apparent disability.

Moulting

Observation of captive birds has shown that moulting occurs from February to April. As yet no birds have been caught during this period and only one bird seemed to be in moult when caught. This was Number **4-49525** ringed on 2 August 1977, when secondaries 4 and 5 on both sides were half normal length and 6 was absent. It is hoped that further records of birds caught while moulting may be obtained.

It is also hoped that further data from catching and ringing will throw light on such questions as longevity in the wild, population size and movements. Data on birds ringed at Pietermaritzburg and recaptured elsewhere would, of course, be particularly welcome.

Reference

McLachlan, G.R. & Liversidge, R. (1957) Roberts Birds of South Africa. Cape Town. S. African Bird Book Fund.

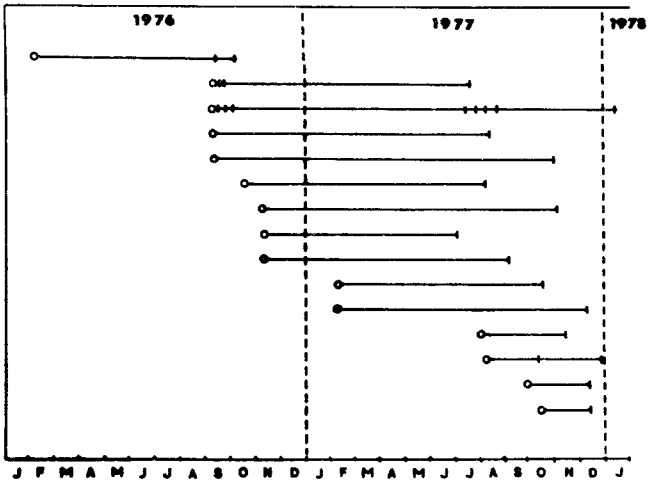

Table 4. Dates of ringing and period elapsing before recovery. 0 = date of ringing, 1 = date of recapture. (Note: the third individual shown in this table was again recaught on 1 August 1978)