OBSERVATIONS ON BREEDING BIOLOGY OF MASKED WEAVER *PLOCEUS VELATUS* AT LYDENBURG

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Introduction

The Masked Weaver *Ploceus velatus* breeds in Lydenburg (25°06'S, 30°28'E) from September to February. No information on Masked Weavers' incubation or nestling stages are given by Maclean (1993). I studied 39 nests from November 1994 to February 1995. Nest sites were found on local railway property, at Lydenburg Golf Course and Gustav Klingbiel Nature Reserve. These sites consisted of *Acacia* trees and *Phragmites* reedbeds. Nests in *Typha* reeds were inaccessible.

Nests

Nests are built from 70 cm to some 4 m above the ground or water level. The nest is woven around a single reed or near the tip of a drooping branch. The reed is cleared of leaves from the top to the nest. Where branches are utilised, the whole branch between nest and tree trunk is stripped of leaves. The tip remaining "after" the nest, keeps its leaves.

The nest is a neat oval, woven by the male, using coarse strips of grass of reed leaves. Broad leaves are clutched in the beak at one end. The bird rakes through it with the claw, dividing the leaf into two or three strips. The nest has a vertical entrance. When a female accepts a nest, she lines it with grass inflorescence and weaves the opening into a small tube of ±2 cm, including a "wall" inside to keep the contents from falling out (Figure 1). The males are polygamous and build a couple of nests at a certain colony. The females raise up to three broods in a single season. Not all rejected nests are pulled apart. In an *Acacia* tree occupied by a single male, two of the eight nests had not been utilised for breeding purposes. The weavers do not show a preference for any part of a tree unless it grows alongside water, in which case all nests are suspended above the water. The opening of the nest is always situated on the side furthest from the trunk or stem of the supporting tree or reed.

Eggs and incubation

Masked Weavers lay a clutch of 2-3 eggs. These are whitish to pale blue, blotched with purplish brown – more so to the thicker end. The eggs weigh 2,6 g on average (2–3 g) and measure 14,3 (13,2–15,1) mm x 19,8 (18,6–21,2) mm. Seventy two eggs were examined. Eggs are laid at daily intervals and usually incubation starts after the whole clutch has been laid. In three nests, incubation must have started after the first two eggs had been laid. The age difference was quite noticeable between the two elder chicks and the younger one. Incubation lasts 14 days. 30 nests were monitored. Only the female was found incubating the eggs.

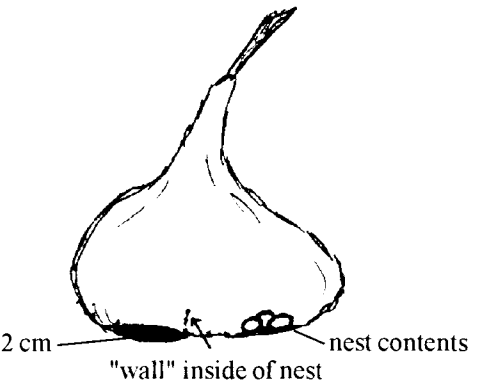

Figure 1. Breeding nest of Masked Weaver.

Parental care and growth of nestlings

In 50% of nests monitored, only two chicks hatched from each clutch. The nestlings are fed by the female, who was frequently found in the nest during the first half of the nestling stage. During the last half, she needs to find more food for her young and stays away from the nest longer.

The newly hatched chicks have orange skin. The bill is pale pinkish-horn coloured, with a swollen whitish yellow gape flange. The naked chicks have only a few long, white down feathers around the head. These are lost after about six days. Their eyes are closed and the inside of the gape is bright red. On the second day the skin turns to a pale pink.

By the fourth day, pin feathers start protruding on the wings and a day later the same happens on the head, rump and thighs. The beak is horn-coloured and the eyes open for the first time. On the seventh day, fine yellow feathers start protruding on the rump. The beak turns dark with a horn tip. Pins covering the body and wings are longer. A tail starts developing. On the tenth day (when the chicks are usually ringed) feathers start protruding through the pins. The tail and wing feathers are dark, while the head and back are covered in olive green feathers. The underparts are covered in white and yellowish feathers. The legs and feet are pink. Naked parts are found down the centerline of the underpart and belly, as well as between the wings and back. The tail and wing feathers are tipped and edged yellowish. The chicks are rather noisy and quite lively in the hand.

During the last nestling days, the chicks rapidly gain weight (Figure 2) and the tail and wing feathers grow quickly. After a nestling period of 15-16 days the chicks leave their nests. They now resemble the adult females. Table 1 gives an account of two of the 39 nests that were monitored.

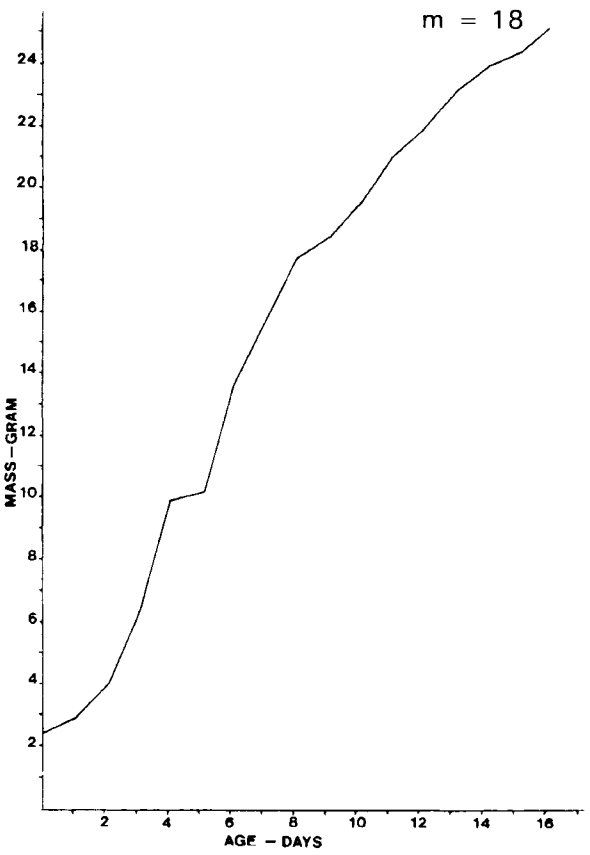

Figure 2. Weight gain of Masked Weaver nestlings.

During the nestling stage, the female removes all traces of faeces for the first few days. Thereafter the chicks move to the opening to defecate. In only two nests was a small crust of faeces found after the chicks had fledged. Hygienic nests are favoured by bird ringers too. They eagerly hold out a hand, while ringing, to catch the faeces – thereby preventing a blob in the nest and making the females' task easier!

Table 1. Examples of data collected from Masked Weaver nests in Lydenburg.

Phragmites reedbed				*Acacia* tree			
Date 1994	Eggs	Chicks	Female on nest	Date 1994	Eggs	Chicks	Female on nest
25.11	1 (3g)	-	-	10.11	1 (2,5 g)	-	-
26.11	2 (2nd=2,5g)	-	-	11.11	2 (2nd=2,5g)	-	-
27.11	3 (3rd=2,5g)	-	y	12.11	3 (3rd=2,5g)	-	y
05.12	3	-	y	16.11	3	-	y
09.12	3	-	y	24.11	3	-	y
10.12	3	-	y	25.11	3	-	y
11.12	1	2	y	26.11	-	3	y
12.12	1	2	y	28.11	-	3	y
14.12	1	2	y	30.11	-	3	y
16.12	-	2	y	02.12	-	BC47389/90/91	-
18.12	-	BC47384/85	-	04.12	-	3	y
20.12	-	2	y	07.12	-	3	-
22.12	-	2	-	10.12	-	3	-
23.12	-	2	-	11.12	-	BC47389/91	-
24.12	-	BC47384	-	12.12	Nest empty		
25.12	Nest empty						
Incubation:	14 days			Incubation:	14 days		
Nestling:	14-15 days			Nestling:	15-16 days		

Used nests are dismantled before building for the second batch is begun. The third lot of nests are left hanging. This was observed in the *Acacia* trees. Here the Masked Weaver nests were prayed upon by Fiscal Shrikes. While on my nest-monitoring spree on 2 December, I came across a Fiscal Shrike *Lanius collaris* guarding its catch ... two chicks had been stuck onto the barbed wire of a fence surrounding some railway buildings, about 100 m from the *Acacia* tree. The chicks, BC47486 and BC47488, had been ringed on 30 November and belonged to one nest. The fledging rate of Masked Weaver chicks is depicted in Figure 3. This includes nests that already had chicks when first examined.

Mensural data

Among other birds, Masked Weavers visit the birdtable in my garden – even more so during the winter months when food becomes scarce.

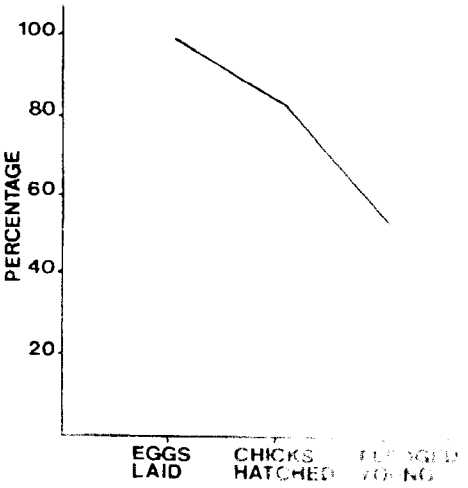

Figure 3. Success rate of N[illegible]

Table 2. Mensural data for adult male Masked Weavers.

	Head	Culmen	Tarsus	Wing	Tail	Mass
Min	31.5	17.7	18.5	75.0	51.0	26.5
Max	39.6	23.6	24.2	89.0	64.0	42.0
Mean	34.0	19.7	22.1	78.7	56.2	32.3
SD	1.14	1.52	1.40	2.22	3.01	5.25
n	13	23	23	23	23	23

Table 3. Mensural data for adult female Masked Weavers.

	Head	Culmen	Tarsus	Wing	Tail	Mass
Min	30.9	17.0	18.1	75.0	53.0	23.0
Max	38.0	22.1	23.5	87.0	62.0	33.0
Mean	33.7	18.6	21.4	79.9	55.2	29.4
SD	1.62	1.65	1.03	3.45	2.25	3.17
n	17	19	19	19	19	19

The mistnets are placed in strategic places and many weavers are caught. From February 1994–February 1995, a total of 61 Masked Weavers were ringed here.

Measurements taken in Lydenburg differ from those given by Maclean (1993). Tables 2-4 show measurements taken from birds in my garden.

All measurements given are in mm and mass in grams. Wing length measurements are of the natural chord.

Acknowledgments

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Table 4. Comparison of mass in Masked Weavers.

	Immature unsexed	Female adult	Male adult
Min	21.5	23.0	26.5
Max	27.5	33.0	42.0
Mean	25.3	29.4	32.3
SD	1.29	3.17	5.25
n	19	19	23

REFERENCES

MACLEAN, G.L. 1993. *Roberts' birds of southern Africa*. 6th Edition. John Voelcker Bird Book Fund. Cape Town.