

A Morphometric study of Baya Weaver (*Ploceousphillipinus Passeriformes*) in Chalisgaon Tehsil Dist- Jalgaon, India

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Manuscript details:

Available online on
<http://www.ijlsci.in>

ISSN: 2320-964X (Online)

ISSN: 2320-7817 (Print)

Editor: Dr. Arvind Chavhan

Cite this article as:

Dhande Abhishek R, Patil Sushan K and Bhavsar KR (2015) A Morphometric study of Baya Weaver (*Ploceousphillipinus Passeriformes*) in Chalisgaon Tehsil Dist- Jalgaon, India, *International J. of Life Sciences*, Special issue, A3 : 104.-106.

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ABSTRACT

The Baya weaver is known for its beautiful and delicate nests hanging on various platforms. An attempt was made to study morphometry of Baya weaver hanging from various places in Chalisgaon tehsil. Seven variables namely suspension, nest length, brood chamber, nest depth, threshold, etc. taken and weight were measured of both complete and incomplete nest. The statistical analysis by one-way ANOVA showed that complete nest differed insignificantly [$p < 0.05$] from that of incomplete ones. A total of 33 nests (7 Complete and 26 incomplete) were studied.

Keywords: *Ploceous phillipus*, Morphometry,

INTRODUCTION

Baya weaver (*Ploceous phillipus*) is a found across whole India and Southeast Asia. This bird is found in grasslands and scrub forests and is also associated with open cultivation. Three subspecies are mainly inhabiting in India, *Phillipus* found throughout India, *Burmacus* found eastward in southeast India and *Travancorensis* in southwest India. This bird has been known for their ranging retort shaped nest. The nest are construct from fine fibers of leaves and the nest colonies are usually found on thorny trees or palm fronds, often these nest are built near water or hanging over water making difficult for predators to reach the nest.

Earlier studies on the breeding biology of the Baya weaver have only recorded coconut palms as nesting platforms on the west coast of India, except for rare instances of nesting on exposed overhanging power lines or telecommunication wires (Ambedkar, 1970; Betts, 1952; Davis, 1971; Kirkpatrick, 1952;). The current work is an attempt to study the morphometric characteristics of 'Baya weaver nests of the electric powerlines in Chalisgaon tehsil. The current work is an attempt to study the morphometric characteristics of 'Baya weaver nests of the electric power lines in Chalisgaon tehsil.

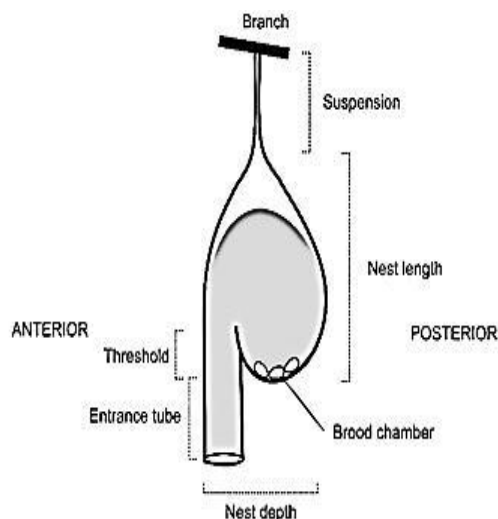
The Bayaweaver is a sexually dimorphic sparrow like bird; the adult male differs from sparrow in having brown streaks, thick bill and short rounded tail; during breeding season it acquires golden yellow plumage on the breast and head whereas female is more drab.

MATERIALS AND METHODS

Study area:

The study was conducted during February & April 2013, Chalisgaon tehsil District Jalgaon of Maharashtra, India. The study area is agricultural lands along the river Girna. The vegetation is dominated grass and scrubs. The prominent plant species found in this area are *Azadirachta indica*, *Ficus religiosa*, *Tamarandus indicus*, *Acacia Arabica*, *Ficus benghalensis*, *Prozopisjulifera* and *Jatropha glandulifera*. Also there are agricultural cultivation of sugarcane, cotton, groundnut, Banana, pulses and other cereals.

A number of colonies were observed on electric power lines in agriculture fields. After the breeding season the nests were abandoned by the birds, some of these abandoned nests were collected from the fields and measurements were taken in the laboratory. On the basis of the presence or absence of the entrance tube, the nests were grouped in two categories namely complete and incomplete nests. Total weight of each nest was weighed by an electronic balance with ±0.01g accuracy.



For Parameters measurement (after Quader S. 2006)

RESULT AND DISCUSSION

During the study, totally 07 complete and 26 Incomplete nests were collected and their morphometric measurements are given in table 1 and

Table 1: Complete Nest Morphometry of various parameters

Complete Nest	Nest 15	Nest 27	Nest 23	Nest 29	Nest 30	Nest 31	Nest 32
Suspension	45	56	130	125	10	88	180
Nest length	490	364	226	425	248	498	310
Brood chamber	60	56	98	67	60	67	69
Nest depth	132	110	130	153	100	142	145
Threshold	65	40	67	50	28	48	39
Entrance Tube	65	48	66	55	45	64	60
Weight	72.2	37.4	58.6	47.5	20.4	41.1	26.9

Table 2: Incomplete Nest Morphometry of various parameters

Incomplete	Nest 1	2	3	4	5	6	7	8	9	10	11	12	13	14	16	17	18	19	20	21	22	28	24	25	26	33
Suspension	110	67	75	114	27	25	50	85	60	49	67	76	54	205	48	28	230	90	17	57	60	110	60	10	34	48
Nest length	210	243	234	204	170	140	155	220	132	170	128	218	330	250	261	188	149	230	217	173	190	260	234	250	278	220
Brood chamber	73	73	75	70	45	64	66	78	70	75	70	65	70	75	78	74	62	85	71	94	54	56	71	78	68	78
Nest depth	98	115	88	90	148	118	87	138	73	110	62	110	175	123	123	80	90	126	90	110	52	145	85	117	113	92
Threshold	59	56	75	48	55	56	68	58	78	67	62	67	56	60	68	65	58	64	50	76	66	58	58	50	66	65
Entrance Tube	68	57	65	50	45	38	56	52	75	57	68	56	60	55	74	72	56	60	64	67	72	51	51	59	69	62
Weight	45.8	54.7	27.6	25.1	41.2	27.5	16.4	64.3	13.2	43.4	13.1	33.3	99.4	56.1	78.2	40.3	16.1	70	54.8	26.3	9.7	52.5	42.3	49.8	54.3	51.6

Table 3: P values for test of significance between complete & incomplete nests Statistically significant (One-way ANOVA; $p < 0.05$)

Parameter	Value	Significant/ Insignificant
Suspension	0.32362	Insignificant
Nest length	0.99787	Insignificant
Brood chamber	0.36339	Insignificant
Nest depth	0.70769	Insignificant
Threshold	0.70502	Insignificant
Entrance Tube	0.29453	Insignificant
Weight	0.14991	Insignificant

2. One-way Analysis of Variance (ANOVA) of above parameters resulted in p values which were statistically insignificant (Table no. 3). Further studies are needed to compare the complete and incomplete nest hanging from natural and manmade platforms.

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