



Floral Preferences of Baya Weaver Nesting

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Abstract

Baya weaves its strong nest skillfully with such a design that the predator cannot encroach in it. The current study narrates the observations on the environmental impact on floral preferences of Baya Weaver birds (*Ploceusphilippinus*) for nest building. Baya weaver birds prefer specific trees to build nests such as the Palm Tree (*Borassusflabellifer*), Coconut Tree (*Cocos nucifera*), and Palash Tree (*Butea monosperma*) which are tall with needle tipped leaves or with thorns on stems and branches, which protect from predators as well as substrates for nest construction. It was also recorded that the tiny bird also constructs its nest on Nilgiri tree (*Eucalyptus* sp.), VilayatiShami tree (*Prosopissp.*) and Babhul tree (*Acacia nilotica*), Ber tree (*Ziziphus zuzuba*), Palash (*Butea monosperma*). The bird showed change in its preference for trees for nesting and nesting activities in different years as per changed environmental conditions and availability of food niche. The study was conducted for one month in each year from 2019-2021. It is desirable that detailed study need to be conducted on the ecology and biology of Baya bird in different ecological set ups and on the Conservation of this beautiful bird in the concrete jungles of suburban areas and townships on priority.

Keywords: Baya Weaver; Nesting; Ecology; Preferences; Suitable trees

Introduction

Bay weaver bird (*Ploceusphilippinus*) is a beautiful tiny bird commonly observed on the countryside. Their skillfully weaved long hanging nest with a narrow tubular entrance is the attraction of the people especially children. The nest is so stabilized that it withstands strong winds and rains. Baya birds are also trained by street performers in India for entertainment.

Baya was observed by me at various places with its special preference for the trees and environmental conditions. These interesting observations are summarized here along with some information on the biology of this bird [1].

Habit and Habitat of Baya Weaver Bird

Baya weaver is a beautiful medium-sized passerine bird found in India's subcontinent that prefers grassland and scrubland for nesting. They are well-known for their beautiful nesting habitat, which they construct with the help of leaf threads. Proper nesting helps to maintain the warmth that promotes incubation of the

eggs and rapid development of the young ones. The Baya weaver breeds during the monsoon season [2] and start their nesting just after availability of certain factors, such as predation and food availability, have an impact on nesting sites and construction [3]. Baya feeds on seeds of grasses, rice, wheat, maize, sorghum, millet and sunflowers and insects like grasshoppers, flies, termites, beetles, caterpillars and butterflies.

The selection of an appropriate nest site is vital for reproduction of birds because it determines the environment to which adults, eggs and altricial nestlings will be exposed during critical periods [4]. The Baya weaver prefers the nesting sites near water bodies, cultivated fields and along forest edges because of the easy availability of nest building materials and food. Thorny trees and shrubs provide the great grip to weave the nest at beginning and also safeguard from the ground predators [5]. The abiotic and vegetative qualities of nest sites can influence nesting success by concealing the nest from predators [6-9]. The nests of the Baya weaver (*Ploceusphilippinus*) bird were mostly built-in palm trees (*Borassusflabellifer*), coconut trees (*Cocosnucifera*), and date palm

trees (Phoneixpsuilla) [10]. The Baya weaver mainly constructed its nests mainly in the palm (*Borassus flabellifer*), coconut (*Cocos nucifera*) and date palm trees (*Phoenix pusilla*) [11,12].

Habitat of Baya weaver is receding fast due to population explosion and destruction of vegetation. More insight into the Biology and ecology of this bird is necessary to design the conservation plant of this bird. Therefore to understand nesting habitat and its influencing factors, study was carried out as a first attempt in this direction in Warora Taluka, District Chandrapur, Maharashtra.

Observations on the habit of baya weaver

Habit and habitat of Baya was studied in Waroratalukain Chandrapur District of Maharashtra State, India with Latitude 20.2343° or 20° 14' 3.5"North and Longitude 79.0028° or 79° 0' 9.9"East. Warora Taluka population [13] in 2022 is 160,010. Total 17,460 Cultivators are depended on agriculture farming. Study area is rich in biodiversity and having number of developmental projects.

Study was carried out from 2018-2021. The observation was made by random visualization in morning hours from 1000am to 1200pm IST for each month during July to August period which is active breeding and nesting period of Baya bird. The study area is dominated by human settlement, having open lands. During rainy season, water got accumulated in the open lands and a rich biodiversity was observed, mainly during the month of July to December. A daily record of weather conditions was maintained with the help of a record diary. In record-keeping, temperature (°C), time, and weather conditions were maintained along with different activities of Baya bird.

During mid of July month of 2018 year, construction of nest was found in Eucalyptus tree. This very rare preference was observed and only very few references were reported. In 2018, high rainfall was reported in July month, and many seasonal ponds were observed in open land. Selection of Eucalyptus tree was mainly due to availability of plenty of food in surrounding area due to development of water bodies harbouring good biodiversity of grasslands, vegetation supporting insect community.

During 2019-2020 average rainfall was reported. Due to increase in humidity there was remarkable increase in grasslands in open areas, providing ample of nesting materials and food, as well as cohesive biological environment for proper development of young ones. During this period Baya gave preference to Vilayat-iShami (*Prosopis* sp.) trees for nesting. This was a very remarkable

phenomena that was observed, as generally, they prefer to build a nest on Ber tree (*Ziziphuszuzuba*), Palash tree (*Buteamonosperma*) and Babhul tree (*Acacia* sp.), There were around 50's of Baya Weaver bird's nesting the nests with beautiful sight. The observed area was dense with diverse vegetation. Average temperature ranged between min 24.4°C (75.9°F) and max 32°C (89.6°F) in the year 2019. However, there was smokeproof temperature in 2020 upto 20-22°C with average rainfall for 15.2 days and aggregate rainfall of 361.9mm (14.25"). The nesting material used were grass (dry), leaves of trees (*Ziziphus mauritiana*, *Azadirachta indica*, *Pyrus communis*), fibres (cotton) and strips (of palm fronds and *Saracaa-soca*), cloth pieces and animal hairs. Nest height of Baya Weaver Bird ranged from 7.00 m to 13.00 m on Eucalyptus tree and from 7.00 m to 9.00 m on *Prosopis* tree.

Nest building and nest site selection is a well programmed behavioral trait of birds [14]. The nest site selection also reflects the ability of a bird to understand the ecological factors, coexistence of different species and impress its mate [15]. Various factors have been influenced the nest-site selection by the Baya weaver such as availability of nesting materials and food, and surrounding biological environment related to temperature, light intensity, humidity, rainfall, etc.

Conclusion

It has been observed that Baya weaver is beautiful and intelligent bird which understands the changes in the environment and to select suitable conditions for habitat. They have instinct skill to weave a nest from naturally available materials which can survive the vagaries of nature like strong winds and rains. However, the present study was conducted for a short period. More detailed long term study is required on response of the birds to changing environment, anthropogenic factors, impacts of pollution, behavior in different ecological complexes etc. The habitat of Baya is being degraded to a large extent and there is need to do research on the conservation measures in the concrete jungles of the towns and suburban areas. There is lot of scopetocarry out detailed study on the ecology, biology and conservation of Baya weaver bird.

Bibliography

1. Asokan S., et al. "Studies on nest construction and nest microclimate of the Baya weaver, *Ploceus philippinus* (Linn.)". *Journal of Environmental Biology* 29.3 (2008) 393-396.
2. Rasmussen PC and Anderton JC. "The birds of south Asia". The Ripley guide". Smithsonian edition and lynx editions (2005).

3. Welty CJ. "The Life of Birds". W.B. Saunders Co. New York. (1982): 754.
4. Travaini A and JA Donazar". "Nest site characteristics of four raptor species in the Argentinean Patagonia". *The Wilson Bulletin* 106 (1994): 753-757.
5. Davis TA. "Selection of nesting trees and the frequency of nest visits by Baya Weaver bird". *Journal of the Bombay Natural History Society* 71 (1974): 356-366.
6. Hines JE and GJ Mitchell. "Gadwall nest-site selection and nesting success". *The Journal of Wildlife Management* 47 (1983): 1063-1071.
7. Hill DA. "Factors affecting nest success in the Mallard and Tufted duck". *Ornis Scandinavica* 15 (1984): 115-122.
8. Jackson SL, et al. "The influence of nesting habitat on reproductive success of lesser snow goose". *Canadian Journal of Zoology* 66 (1988): 1699-1703.
9. Peterson MR. "Nest-site selection by emperor geese and cackling Canada geese". *The Wilson Bulletin* 102 (1990): 413-426.
10. Asokan S, et al. "Studies on nest construction and nest microclimate of the Baya Weaver, *Ploceus philippinus* (Linn.)". *Journal of Environmental Biology* 29.3 (2008): 393.
11. Achegave R, et al. "Nesting of Baya Weaver (*Ploceus philippinus*) in S.R.T.M. University, Nanded and fields along Asana River at Nanded, Maharashtra, India". *International Journal of Current Research and Academic Review* 4.6 (2016): 51-60.
12. Ali S. "The book of Indian birds. Bombay Natural History Society, Mumbai (2002): 326. (Thirteen edition).
13. <https://censusindia.gov.in/2011census/dchb/DCHB.html>
14. Rahmani AR and Sankaran R. "An unusual nesting site of the Sunbird". *Journal of the Bombay Natural History Society* 87 (1990): 148-149
15. Martin TE. "Fitness costs of resource overlap among coexisting bird species". *Nature* 380 (1996): 338-340.

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