



Study of Nesting pattern and Breeding Ecology of *Prinia socialis* in Manjula Nagar Colony Bhokar Dist. Nanded (MS) India

Budkewar Shubhangi, Dudhare Dhammapushpa, Balkhande Jayvardhan* and Chavhan Arvind

Department of Zoology, D B. College, Bhokar Dist. Nanded. (M.S.)

*Corresponding author Email: cageculture2014@gmail.com

Manuscript details:

Received :25.04.2018
Revised : 31.07.2018
Accepted : 18.09.2018
Published : 30.09.2018

Cite this article as:

Budkewar Shubhangi, Dudhare Dhammapushpa, Balkhande Jayvardhan and Chavhan Arvind (2018) Study of Nesting pattern and Breeding Ecology of *Prinia socialis* in Manjula Nagar Colony Bhokar Dist. Nanded (MS) India, *Int. J. of Life Sciences*, Volume 6(3): 807-813.

Copyright: © Author, This is an open access article under the terms of the Creative Commons Attribution-Non-Commercial - No Derives License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

Available online on
<http://www.ijlsci.in>
ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)

ABSTRACT

Birds are taking full care of their young ones. They are true engineers found in the nature. Although nest construction is a tough job but this job making easy by these beautiful creatures of the nature. Ashy prinia is a small bird but their style of construction of the nest is quite interesting and much difficult. In this MS we have observed the breeding biology, nesting pattern and parental care of Ashy prinia. This study was carried out from 14 July 2017 to 6 August 2017; it includes construction of nest, egg laying, hatching of young ones and post birth care of young ones etc by the beautiful bird. This was a wonderful experience for us, because of the study we are so close to the small bird *Ashy prinia*. This study was baseline work for the new comers.

Key words: Ashy prinia, Manjula Nagar, Bhokar,

INTRODUCTION

Birds are the ultimate nest-builders. Each different species has its own unique nest-building techniques and constructs these structures without ever getting confused. When the parent birds leave the nest to search for food, their offspring are completely defenseless. Their nests that are concealed with great skill in treetops, holes in trees and cliffs, or even amidst tall grass, provide a safe, hidden shelter for the chicks. Another purpose of the nests is to provide protection from the cold. Birds are hatched featherless, and since their muscles do not get exercised within the egg, they are relatively immobile and thus need nests to insulate them from the cold. Woven nests in particular trap body heat, providing warmth for the chicks—but constructing these structures is a detailed and difficult undertaking. The female builds the nest by carefully weaving grasses, twigs, and scavenged yarn over a fairly long period of time. She cushions the inside with feathers, hair and fine grass, thereby further insulating the nest. For every type of nest, finding the right building materials is essential. Birds can spend a whole day in their quest for the building materials their structure needs. Their

beaks and talons are designed for carrying and arranging the materials they gather. The male bird chooses the location of the nest, and the female builds it. These nests' features depend on the materials and techniques used in their construction. All building materials for their architectural masterworks must be pliable and compressible. Nests are built taking into account the elasticity, durability and toughness of the different materials birds use—mud, leaves, feathers, cellulose and the like. This increases the structure's durability. Using plant fibers mixed with mud, for instance, prevents cracks from developing. (<http://m.harunyahya.com/tr/works/8168/How-do-birds-build-their-spectacular-constructions>).

Prinia socialis commonly known as ashy prinia or ashy wren warbler. It is classified under Order: Passeriformes, Family: Cisticolidae. This ashy prinia is found abundant in Marathwada region and is a resident breeder. It is commonly found in urban gardens, herbs, shrubs and many farmlands in India. Its identification is easy because of its small size, color is distinctive and it made the tail upright continually. This bird is look similar to the tailor bird. https://en.wikipedia.org/wiki/Ashy_prinia.

The *Ashy prinia* is insectivorous bird. They usually give a call in the form of song is a repetitive tchup, tchup, tchup or zeet-zeet-zeet. Another call is a nasal tee-tee-tee. It also makes a sound like "electric sparks" during the fluttery flight which is thought to be produced by the wings. (Rasmussen and Anderton, 2005), however (Uttangi, 1991) reported that this sound might be produced by the beak.

Few observations were made by some authors on nesting pattern of some birds in Nanded region in Maharashtra state it includes Chavan *et al.* (2016a) studied characters of nesting site, ground nest and eggs of Yellow-wattled lapwing *Vanellus malabaricus* (Aves: Charadriidae), Chavan *et al.* (2016b) done another study of Mud nests of wire-tailed Swallow (*Hirundofilifera*): Biomarkers of Ecological niche in Godavari river ecosystem, Nanded, Maharashtra State. Achegawe *et al.* (2016) worked on Nesting of Baya weaver (*Ploceus philippinus*) in S. R. T. M. University, Nanded and fields along Asana river at Nanded, Maharashtra. Balkhande *et al.* (2017) carried out study of Nesting Pattern and Breeding Biology of Red-wattled lapwing *Vanellus Indicus* in Agricultural Field Near to Asna River Bridge,

Nanded (Maharashtra). Balkhande and Shaikh (2017) also work on.

Study of Nesting pattern and Breeding Biology of *Prinia socialis* in forest office of Bhokar Dist. Nanded (Maharashtra) India.

This study was carried out for the baseline data on nesting pattern and breeding ecology of *Prinia socialis*. This was a wonderful experience for us, because of the study we are so close to the small bird *Ashy prinia*, when we search the literature very few observations were made by different researchers on nesting and breeding biology of such small bird. Hence this investigation was undertaken and some photographic proof of nest, eggs, etc. reported in this study.

MATERIALS AND METHODS

Study area and Survey

The Bhokar is a taluka place in Nanded district, lies between 19.217803°N and 77.669392°E. For the present study the Manjula Nagar was selected, this colony has full of greenery and having variety of plants. Various birds are found as a resident of this colony. They are attracted here because they found nesting and breeding ground inside this colony. This colony contains many small and big plants; these plants are shelter of many birds. One day our attention goes towards the pair of Ashy prinia bird, they are busy with construction of nest. Hence we decided to observation on nesting pattern and breeding biology of Ashy prinia bird.

The nesting of prinia was photographed by using Sony Cyber shot Camera Model No. W570. Length of the nest was measured by with the help of General metal scale.

As this is the colony site hence daily observation was made by us. We are observing this activity from early in the morning i.e. from 06:00 AM to 09:00 AM & at afternoon from 04:00 PM to 06:00 PM because this small pair of bird usually busy in those hours. In the afternoon hours their work was little. The study period was from the month of 14 July 2017 to 6 August 2017. Various details were recorded about the behavior, nest, eggs and selected area for nesting without disturbing the nest and birds. All the standard protocols for birding and bird studies were followed (Bibby *et al.*, 2000; Grimett *et al.*, 2011).

RESULT AND DISCUSSION

On 14th July 2017 a pair of Ashy prinia bird was sighted when they are busy in construction of their nest. Both the partners are involving in the construction of nest. We observed that, the male and female partner are giving equal share for the construction of nest.

They select the *Jasminum sambac* (mogra) flower plant for the construction of nest. On 15th July they started their work, it was observed that early morning i.e. from 06:00 AM to 09:00 AM their work was fast later on in afternoon they took rest and again in the evening hours i.e. from 04:00 PM to 06:00 PM they busy in constructing

the nest. The construction of nest is similar to the nest of tailor bird, means they are also construct by 'sewn'. Ali and Ripley (1997) state that the Ashy Prinia also constructs a similar nest of large leaves stitched together.

The nest consisted of three large leaves stitched together with fibers and webs, and lined with fine thin fibers, and twigs, some threads and cotton are also found in the nest. This observation was made when the both partners are not present with due care.

The nest size, material used for the construction etc. are described in Table 1

Table 1 : Detailed information of *ashy prinia* nesting and breeding ecology.

Sr.	Detailed information of	Measurement in cm/ materials used
1	Total height of the plant	152 cm
2	Total width of the nest	9.3 cm
3	Total height of the nest(Excluding leaf length)	8.9 cm
4	Total height of the nest(including leaf length)	10.1 cm
5	Length from the ground	
6	Depth of cup	8.3
7	Grass, nylon thread, small twigs, cotton swab etc.	-----
8	Clutch size	04
9	Color of eggs	brick-red
10	Incubation period	18 days
11	Total no of egg hatched	04
12	Percentage of hatching	100%



***Jasminumsambac* (mogra) Nesting plant**A pair- Ashy prinia on hibiscus plant near to the nest plant



Nest constricted by Ashy prinia by stitching



Clutch of eggs 04



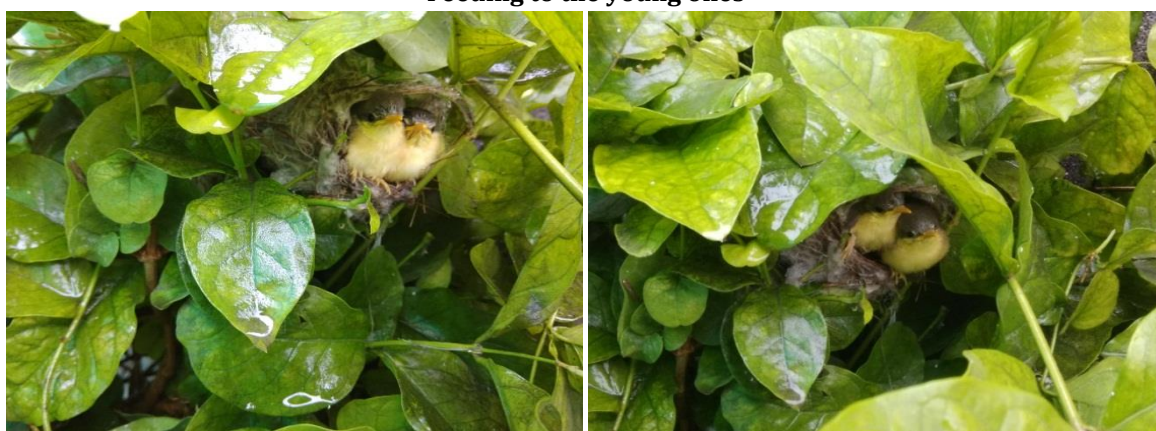
Chicks after eggs hatched



Development of chicks



Feeding to the young ones



Young Ashy prinia ready to fly

Observation of Eggs and Incubation

On 17th July 2017 we observed four eggs in nest. The size of clutch in *ashy prinia* was observed to be of four eggs, laid by the female of a somewhat pointed oval form and exceedingly glossy. They are brick-red in color some being paler, some darker. The broad end of the egg is generally darker than the remainder of the shell. The eggs were so arranged by the bird that their small edges meet in the center, making for even sitting and easier incubation by the parent.

After the egg laying the female partner take care of the eggs for full time. It was observed that the male partner took all responsibility of the feeding the female during the incubation period. Female was also caught outside the nest for 3 to 4 times in a day, when female leave the nest at the same time male give his attention towards the nest and eggs. In this way both partners are involving in the parental care.

On 3rd August, 2017 in the afternoon at 01:00 PM we found that 3 chicks were hatched while remaining an

egg was hatched in the evening 06:20 PM same day. All the four chicks were healthy and good in condition. After hatching the female remain in the nest for full time for 2 days while for those 2 days the male take all responsibility i.e. feeding, guarding etc.

On 06th August 2017, after 2 days of hatching all offspring's open their eyes and start to feed. It was observed that the male and female both involving in feeding to the young ones. When female flew away for food then same time the male comes near to the nest for protection and when the male went for the food the female remains near to the nest, in this way they both taking care of the young ones from the predator and other animals. This activity continuous till the young ones are able to fly. On 14th August 2017 all the four chicks were flew away.

Our observations of construction of nest, egg laying, incubation period and feeding behavior of this species match with the earlier observations of Karthikeyan (1993), Ramanan (1995), Ali & Ripley (1997), Vyas & Upadhyay (2015) and Balkhande *et al*, (2017).

CONCLUSION

The breeding, morphometric characters of nest and eggs of *Prinia socialis* were investigated first time from the selected study area. The whole study indicated that, the Ashy prinia, it is a small bird but their parental care was enormous and both partners are involving in the parental care. The places like this type of colonies are safe for the breeding of such a small birds. When such type of birds will constructing their nest in our house or colony it is our responsibility to protect them from the small animals such as cat, dog, birds like pariah kite that are predators for the eggs and chicks of the small birds.

Acknowledgement

The first two authors thankful Principal, Dr. P. A. Chavan, D. B. ACS College, Bhokar Dist. Nanded for continuous encouragement during this B. Sc. project. We also thankful to our family members for kind help during the work.

REFERENCES

- Achegawe RM, Chavan SP, Patil PV, and Tarte SH (2016) Nesting of Baya weaver (*Ploceus philippinus*) in S. R. T. M. University, Nanded and fields along Asana river at Nanded, Maharashtra, India. *Int. J Curr Res Aca Rev*; 4(6):51-60.
- Ali S and Ripley SD (1997) Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka. Warblers to redstarts. 2nd (Hardback) ed. Delhi: (Sponsored by Bombay Natural History Society.) Oxford University Press. Vol. 8 of 10 vols. Pp. i-xiv, 1-281, 8 ll.
- Balkhande JV and Shaikh Azeem I (2017) Study of Nesting Pattern and Breeding Biology of Red-wattled lapwing *Vanellus indicus* in Agricultural Field Near to Asna River Bridge, Nanded (Maharashtra). *Research Magma*, Vol-1, Issue-6, 1-4.
- Balkhande Jayvardhan, Chavhan Arvind and Shaikh Azeem Issak (2017) Study of Nesting pattern and Breeding Biology of *Prinia socialis* in forest office of Bhokar Dist. Nanded (Maharashtra) India. *Int. J. of Life Sciences*, Vol. 5 (4): 635-638.
- Bibby CJ, Burgess ND, Hill DA, Mustoe SH (2016) Birds census techniques. London: Academic Press., 302.
- Chavan Shivaji, Rajesh Achegawe and Sharda Padghane (2016a) Characters of nesting site, ground nest and eggs of Yellow-wattled lapwing *Vanellus malabaricus* (Aves: Charadriidae). *International Journal of Zoology Studies*. 1 (06): 12-17.
- Chavan SP, Dudhmal DH and Walke DS (2016b) Mud nests of wire-tailed Swallow (*Hirundofilifera*): Biomarkers of Ecological niche in Godavari river ecosystem, Nanded, Maharashtra State. *Adv. Biores.*; 7(2):170-175.
- Grimmett R, Inskipp C and Inskipp T (2011) Birds of the Indian Subcontinent. 2nd ed. New Delhi: Oxford University Press.
- Karthikeyan S (1993) Monogamy in Ashy wren Warbler *Prinia socialis*: How much do sexes share domestic duties. In: Bird Conservation: Strategies for the Nineties and Beyond. Verghese, A., Sridhar, S., & Chakravarthy, A. K., (eds.). Bangalore: Ornithological Society of India: Pp. 200-201.
- Ramanan RV (1995) The nest of Ashy Wren Warbler *Prinia socialis*. Newsletter for Birdwatchers 35 (1): 17.
- Rasmussen PC & Anderton J (2005) *Birds of South Asia: The Ripley Guide*. Smithsonian Institution & Lynx Edicions.
- Uttangi JC (1991) Electric sparks" from Ashy Wren Warbler". Newsletter for Birdwatchers. 31 (7&8): 14.
- Vyas Raju and Upadhyay Kartik (2015) Notes on breeding of Ashy *Prinia socialis* in Gujarat, India. *Indian Birds* 10 (5):118-121
- https://en.wikipedia.org/wiki/Ashy_prinia
- <http://m.harunyahya.com/tr/works/8168/How-do-birds-build-their-spectacular-constructions>.