



First record of Nesting pattern and breeding biology with parental care of Ashy crowned sparrow lark *Eremopterix griseus* at Kini Tq. Bhokar Dist. Nanded, Maharashtra

Balkhande Jayvardhan Vitthalrao

Department of Zoology, Digambarrao Bindu ACS College, Bhokar Dist. Nanded (MS).

Email: cageculture2014@gmail.com

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ABSTRACT

The nesting pattern and breeding biology of the ashy crowned sparrow lark *Eremopterix griseus* was studied in this MS. This small bird is really a creative for the construction of their nest and parental care for their offspring's, both the parents busy in the construction of their nest, taking care of their young ones. Very little data was available on nesting pattern, breeding biology and parental care of this bird in Maharashtra state. Their selection of site for the construction of nest was really amazing. This was the first record in the Marathwada region in the Maharashtra state. This is preliminary study on such a small bird; many of birds are still not studied in this regard. Hence this work is helpful to the new comers who are near to this beautiful creature of the nature.

Keywords: Birds, Nest, scavengers, ecosystem, Ashy crowned sparrow lark.

INTRODUCTION

Birds are the beautiful creatures of the nature. They serve as pollinating agent, one of the important role plays by them. Many birds are worked as natural scavengers in the nature. They are more important for the maintenance of the ecological balance of the ecosystem. Their style of construction of nests is phenomenal; truly they are the natural engineers. Birds occupy a special position in an ecosystem. Biodiversity at present is better understood for birds in many respects than any other major group of organisms because they probably inspire more extreme interest in humans, are often spectacular, relatively easily observed and not too cryptic to identify, Balkhande (2019). The quality of habitats is evaluated by diversity of avian fauna which is one of the important ecological barometers. The human population will in danger if the birds are not present in an ecosystem. They act as a pest controlling agent in the nature. Considering their importance in the ecosystem and among human being researchers have studied birds since ages.

Many researchers have been studied the nesting pattern of different birds in Maharashtra state. Nanded is one of the important districts in the Marathwada region, Kinwat, Mahur and Bhokar forest is present in this

district. Some workers done their research on nesting pattern of some birds in that, Chavan et al (2016) worked on nesting site, ground nest and eggs of Yellow-wattled Lapwing *Vanellus malabaricus* (Aves: Charadriidae), Achegave *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 and Shaikh (2017) studied Study of Nesting Pattern and Breeding Biology of Red-wattled lapwing *Vanellus indicus* in agricultural field Near to Asna river bridge, Nanded (Maharashtra). Balkhande *et al.* (2017, 2018) recorded twice the Nesting pattern and Breeding Biology of *Prinia socialis* in forest office and Manjula Nagar of Bhokar Dist. Nanded (Maharashtra) India.

The ashy crowned sparrow lark *Eremopterix griseus* is a small bird. The males are well marked with a contrasting black-and-white face pattern, while females are sandy brown, looking similar to a female sparrow. Males are easily detected during the breeding season by the long descending whistle that accompanies their undulating and dive-bombing flight displays (https://en.wikipedia.org/wiki/Ashy-crowned_sparrow-lark). These color combinations of male and female are special adaptive feature for a terrestrial life. Hence they are difficult to sight in dry scrub land.

When we search the literature, there was not a single record found on the nesting pattern and breeding biology of the ashy crowned sparrow lark *Eremopterix griseus* in Marathwada region. Hence we are sighted this nest and recorded in the form of some photographs on the site. This work will definitely helpful for the record purpose. This was a preliminary work on such a small bird, more work should be taken on many other small birds for the balance of ecosystem. These findings are also used for future inter- and Intraspecific comparative studies.

MATERIAL AND METHOD

Study area

Kini is one of the biggest villages in Bhokar Taluka. It is 20 KM from the Bhokar. The population is around 8000. This village is known as "Golden KINI". The people in the past used to carry lots of gold. It is awesome village with mountains around with Teak wood trees and a large lake.

(<http://www.onefivenine.com/india/villages/Nanded/Bhokar/Kini>). The ashy crowned sparrow lark constructed their nest behind the open and scrub land of Primary Health Centre, Kini. All the standard protocols for birding and bird studies were followed Bibby *et al.*, (2000); Grimett *et et al.*, (2011). The nesting of ashy crowned sparrow lark was photographed by using DSLR camera Canon D1300 with lens EF-S 55-250 mm F4 5.6 IS II. Length of the nest was measured by with the help of General metal scale. All this measurement was recorded with due care without disturbing of pair. The study period was in the month of 24 March 2019 to 15 April 2019. During this period daily observation was done in twice. All the data were recorded about the nesting site, behavior of parents, hatching, feeding etc without disturbing to the young one and parents.

RESULTS AND DISCUSSION

On 24th March our attention was going to a pair of small bird, who was busy in collecting some materials from the scrub land. When we observed the pair, they are engaged in constructing their nest. Both partners are busy in the task. It was noticed that female partner taking extra effects as compare to male in the construction of nest. They selected a very descent place for the nest construction. They completed their nest adjacent to the plant *Tephrosia purpurea*. Actually, they built their nest in such way that no one can easily find their nest. In the month of March and April the scrub land have dry grass and the color of the grass was match with the surrounding patches. Their nest was a compact depression under *Tephrosia purpurea* in the ground with some small stone arranged on the edge. The sizes of the stones were from 0.5cm to 3 cm. the cup nest was built with the help of small stick of dry grass, cotton pieces, and some nylon threads. All these materials were gathered by both partners nearby the nest.

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

Parental Care

All the parental care activities were presented in the form of photographs in Photo plate A, B & C. It was observed that after laying the eggs, male taking all care of his female and eggs. The eggs were protected by both the parents; both are take responsibility of

Table 1: Detailed information of the Ashy crowned sparrow lark nesting and breeding ecology.

Sr. No.	Precise details of Nest	Measurement in cm/ materials used
1	Total height of the plant <i>Tephrosia purpurea</i>	6.4 cm
2	Total depth of cup	1.8 cm
3	Diameter of nest	2.1 cm
4	Grass, nylon thread, small twigs, cotton swab, small stones etc.	
5	Clutch size	02
6	Color of eggs	White with black scrawling
7	Total no of egg hatched	01
8	Percentage of hatching	50%

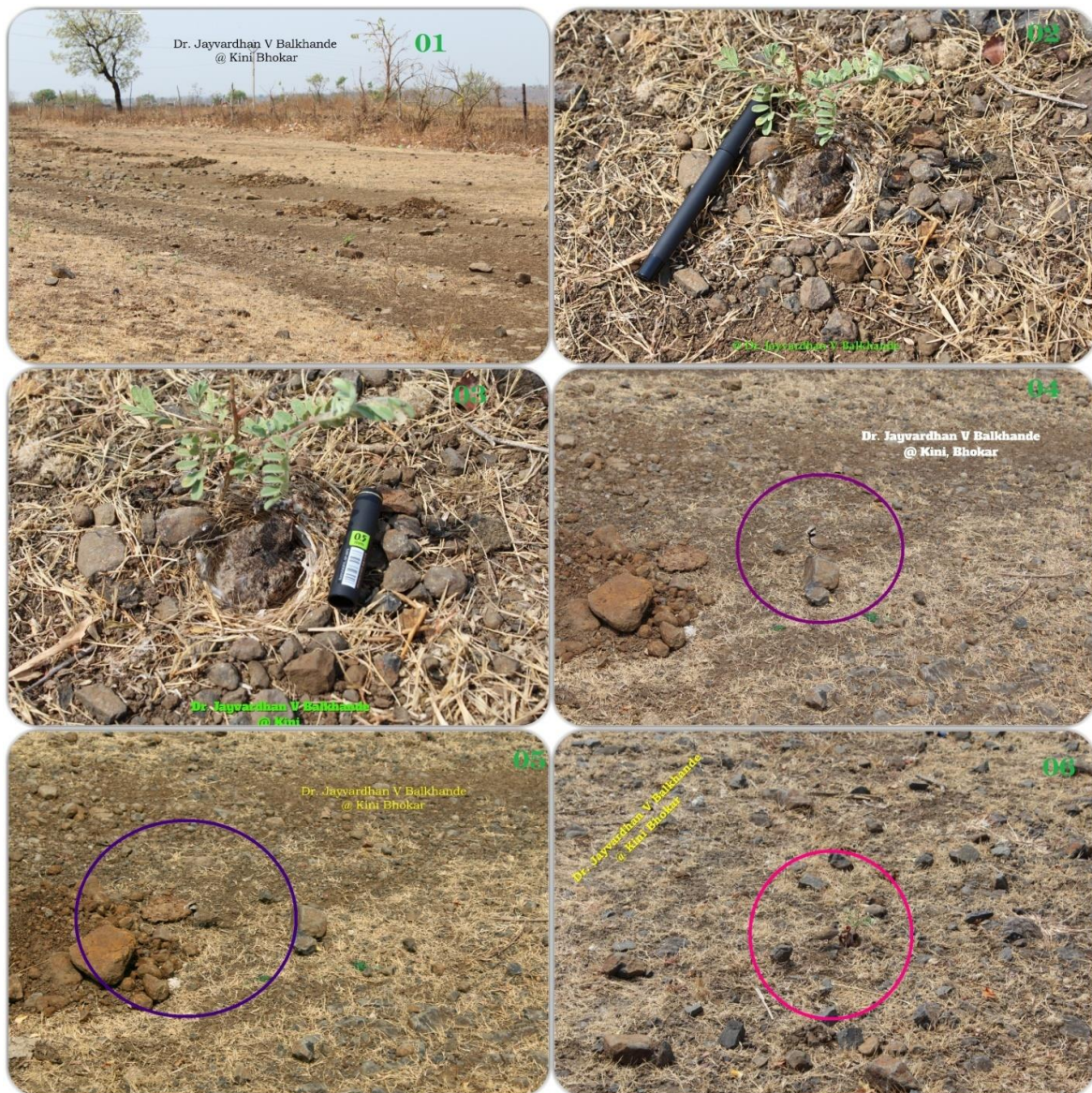


Photo Plate A: 01 Site of Nesting, 02 Nest along with offspring, 03 Size of the Nest, 04 Male Ashy crown sparrow lark holding the food in his mouth for feeding the young one. 05. Male Ashy crown sparrow lark holding the food in his mouth for feeding the young one 06 Male Ashy crown sparrow lark feeding to young one.



Photo Plate B: 07 The ashy crowned sparrow lark young one in the nest. **08.** Male ashy crowned sparrow lark was sitting on nearby the nest for protection purpose. **09, 10, 11 & 12.** The female ashy crowned sparrow lark was cover the young one with her wings in danger condition and did not leave the nest until the condition was normal.

incubation process. It was observed that when female partner leave the nest, at the same time male was giving his attention towards the nest. In this way both were busy in incubation process of eggs.

Unfortunately on 29th March 2019, when we had a visit to the nest only one egg was remaining in the nest. Later on care was taken of the nest by giving some extra visits on the site and simultaneously we had placing one large leaf of palas (*Butea Monosperma*) tree side of the nest. On 02nd April 2019 in the morning hours at 7:30 AM, it was recorded that an egg was hatched.

After the hatching female spend most of the time in the nest along with the hatchling. Male was sighted near to the nest during this period. On 4th April both parents busy in the feeding to their offspring, it was observed that male and female both are giving equal share for feeding. When female leave the nest for food then same time the male had noticed near to the nest for protection, same activity recorded from the female when male leaves the nest in search of food. Both the parents were sighted near to the nest full time. When any danger was observed by them, the female cover the offspring with her wings. Female was sitting in the nest until the risk was over. This activity was observed

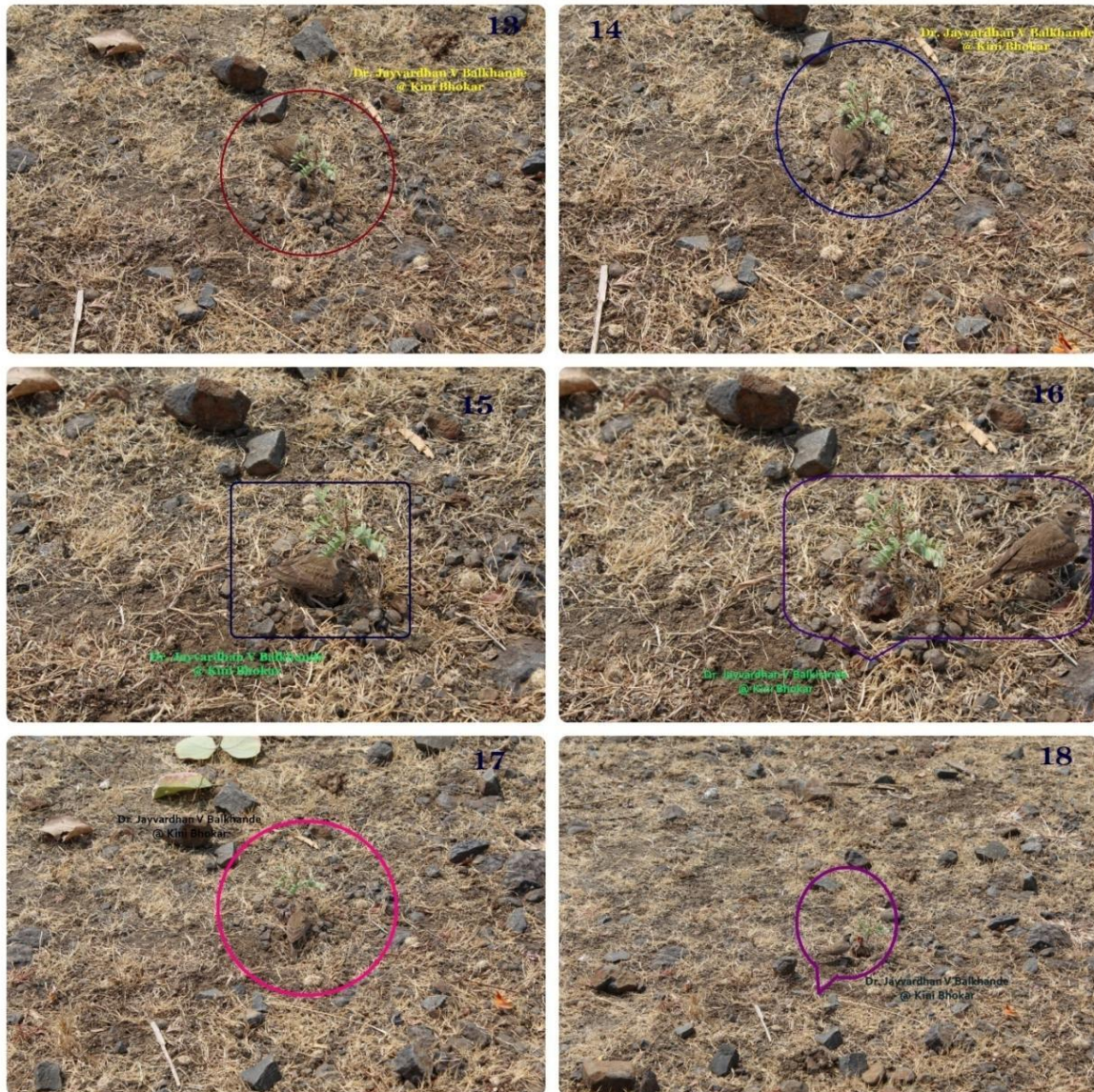


Photo Plate C: 13 to 16 Female ashy crowned larks had spent full time with the young one. **17.** Female Ashy crown sparrow lark feeding to young one. **18.** Chick of the ashy crowned lark demanding the food to his father.

till the offspring able to fly. Lastly on 15th April 2019 when we visit to the nesting site in the morning the nest was found in empty condition, but both the parents were recorded near to the nest.

CONCLUSION

The nesting pattern, breeding biology, and parental care of the ashy crowned sparrow lark was investigated first time from the Marathwada region in Maharashtra. The whole study suggested that, the Ashy crowned sparrow lark, as it was a small bird but their parental care was incredible and both partners

were involving in the parental care. For the conservation of an ecosystem, such small types of birds, animals should be studied more. This type of study should be carried out by the college students so they can feel the actual environment along with this beautiful creature of the nature. More efforts should be taken to conserve these small type of birds for maintain the healthy ecosystem. As this type of birds plays a crucial role in food chain and in an ecosystem.

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Conflicts of interest: The authors stated that no conflicts of interest.

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