



Rapid study of House Sparrows (*Passer Domesticus*) in Moodbidri, Karnataka.

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Abstract— House sparrow *Passer Domesticus* belongs to Passeriformes order and Passeridae Family. The house sparrow, *Passer Domesticus* is closely associated with human habitations and cultivation from historic times. The house sparrow is distributed all over India up to 4000m in the Himalayas. Rapid Study of house sparrows (*Passer Domesticus*) was studied in two different locations from August 2016 to September 2016 at two different habitats such as Agricultural field (Mijar) and Sub Urban area (Moodbidri). For the study Point count method was used. It was observed that population density was abundant in sub urban area and rare in agricultural fields. The details of observation are discussed in the text.

Keywords— Habitats, Population density, House sparrows, Rapid study.

INTRODUCTION

Birds are one of the best monitors to detect change in environment condition and have been used to evaluate the environmental condition since ages as a bio-monitor [1]. House sparrow belongs to the family Passeridae and most wide spread and abundant birds in the world. The species breed in small colonies or in loose groups. It is omnivorous and feeds on grains, fruit buds, flower nectar, weed seeds, insects and kitchen scrap, though chicks are fed with aphids, weevils, grasshoppers, and caterpillar [2].

Birds are sensitive to environmental changes and hence can act as an indicator of ecological balance of a particular habitat. House sparrow, *Passer domesticus* indicus, a small bird locally known as 'Chorui' is closely associated with human habitation [3]. The House Sparrow is highly adaptable to urban, suburban and agricultural habitats [4]. But a number of hypotheses such as predation, competition, lack of

nest sites, disease, food availability and pollution, have been come forward to indicate possible causes of the decline of house sparrow. In addition to this the other reasons such as loss of invertebrates, reduction in food, change in agricultural practices, loss of grass and lawns from gardens, use of pesticide and change in the architecture of human habitation are also responsible for decline of House sparrow. The object of this paper is to analyse the study of house sparrows (*Passer Domesticus*) in Moodbidri, Karnataka.

STUDY AREA

The study was conducted in Mijar and Moodbidri is a town in Dakshina Kannada district. It lies 34 km northeast of the district headquarters, Mangalore City, in Karnataka, India. The Latitudinal range is 13.0688°N and Longitudinal extension is 74.9936°E.

Selected Locations:

- i. Mijar Village which is located 7.6 Km from Moodbidri.
- ii. Moodbidri Town.

METHODS

The study was conducted over a period of one month i.e. from August 2016 to September 2016. Regular field trips of one week interval were made throughout period. The study was done to know the population density of House Sparrow of these selected areas. Afterwards population status was compared to the population of different habitats. Population data was collected by Point Counts Method. The number of individuals and were recorded during the survey.



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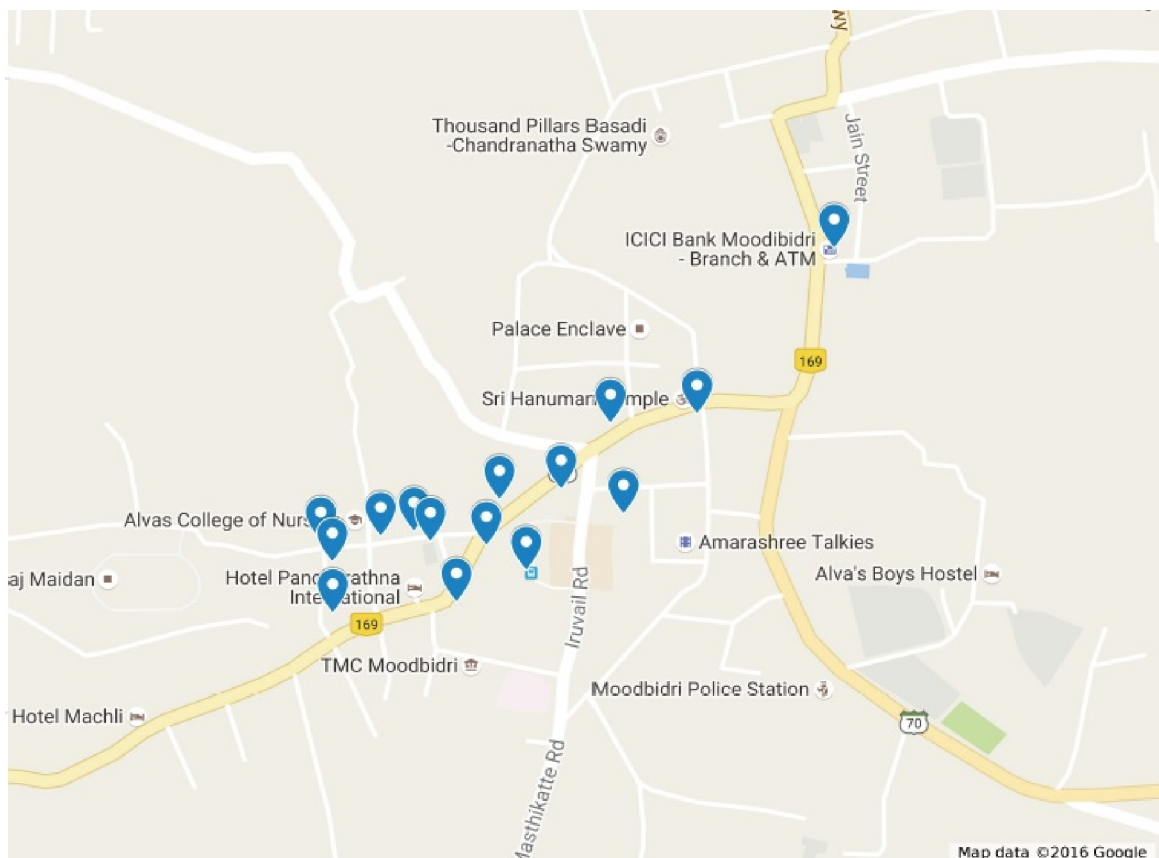


Figure 1: Map of Moodbidri town showing locations of Sparrows Courtesy: www.GoogleEarth

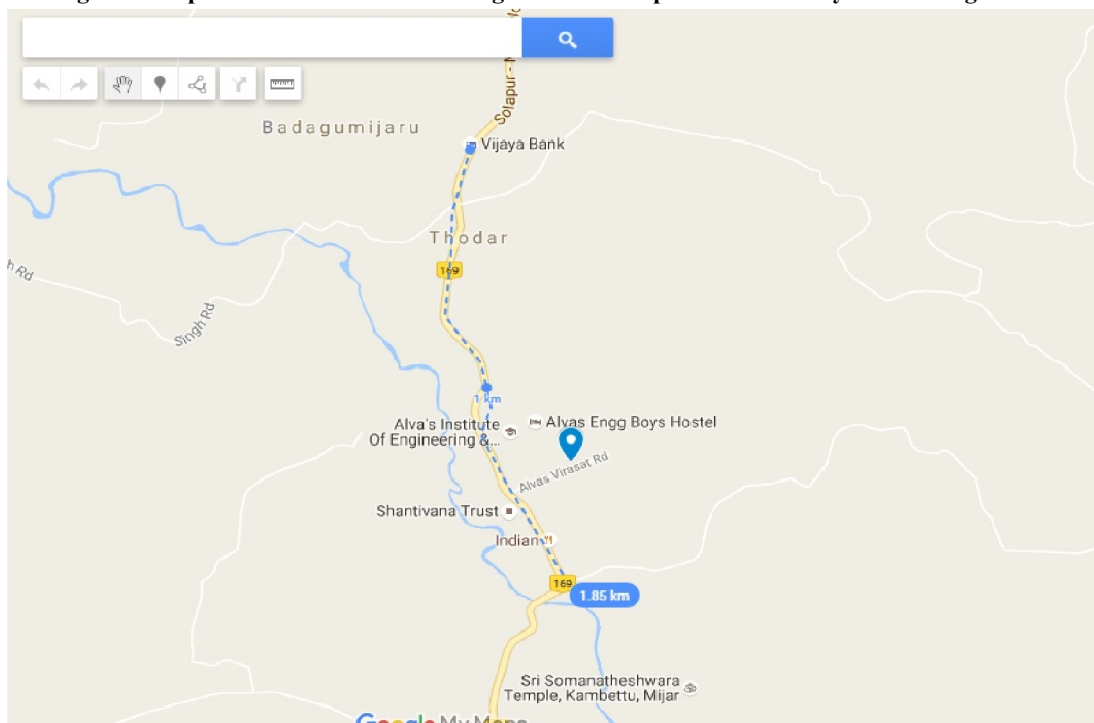


Figure 2: Map of Mijar Village showing locations of Sparrows Courtesy: www.GoogleEarth.com

OBSERVATIONS AND CONCLUSION:

The results of house sparrow population in the two habitats are depicted in table 1 and figure 3. During the study as the birds were counted out of them 39 were male and 54 were female. Study show the population in urban area was 92 (38M:54F) and 03 (1M:2F) in agricultural fields. A total of 95 House sparrows in Moodbidri and Mijar we recorded of which during 1st week 22 individuals followed by 19, 27, and 24 in 2nd, 3rd and 4th week during August 2016 to September 2016 were recorded and 2 in 1st week and 1 in 4th week in Mijar. (Fig 3). Apart from that most of the sparrows are associated with road side shops and counted 2 active nests during the population counts of sparrows. Loss of nest sites, especially in buildings, as a consequence of present construction and renovation style in building industry, may be one of the potential causes of House sparrow crisis in India. On the other hand, it is suggested that House sparrow is especially connected with urban areas of lower socioeconomic status,

therefore with buildings in worse condition that offer more nest sites. Additionally, being flexible in choice of nest sites, house sparrow is expected to build the nests in other available places (including nest-boxes), when those in buildings are lacking (Balaji S., 2014) and in the agricultural fields most of the agricultural fields were converted into monoculture farming which is either areca nut or coconut farming, which would be considerable reason for decline in population as they don't provide nesting sites for house sparrows. In the month of August population would have been decreased it may be due to various reasons such as mortality due to old age, competition for food, predation, loss of nesting sites, use of insecticides, destruction of habitats and mobile tower radiations. The monitoring of sparrow population can be helpful to understand the change in surrounding environment and their composition population can thrive successfully.

Area	Weeks				Total	Sex Ratio M:F
	1 st Week	2 nd Week	3 rd Week	4 th Week		
Moodbidri (Urban)	22(8:14)	19(8:11)	27(12:15)	24(10:14)	92	38:54
Mijar	02(1:1)	0	0	01(0:1)	03	1:2

Table 1: Show Occurrence of P. Domesticus during the period August 2016 to September 2016

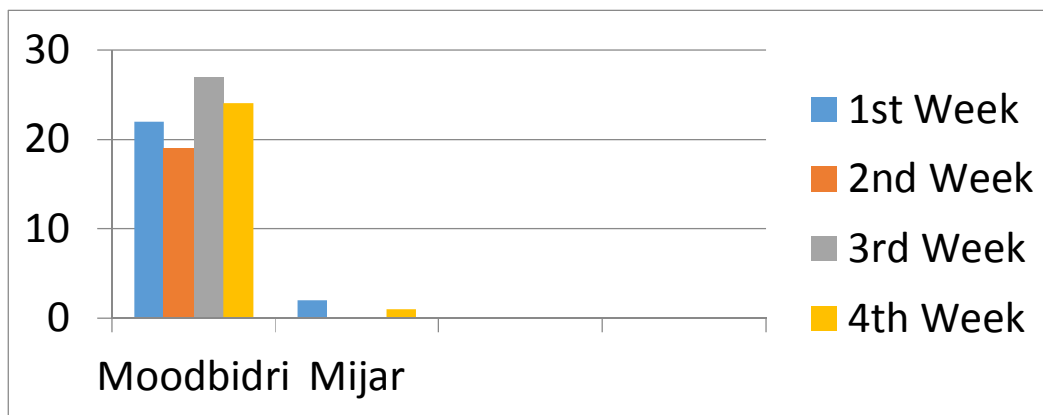


Figure 3: Variations in the abundance of House Sparrow in different weeks at Moodbidri Town and Mijar in the period August 2016 to September 2016

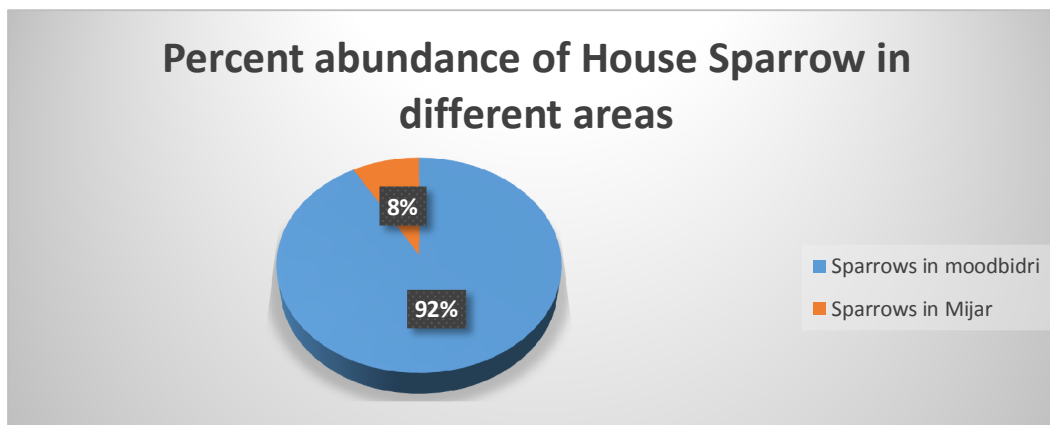


Figure 4. Percent abundance of House Sparrow in Moodbidri Town and Mijar in the period of August 2016 to September 2016

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