Reintroducing Sparrows to Urban Spaces: The Success of Bird feeders and Nesting Sites.

[1]Thota Preethi, [2]M. Sai Charan Srivatsav yadav

[1]Lecturer in Zoology, [2]Lecturer in Zoology
Department of Zoology,
SRR Govt Arts and Science Degree college(A) , Karimnagar, Telangana, India

ABSTRACT – **The house sparrow (*Passer domesticus*), once abundant across India, has witnessed an alarming population declines in urban environments, largely due to habitat loss, urbanization, and reduced foraging opportunities. Telangana alone has reported an 80% decline in sparrow numbers. This study investigates the effectiveness of two simple, ecofriendly interventions—placement of bird feeders and reuse of fallen sparrow nests—in reversing this trend. The research was conducted over eight months (January–August) in two urban areas of Karimnagar district: Bank Colony and Hanuman Nagar. Bird feeders containing seeds, millets, and nuts were strategically installed, while carefully collected fallen nests were placed in suitable sheltered locations near feeders. Regular observations recorded bird visits, feeding frequency, and nesting behavior. Statistical analysis of pre- and post-intervention data revealed a significant increase in sparrow visits and nesting success, particularly during colder months when food scarcity is high. The findings highlight that bird feeders and repurposed nests can serve as cost-effective, practical tools for urban sparrow conservation, supporting biodiversity restoration with minimal effort. This study emphasizes the value of small-scale, community-driven initiatives in addressing the broader issue of urban avian decline.**

Key words - Birds, Bird feeders, Nests, Sparrow behaviour, fallen nests, millets, nuts, rice.

I INTRODUCTION

House sparrow is the common bird which is found in almost all parts of India.
The scientific name of house sparrow is Passer domesticus, it is a non migratory bird and which is a commonly known and found near human habitations in both rural and urban areas. Currently the decline in its population raised concerns about them. Sparrows are sedentary birds and do not travel more than a kilometre or two to for food. The nest sites are usually electricity poles, rooftop, tubelight holders, ceiling fan etc. Urbanization, loss of habitat, loss of foraging sites often led to the decrease in their numbers
The decline of sparrows in urban environment is currently a rising issue. A Research showed that Telangana has lost its sparrow number to 80%.
Sparrows, which are integral to maintaining ecological balance through pest control and seed dispersal, have experienced dramatic declines in cities worldwide. Though creating bird sanctuaries for the conservation purposes the efforts coudnt be more fruitful and is not cost effective. We came up with the Idea that is Ecofriendly, cost effective and easy to be introduced anywhere in the urban areas with minimum effort.
The objective of this study was to explore the effectiveness of two simple interventions—placing bird feeders and using fallen sparrow nests—in reversing the decline of sparrow populations in urban areas. This research aims to contribute to a growing body of knowledge on urban wildlife conservation and highlight practical methods for supporting biodiversity in cities.

II LITERATURE REVIEW

There are many books, issues and research papers published which highlights the decline of avian population most precisely Sparrows. However, there is limited research on the specific reintroduction of sparrows to urban areas using fallen nests, Feeders—an element central to this study. Some studies, have explored the role of natural materials in encouraging nest-building behavior, but none have focused on sparrow-specific interventions in highly urbanized spaces.

III METHODOLOGY

Study Area: karimnagar district located in Telangana, India.

The study was conducted in 2 urban areas within karimnagar where sparrow populations have been in decline. One is Bank colony and the other site is Hanuman nagar. The sites were selected based on their high foot traffic, proximity to residential areas, and the availability of trees or shrubs, which are typical sparrow habitats. These urban areas included parks, residential streets, and commercial spaces with open-air environments.

IV. MATERIALS REQUIRED

- Bird feeders of many sizes, types.
- Bird feed which included various seeds, millets and nuts.
- Fallen nests which were carefully collected from the natural sites of abandoned trees.
- Nesting areas which were strategically selected nearby the bird feeders.
- Nests were chosen based on their condition and appropriateness for reuse, ensuring they did not contain parasites or contaminants.

- Nesting Sites. The nests were placed in sheltered areas such as trees, under eaves, and in dense shrubs where sparrows typically build their homes.

V. DATA COLLECTION

The bird feeders were placed in preferred locations and fallen nests were placed nearby the bird feeders to watch them precisely. The research work was conducted for about 8 months period that is from January to August in which observation was taken place during same timing in every visit.
Frequent visits were made to nesting sites and bird feeder areas.

VI. BIRD FEEDERS

Feeding activity was keenly observed particularly at what time do the bird visits increase, also which type of food attracts more birds


Bird sightings: Observations of frequency and number of birds were watched throughout the 8 month period and noted down the data.

Nesting sites: A close watch on nesting sites were done. Observing the bird reusing the placed nests and egg laying nature of them.


M. Sai Charan Srivatsav Yadav


T. Preethi

Author's at sites while collecting fallen nests.

VII. LOCATION CO-ORDINATES:

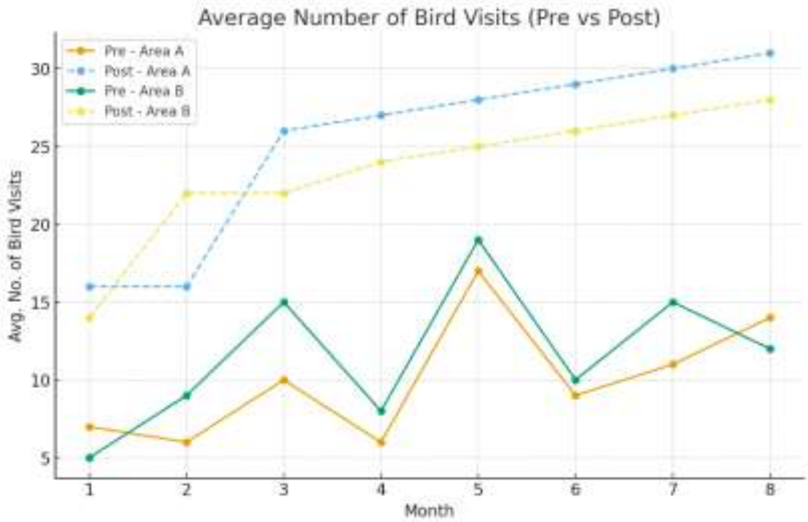
Bank colony: 18.456059111188463, 79.12121534106733
Hanumannagar:18.422424108414056,79.13117777285763

VIII. STATISTICAL ANALYSIS:

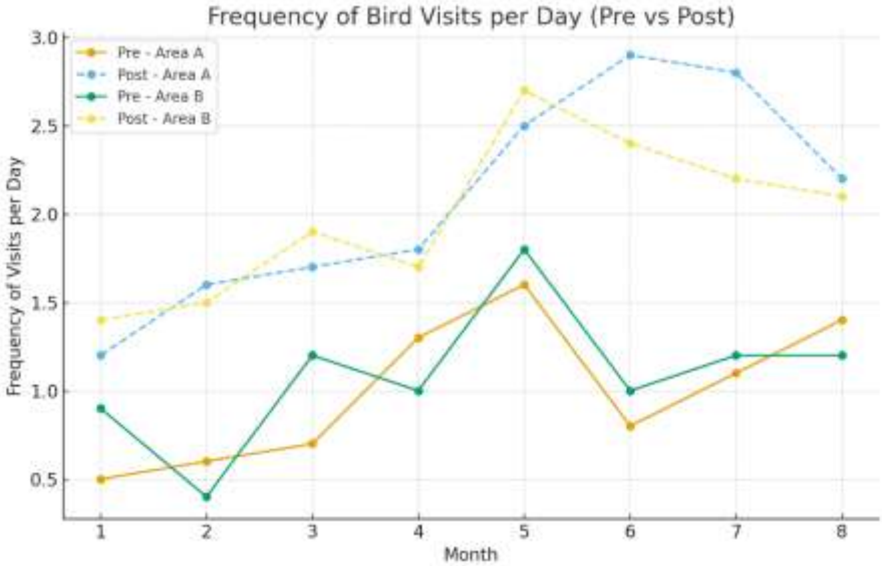
Data on sparrow sightings and nesting success were analysed comparing Pre and Post-intervention population counts.

TABLE-1

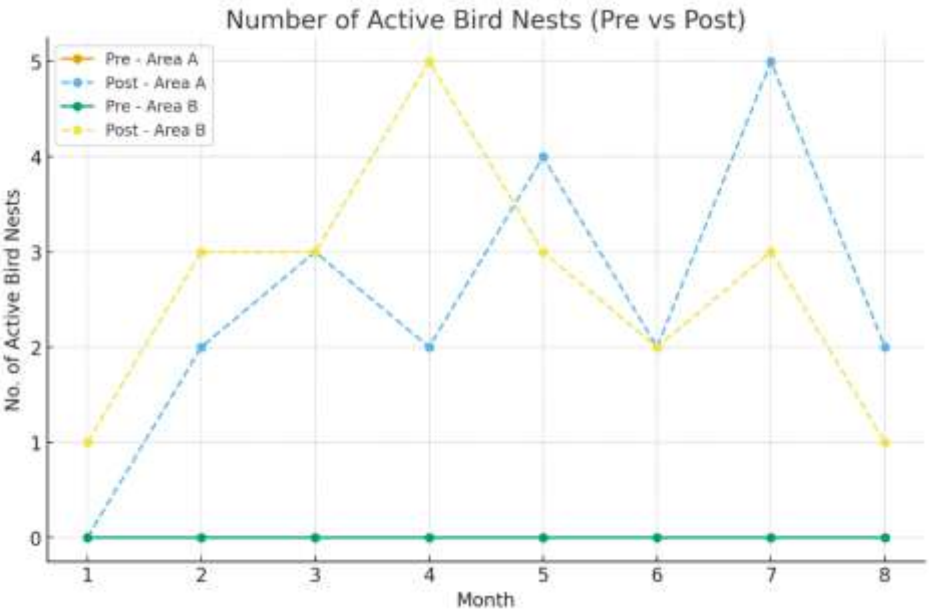
Month	Area	Avg. No. of Bird Visits (Pre)	Avg. No. of Bird Visits (Post)	Frequency of Visits per Day (Pre)	Frequency of Visits per Day (Post)	No. of Active Bird Nests (Pre)	No. of Active Bird Nests (Post)
1	A	7	16	0.5	1.2	0	0
1	B	5	14	0.9	1.4	0	1
2	A	6	16	0.6	1.6	0	2
2	B	9	22	0.4	1.5	0	3
3	A	10	26	0.7	1.7	0	3
3	B	15	22	1.2	1.9	0	3
4	A	6	27	1.3	1.8	0	2
4	B	8	24	1.0	1.7	0	5
5	A	17	28	1.6	2.5	0	4
5	B	19	25	1.8	2.7	0	3
6	A	9	29	0.8	2.9	0	2
6	B	10	26	1.0	2.4	0	2
7	A	11	30	1.1	2.8	0	5
7	B	15	27	1.2	2.2	0	3
8	A	14	31	1.4	2.2	0	2
8	B	12	28	1.2	2.1	0	1



Graph-1



Graph - 2



Graph – 3

- **Percentage increase in both areas after introducing Bird Feeders and Nests.**
- **Bank colony Area**
  - Avg. Bird Visits ↑ **154%**
  - Visit Frequency ↑ **109%**
  - Active Bird Nests → **20 nests (from 0)**
- **Hanuman nagar Area**
  - Avg. Bird Visits ↑ **102%**
  - Visit Frequency ↑ **83%**
  - Active Bird Nests → **21 nests (from 0)**
  -

IX RESULT:

The observation results were as follows. There is a significant increase in number of bird visits when compared to pre and post intervention of bird feeders and nests.

The increase in sparrow numbers and nesting success suggests that both bird feeders and fallen sparrow nests can play a crucial role in restoring sparrow populations in urban environments. The success of the feeders during colder months is particularly important, as it highlights the potential of supplementary feeding in areas where natural resources are limited. The use of fallen nests also proved to be effective, likely due to the familiarity of these nests to sparrows, which are more inclined to occupy them.

X CONCLUSION

This study demonstrates the success of using bird feeders and fallen sparrow nests to increase sparrow populations in urban spaces. By offering supplementary food sources and suitable nesting sites, cities can help support biodiversity and combat the decline of sparrow populations. The results suggest that simple, cost-effective conservation methods can make a significant impact on urban wildlife, benefiting not only sparrows but potentially other bird species as well.

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