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FACTORS AFFECTED THE RESPONSE OF COMMON MYNA *(Acridotheres tristis)* TOWARDS ARTIFICIAL NESTS IN SELECTED SITES OF PESHAWAR CITY, KPK PAKISTAN.

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ABSTRACT
The objective of this paper is to analyze the factors affecting the response of common myna towards artificial nest boxes placed at different sites in Peshawar city i.e. University Town, Rahat Abad, Qadir Abad and Palosi Road Peshawar respectively. Total 28 artificial nests were installed in the breeding season of common myna. Therein 18 nest boxes were found attempted by common myna. 45 eggs were found in the attempted nest boxes. While rest of the 10 nest boxes were affected by the activities of pariah kite & common crow, presence of common squirrels, Ants, mega bats and orientation of the installed nest boxes.
[Arz Muhammad Umrani, Dr.Mamoona Wali Muhammad, Ahmad Zamir, Aimal Khan, Talha Anwar, Sohaib Ahmad, Shabir Ahmad Jan, Danyal Khan. **FACTORS AFFECTED THE RESPONSE OF COMMON MYNA *(Acridotheres tristis)* TOWARDS ARTIFICIAL NESTS IN SELECTED SITES OF PESHAWAR CITY, KPK PAKISTAN.**.*Researcher*2022;14(7):38-40]ISSN1553-9865(print);ISSN2163-8950(online)
http://www.sciencepub.net/researcher. 06.doi:10.7537/marsrsj140722.06.

KEY WORDS : Artificial nests, common myna, orientation, breeding season.

Introduction

In order to overcome biological variety conservation concerns, cities may play an important role. The majority of research into the habitat requirements of various bird species has been on natural settings, with urban ecosystems being ignored. (Jokimaki & Huhta, 2000) With the rapid expansion of urban and suburban development, as well as the resultant habitat alteration, it is evident that a better knowledge of the interactions between birds and urban ecosystems is essential. (Niemelä, 1999) Artificial nests are frequently used to explore factors that influence the reproductive success of woodland birds. Artificial nests have the effect of allowing the researcher to count and distribute the number of nests in the study. Building artificial nests also takes less time than finding natural nests. The underlying assumption of utilizing artificial nests is that they can be a good alternative for real bird nests, and some researchers have found that disturbance rates on artificial nests are equal to disturbance rates on real nests (Wilson et al., 1998). For artificial nests to be a useful tool for natural nest predation, researchers need a better understanding of how rates of predation on artificial nests compare to rates of predation on natural nests (Major, 1991). Artificial nests differ from natural nests in a number of critical ways that may influence predation rates. If there is no incubating adult associated with built nests, a predator's ability to discover nests may be impeded. Predation rates on artificial nests may be higher if adults can either conceal or actively protect the natural nest from predators. If the behavior of adults attracts predators to natural nests, the absence of adults may result in lower rates of predation on constructed nests. (1987, Martin).
Mynas are abundant in all climate zones where they can survive. Mynas are members of the Sturnidae family and the Passeriformes order. (1983, Ali et al.). The common myna is a small Asian bird that has spread throughout the world as a result of human introductions, whether accidental or planned. Common myna were found in areas with greater human population numbers and land transformation values more frequently than expected by chance (Peacock et al., 2007)

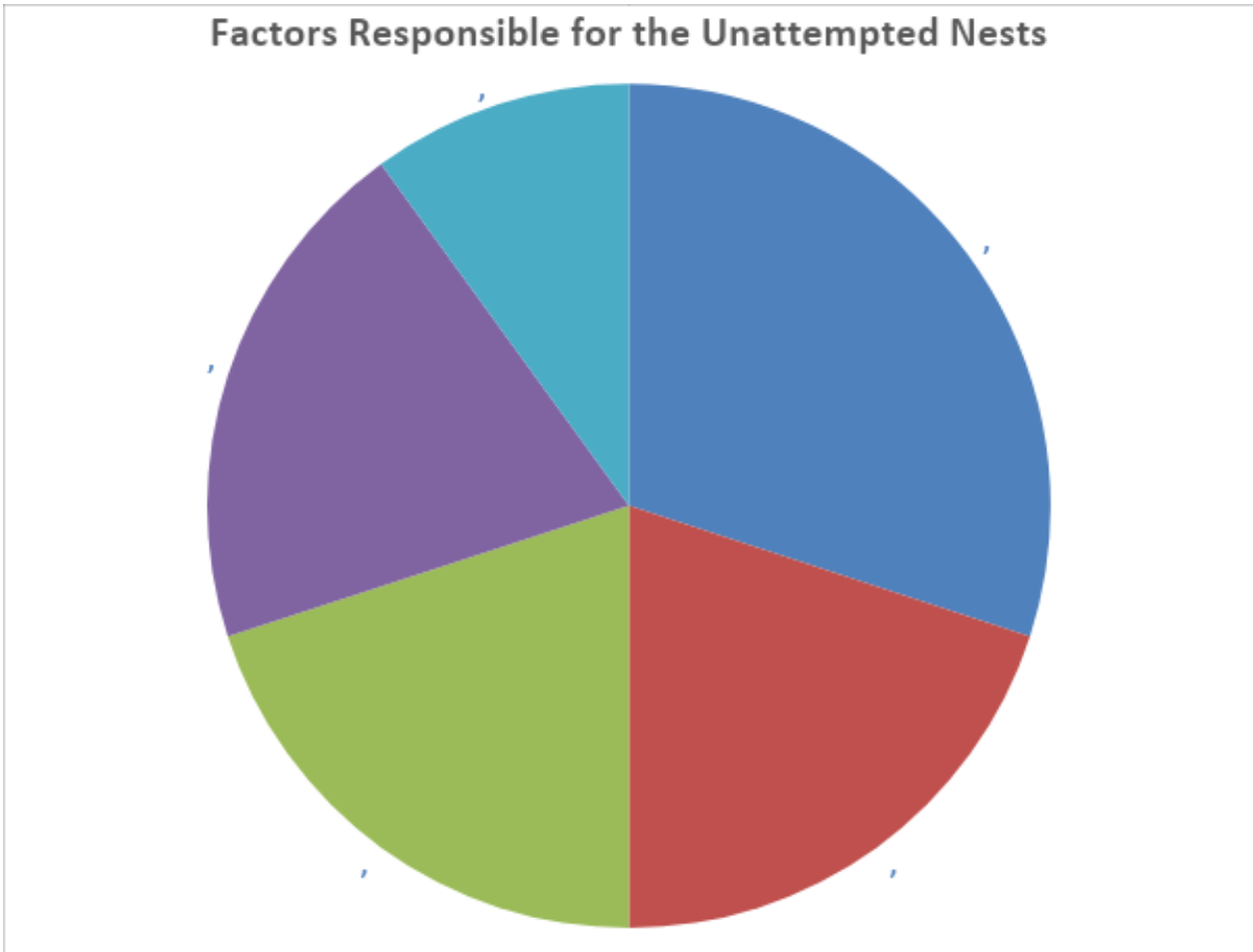
METHOD, METHODOLOGY AND STUDY AREA:

Factors were observed in breeding season (March, 2022 to September, 2022). Twice a week by foot through transit line method, predators were recorded and damage done was assessed at each site (site-A (University town), site-B (Rahat Abad), site-C (Qadir Abad) and site-D (Pelosi road).

STUDY AREA

The research work was carried out in Peshawar city, located in the wide valley, surrounded by four districts; Kohat, Charsadda, Khyber Agency and Nowshera. The total area of Peshawar city is 125 Km.sq and is positioned at (Latitude 34 °0150 ° N Longitude 71 °5805 ° E). It features a warm semi-arid weather, long summers and short, cool Winters. The winter season starts from mid-November to the end of March and summer starts from May to September. The mean temperature in summer ranges from 25 °c to over 40 °c.

RESULTS AND DISCUSSION



Out of the total 28 artificial nests installed during breeding season of common myna at four different sites. All the Artificial nests installed at road side were left unattempt due to anthropogenic disturbances therein 02 nests boxes at site-A University town and at site-B Rahat Abad. Predation by pariah kite and common crow was observed over 02 nest boxes at site-D Palosi Road. Presence of common squirrels around 02 of the nest boxes at site-C, Qadir Abad, may be a possible reason for the nests to be left un attempted. Predation by Bats was observed at one of the nest boxes at site-A. 03 of the nest boxes were left un attempted at site-B, Rahat Abad due to installation of the nest boxes above the prescribed height for common myna.

STATISTICAL ANALYSIS

Table 5 : Contingency Table

SITE	NO OF NEST BOXES	NO OF EGGS	NO OF HATCHED EGGS	TOTAL
SITE-A	8 (9.24)	15 (14.9)	13 (11.9)	**36**
SITE-B	8 (6.42)	10 (10.32)	7 (8.25)	**25**

SITE-C	6 (5.13)	8 (8.25)	6 (6.60)	**20**
SITE-D	6 (7.19)	12 (11.55)	10 (9.24)	**28**
TOTAL	**28**	**45**	**36**	**109**

χ^2 cal = 1.3425; χ^2 table = 12.59 at df = 6, LS = 0.05

TABLE 6 : Multiple Regression Model

SITE	NO OF NEST BOXES Y	NO OF EGGS X_1	NO OF HATCHED EGGS X_2	X_1Y	X_2Y	X_1X_2	X_1^2	X_2^2
SITE-A	8	15	13	120	104	195	225	169
SITE-B	8	10	7	80	56	70	100	49
SITE-C	6	8	6	48	36	48	64	36
SITE-D	6	12	10	72	60	120	144	100
	$\overline{Y} = 7$	$\overline{X}_1 = 11.2$	$\overline{X}_2 = 9$	320	256	433	533	354

$\hat{\beta}_1 = 2.039$

$\hat{\beta}_2 = -177.03$

$\hat{\beta}_0 = 0.006$

$Y = \hat{\beta}_0 + \hat{\beta}_1 X_1 + \hat{\beta}_2 X_2$

$Y = 0.006 + 2.039\, X_1 - 177.03\, X_2$

ACKNOWLEDGEMENT

The authors are highly grateful to **Mr. Safdar Ali Shah** Additional Director General, PFI, **Dr. Sajjad Saeed** Assistant Professor of Forestry, PFI, for their technical Guidance. We could not have managed this research work without their due support.

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7/22/2022