

BREEDING BEHAVIOUR OF COMMON MYNA (*ACRIDOTHERES TRISTIS*)

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The Common Myna (*Acridotheres tristis*) in Faisalabad city mainly nests in tree cavities. Mating was observed from March through May. Egg laying took place in mid-April. Incubation period lasted for 13 to 14 days. The incubating pairs spent only 32% of the total day light hours inside the nest cavities. The young were fledged after 18 to 25 days. Both the parents brought food (mainly insects) for the nestlings. The parents made 22 visits to an average nest in an hour to feed the young. The Myna fiercely competed for defending the nest among themselves as well as with the Rose-ringed Parakeets. About 43% of the territorial defense involved Common Myna and 35% Rose-ringed Parakeet. Generally, the Myna produced two broods in a season and the breeding season lasted from March through September.

INTRODUCTION

The agroecosystem in Pakistan is considerably complex as it includes the cropland, orchards, forest plantations, canal- and road-side plantations and waste lands of variable sizes. This heterogeneity favours the existence of a rich fauna. The Common Myna (*Acridotheres tristis*) is a dominant component of the avifauna of the agroecosystem of Punjab. Under certain situations, the Myna assumes the role of a pest as it is known to feed upon some orchard fruits, seedlings of wheat and standing cereal crops (Ali and Ripley, 1972; Bruggers, 1983). The Common Myna generally nests in tree cavities and so does the Rose-ringed Parakeet (*Psittacula krameri*). Both these birds have been observed competing for the nesting sites. This paper documents information about the breeding behaviour of the Common Myna with special reference to that of the Rose-ringed Parakeet.

MATERIALS AND METHODS

The study was carried out from March through September on the Campus of the University of Agriculture, Faisalabad and the Bagh-i-Jinnah of Faisalabad city. These habitats were visited 1 to 3 times every week throughout the entire length of the study. In all, 45 visits were made to the study area, 26 in the forenoon and 19 in the afternoon. The duration of these visits ranged from 2 to 8 hours. In all, 210 hours-139 of forenoons and 71 of afternoons were spent in the field. During each of these visits, the behaviour of the Common Myna in connection with the occupation and defense of the nest cavities during incubation and brooding periods was recorded.

RESULTS

The Common Myna in the present study area mainly nested in cavities found in

the limbs and trunks of trees. Only a small proportion (13%, $n = 39$) of the nests were found located in cracks of walls, drain pipes, ventilators and under the beams of roofs of buildings. Some nests (about 10%) were located at the base of the crowns of date trees.

Occupation of nests: The Myna began occupying the nest cavities in March and thereafter it defended them vigorously against its own kind and other birds throughout the breeding season. Some casual observations indicated that the Myna defended the nests, at least, against the Rose-ringed Parakeet even outside the breeding season. Pairs of the Myna were seen attacking the Parakeets even in December and January in proximity of some such nest cavities as had served as nests during the previous breeding season. This indicated that the Common Myna stayed in pairs even outside the breeding season.

Mating behaviour: Mating was recorded from March through May. It took place in the vicinity of the nest cavities as well as away from them. Just before mating, the female crouched shivering and raising its posterior. This elicited mounting by the males who usually puffed and bowed twice or thrice before mounting. The males dismounted usually after making just one cloacal kiss. The whole mating act, that is, comprising posture of the female, puffing, bowing and mounting by the male and the cloacal kiss was completed in 15 to 25 seconds.

Incubation period: On April 14, egg laying had taken place in 5 of the nests. The subsequent observations regarding incubation and brooding behaviour were mainly restricted to these 5 nests. Of the 5 clutches under observation, one failed to hatch at all and the Myna were seen ejecting the eggs from the nest. The incubation period lasted for 13 to 14 days. Occasionally, the incubating pairs were seen bringing green leaves to the nest cavities.

The Myna sat over the eggs in a series of short duration bouts. These sitting bouts lasted from 0.5 to 10 minutes, the average being 2.56 ± 0.15 minutes long (Fig. 1). During the early phase of incubation, an average sitting was of 2.81 ± 0.38 minutes, during the mid-phase of 2.60 ± 0.17 minutes and during the last phase, it was 2.28 ± 0.46 minutes. Thus, in the early stage of incubation period, the breeding Myna sat over the eggs for longer periods of time. The forenoon sittings averaged 2.60 ± 0.22 minutes long and the average afternoon sitting was of 2.54 ± 0.21 minutes, there being no statistically significant difference between the durations of forenoon and afternoon sittings. However, the incubating Mynas stayed inside the nest cavities during early hours of the afternoon (Fig. 2).

Brooding period: In two of the 4 clutches, hatching took place on April 27 and in the remaining 2 on April 28. The nestlings were fledged from one of the nests on May 15, from another one on May 20 and from the remaining 2 on May 22. Thus, the nestlings were fledged in about 18 to 25 days. Both the parents fed the nestlings. Insects were the main food items brought to the nestlings. Occasionally, earthworms were also brought for them. Besides animal food, fruits such as fig, jaman and pieces of watermelon were also fed but mainly to nestlings about to be fledged. The feeding continued from dawn to dusk everyday. It was recorded that the two parents together averaged 289 visits bringing food for the nestlings during 13 hours of the daylight.

Length of breeding season: Casual observations over the year revealed that the breeding season of the Common Myna in our study area lasted from March to September. Mating started in March and the last brood of the season was generally fledged by mid-September. The breeding pairs generally produced two (70%) to three

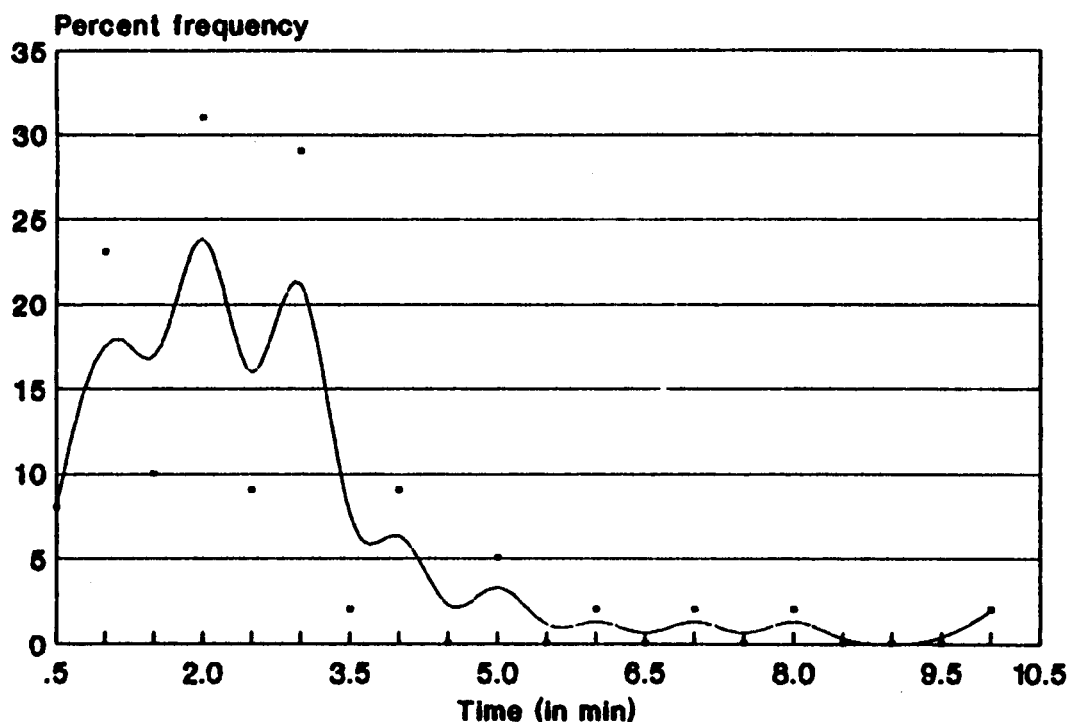


Fig. 1. Duration of stay of incubating Mynas inside the nest cavity.

Table 1. Defense of the nest cavity by the Common Myna against its own kind and other animals (percentages are given in the parentheses)

Object of aggression	Pre-egg laying period	Incubation period	Brooding period	Total
Myna	21 (52.5)	2 (50.0)	4 (21.1)	27 (42.9)
Parakeet	13 (32.5)	1 (25.0)	8 (40.1)	22 (34.9)
Crow	1 (2.5)	1 (25.0)	2 (10.5)	4 (6.3)
Squirrel	4 (10.0)	-	1 (5.3)	5 (7.9)
Others	1 (2.5)	-	4 (21.1)	5 (7.9)
Total	40 (100)	4 (100)	19 (100)	63 (100)

(30%) broods every season. One of the authors (M.A. Beg) noted that a single pair fledged a series of four broods during the breeding season of 1992. The last brood was fledged on September, 27. During this year, it unusually rained at regular intervals

throughout the breeding season and perhaps there was no scarcity of insect food during the summer months.

Territory and defense of the nest: The Common Myna defended its nest and the area around it against its own kind and other

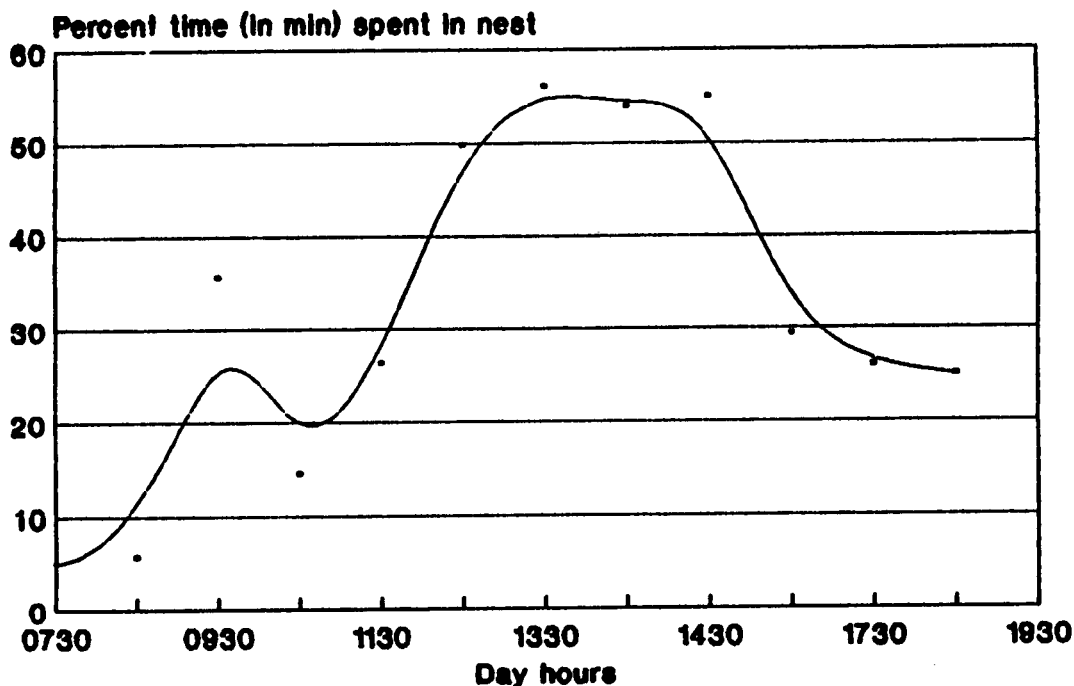


Fig. 2. Proportion of time the incubating Mynae spent inside the nests during different hours of the day.

Table 2. Types of territorial defense exhibited by the Common Myna during the breeding season

Breeding season	Types of territorial defense				Total
	Calling, puffing and bowing	Attacking and chasing	Confronting Parakeet inside the nest	fight involving one or more pairs	
Pre-egg laying period	21 (36.2)	26 (44.8)	5 (8.6)	6 (10.4)	58 (100)
Incubation period	2 (40.0)	2 (40.0)	1 (20.0)	-	5 (100)
Brooding period	5 (22.7)	16 (72.7)	-	1 (4.6)	22 (100)
Total	28 (32.9)	44 (51.8)	6 (7.1)	7 (8.2)	85 (100)

animals. Generally, the defended territory extended 10 to 15 feet around the nest. As the fledging time neared, the brooding Mynas became more and more responsive to predators like cats, mongoose and crow.

Table 1 presents a list of animals repulsed by the Common Mynas from the breeding territory. The most common trespassers were its own conspecifics and the Rose-ringed Parakeet. The intruders were

As the Common Myna used tree cavities for nests, they must have been competing with the Rose-ringed Parakeet for suitable nesting sites. The breeding season of the Parakeet in the present study area seems to broadly overlap that of the Common Myna. The results of the present study indicate that the two species intensively compete for nesting sites. As such, they might be inhibiting each others reproductive potential.

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