

Nesting Frequency in Black-Crowned Night-Herons *Nycticorax nycticorax* in Kolkata, India

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Abstract

Nesting frequency in black-crowned night-herons *Nycticorax nycticorax* was noted during January—December period in 2009 in Kolkata, India. It was revealed that these birds bred almost throughout the year except January. In one tree, though as many as 52 nests were seen at a time, a bimodal trend—one during summer (April—May) and the other during post-monsoon (August—September) was well marked in these birds.

Key words : Night-heron, Nesting frequency, Kolkata, India.

During last few years the black-crowned night-herons *Nycticorax nycticorax* were seen to nest at B. C. Road, C. I. T. Road and A. P. C. Park areas of Kolkata, India (1—3). Usually, in Kolkata nesting starts by the second half of February and continues at least up to November. It is intriguing to know whether these birds continue nesting uninterruptedly for the period of 8—9 months and if so, then how frequently nests are constructed irrespective of the breeding months. To gain some idea on these points we took the liberty to study the nesting frequency in *N. nycticorax* during 2009 in Kolkata and the findings are presented.

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Methods

N. nycticorax are colonial. They prefer nesting on the big trees having well developed branching system and canopy configuration. Accordingly, on the basis of our field experience (1—3) we selected two big trees which were considered by these birds nesting in earlier years from each of the three localities viz. B. C. Road of Ballygunge area, C. I. T. Road of Beliaghata area and A. P. C. Park of Kankurgachi area. At B. C. Road area a *Ficus religiosa* (16.67 m in height, 13.33 m in canopy diameter) and a *Mangifera indica* (18 m in height, 13.33 m in canopy diameter); at C. I. T. Road two *F. bengalensis*, one 16.67 m in height and 15 m in canopy diameter and the other

18.67 m in height and 15 m in canopy diameter, and at A. P. C. Park two *Peltophorum inerme*, one 13.33 m in height and 10.67 m in canopy diameter, while the other 15 m in height and 13.33 m in canopy diameter, were selected for data collection on the number of viable nests present on these trees at weekly intervals. The nests bearing eggs or chicks or parent birds are here termed as “viable nests”. It is to be mentioned here that in nesting season deserted nests are vanished within 24 hours as the nest-building materials of the said nest are taken away by the other nesting pairs to use the same in their nest-construction.

On each observation day due attention was given to locate all the nests present in the tree and the number was noted in respect to the nest-building trees of the three localities concerned. Observation was started by the first week of January 2009 and terminated by the last week of December 2009.

Results

At B. C. Road and C. I. T. Road, nesting was started by the second week of February 2009 in four trees selected for studies. At A. P. C. Park, nests were first seen in the second and third weeks of March 2009 on the tree no. 1 and tree no. 2 respectively. The number of nest varied with the progress of breeding period (Table 1). At a time, maximum 20—52 nests were seen in a tree.

Discussion

Black-crowned night-herons, *N. nycticorax* breed

Table 1. Nesting frequency in black-crowned night-heron *Nycticorax nycticorax* in Kolkata, India in 2009 breeding season.

Months	Observation period Weeks	B. C. Road		C. I. T. Road		A. P. C. Park	
		<i>Ficus religiosa</i>	<i>Mangifera indica</i>	<i>Ficus bengalensis</i> (1)	<i>Ficus bengalensis</i> (2)	<i>Peltoforum inerme</i> (1)	<i>Peltoforum inerme</i> (2)
Jan	1st	0	0	0	0	0	0
	2nd	0	0	0	0	0	0
	3rd	0	0	0	0	0	0
	4th	0	0	0	0	0	0
Feb	1st	0	0	0	0	0	0
	2nd	2	10	5	1	0	0
	3rd	2	27	11	1	0	0
	4th	5	30	20	1	0	0
Mar	1st	6	34	22	2	0	0
	2nd	7	35	28	3	1	0
	3rd	12	37	28	3	3	6
	4th	23	39	28	3	9	7
Apr	1st	22	43	28	3	9	9
	2nd	27	45	28	4	10	10
	3rd	26	43	30	5	11	12
	4th	29	32	13	8	11	8
May	1st	27	34	13	8	14	15
	2nd	26	35	4	7	13	13
	3rd	20	29	2	7	8	10
	4th	16	22	1	9	16	9
Jun	1st	7	14	1	5	10	4
	2nd	4	15	1	3	7	2
	3rd	11	20	3	5	4	1
	4th	10	20	5	2	3	1
Jul	1st	9	28	4	6	1	1
	2nd	21	25	7	7	1	1
	3rd	25	32	7	12	1	1
	4th	25	35	11	18	1	2
Aug	1st	28	38	10	18	1	2
	2nd	46	38	16	16	2	2
	3rd	38	40	17	21	2	6
	4th	52	46	16	22	4	13
Sep	1st	51	44	16	19	8	12
	2nd	45	38	13	16	14	16
	3rd	42	39	6	16	15	15
	4th	37	30	7	15	17	30
Oct	1st	31	26	5	7	20	21
	2nd	29	23	3	8	17	23
	3rd	22	20	2	6	17	20
	4th	17	14	2	3	19	18
Nov	1st	17	12	1	2	19	8
	2nd	12	12	1	1	13	5
	3rd	18	10	1	1	12	3
	4th	6	9	0	0	8	2
Dec	1st	5	8	0	0	8	1
	2nd	2	7	0	0	1	1
	3rd	2	5	0	0	1	0
	4th	2	4	0	0	0	0

on every continent except Australia and Antarctica (4), but the duration of breeding period varies with

the countries. Scharf (5) noted nesting in *N. nycticorax* from early May to July in Michigan, USA.

In Spain these birds usually breed during April—June period (6), but nesting in winter (January—February) is not uncommon (7). According to Ali (8), *N. nycticorax* nest between April and September in north India and between December and February in south India. In Raiganj Wildlife Sanctuary, Uttar Dinajpur, West Bengal breeding season in Black-crowned night-herons extends from June to January (9). From the present findings it is evident that breeding in *N. nycticorax* in Kolkata extends from February to December. This suggests that *N. nycticorax* can breed throughout the year depending upon the environmental conditions of the nesting areas concerned. This sort of long breeding season as opined by Scharf (5), is undoubtedly, an adaptation that allows the black-crowned night-heron to exploit habitats over much of its range. Perhaps such adaptability enabled black-crowned night-herons to find suitable habitats in most part of the globe. This could be substantiated for the bimodal nesting peaks, once during early summer and the other during mid-monsoon in Kolkata.

It is most likely that the nesting frequency in *N. nycticorax* is much related with the availability of foods for the chicks. It is to be mentioned here that during March—May period the bheries of east Kolkata remain rich with different kinds of fishes, and fishing continues regularly until the stock is finished from the commercial point of view. Usually, this situation is met by the end of May every year. Therefore, there exists uncertainty of getting fish-food for the chicks. Thus, the second phase of breeding starts by the end of May. So, egg-laying takes place by June and hatchlings are seen in July and after wards. Incidentally, during July—August these bheries again be-

come crowded with fingerlings of different fish species. Thus these herons are apt to utilize the opportunity to ensure their breeding at a maximum level.

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