

Published on: 1st June 2011



BIRD FAUNA OF THE PEARL MILLET CROP ECOSYSTEM IN PATAN DISTRICT (N.G.)

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ABSTRACT:

In the rural economy of an agriculturist birds play a vital role since some birds are beneficial or useful to him and others claim a heavy toll of his produce. In this paper an attempt is made to list out the common species of birds both resident and migratory in this region. A detailed observation was made for the insectivorous avian fauna visiting the pearl millet ecosystem throughout the years of 2005-2007.

KEY WORDS: Birds, Pearl millet, Patan.

INTRODUCTION:

The principal agro-ecosystem in Patan district is pearl millet- based and the irrigation needs are met mostly by canal, tank and by a network of tube wells. The entire area is drained by the following river viz. Rupen, Banas, Saraswati, Narmada canal and tube well. This area considered as semi-arid. The average annual rainfall in the district is 876 mm. The annual rainfall in the district is received during the south-west monsoon months, June to September, the rainiest month being July during the monsoon. The relative humidity is high being generally above 70 per cent. The driest part being the summer season when the relative humidity is less than 30 per cent. The cold season commences from December and ends in the month of February. The period from March to the first week of June is the hot season. It is followed by the south-west monsoon, which lasts till the end of September; October and November thus constitute the post-monsoon season. The highest temperature occurring in May goes up to 40⁰C and the lowest in January falls down to 10⁰ C. This biome of the pearl millet ecosystems includes the invertebrate fauna comprising insect pests like Blister beetle, Myllocerus weevil, Shoot fry etc.

STUDY AREA:

Patan is situated in the Northern part of Gujarat. It is bound on the North West and north by Rann

of Kutch and Banaskantha district. Patan district lies between 23° 41' and 23° 55' N latitude and 71° 31' and 72° 20' E longitude. Patan is situated on 82.30 mts height from the sea level in the Northern part of Gujarat. The region is having the minimum temperature as low as 5°C -10°C and maximum temperature as high as 40°C - 48°C. The average rain fall in the region is about 701 mm.

MATERIALS & METHODS:

The survey on bird fauna was conducted in 7 Talukas and 2 sites in each Taluka have been selected for the study purpose (Table 1).

The birds are classified in the following groups.

1. Very common : Seen in large numbers
2. Common : Seen in less numbers
3. Less Common : Seen in less numbers and only in certain places
4. Rare : Seen in singles or in few in numbers occasionally.

The birds were compared for identity and nomenclature with the authenticated guides by Salim Ali (1977) and Ganguli (1975) and the birds were observed with help of a binocular (7x50) during morning and evening. Also, number of various species of birds observed were recorded. The birds were identified up to species level with the help of standard books and presented in the table 1. Among the birds the rose ringed parakeet (*psittacula krameri*) invade crops in flocks and inflict heavy damage wasting much more than what they eat. They feed on pearl millet ear herds in enormous numbers. In company with weaver Bird House sparrow (*passer domestic*), munia, crows, pigeon & Dove, Indian myna (*Acridotheres tristis*) and Indian Peafowl (*pavo cristatus*) etc. depredate crops inflicting heavy damage in millet crop.

RESULT AND DISCUSSION:

The 39 species of birds observed by author from Patan district also find out taluka wise population status. The results presented in table 1 indicated that 5 to 10 species of birds were found very common in most of the taluka. These were cattle Egret, Blue Rock Pigeon, Roseringed Parakeet, Green Bee eater, Babbler, House Sparrow. The common bird species varied from 01 to 13 species in different taluka. The numbers of less common species of birds were more and varied from 01 to 13. The number of rare species found in different taluka of Patan district varied from 00 to 14. As comparative study, maximum very common birds found in Siddhpur, Patan, Chanasma, Santalpur, Harij and Radhanpur taluka. Same as maximum common birds found in Patan, Santalpur, Sami and minimum in Radhanpur taluka while less

common birds found maximum in Radhanpur, Harij and Chanasma and minimum in Patan. In addition, rare birds found maximum in Siddhpur, Radhanpur, and Santalpur while minimum in Chanasma.

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Table I: Taluka wise bird species and their population status

Sr. No.	Common Name	TALUKA													
		SIDDHPUR		PATAN		CHANASMA		HARIJ		SAMI		RADHANPUR		SANTALPUR	
		SITES													
		S ₁	S ₂	P ₁	P ₂	Ch ₁	Ch ₂	H ₁	H ₂	Sm ₁	Sm ₂	R ₁	R ₂	Sa ₁	Sa ₂
1.	Cattle Egret	VC	VC	VC	C	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC
2.	Black Headed Ibis	C	LC	LC	LC	C	LC	C	LC	C	C	C	C	LC	C
3.	Black Ibis	C	LC	R	LC	LC	C	LC	LC	LC	C	LC	LC	R	C
4.	Grey Francolin	LC	C	VC	LC	LC	C	LC	LC	LC	LC	LC	LC	LC	LC
5.	Indian Peafowl	C	VC	R	C	VC	C	C	C	VC	C	C	C	C	C
6.	Red-Wattled Lapucing	C	C	C	C	C	C	C	LC	VC	C	C	C	C	C
7.	Blue Rock Pigeon	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC
8.	Eurrasian Collared-Dove	C	LC	LC	C	LC	LC	LC	C	C	C	LC	C	C	C
9.	Red Collared-Dove	LC	LC	LC	LC	LC	LC	LC	LC	C	LC	LC	LC	C	C
10.	Spotted Dove	R	R	LC	LC	LC	R	LC	LC	LC	R	LC	R	R	LC
11.	Laughing Dove	C	C	C	C	VC	C	VC	C	VC	C	C	C	VC	C
12.	Rose-ringed Parakeet	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC	VC
13.	Asian Koel	C	LC	C	LC	LC	LC	LC	LC	LC	C	R	LC	LC	R
14.	Greater Coucol	LC	R	LC	LC	LC	LC	LC	LC	LC	LC	R	LC	LC	R
15.	Green Bee-	VC	VC	VC	C	VC	C	VC	VC	C	VC	C	VC	VC	VC

	Eater														
16.	Black Drongo	C	C	C	C	C	C	C	C	C	VC	C	C	C	C
17.	Brahminy Starling	LC	LC	LC	LC	LC	C	LC	LC	LC	LC	LC	LC	LC	LC
18.	Common Myna	C	VC	C	C	LC	C	C	C	C	C	C	C	C	LC
19.	Bank Myna	C	VC	C	C	LC	C	C	C	C	C	C	LC	C	C
20.	Rosy Starling	LC	LC	VC	LC	VC	C	VC	LC	C	LC	LC	-	C	C
21.	House Crow	VC	VC	VC	VC	C	VC	C	VC	C	VC	VC	C	C	C
22.	White-eared Bulbul	LC	LC	LC	C	LC	R	LC	LC	LC	LC	LC	LC	LC	LC
23.	Red-Vented Bulbul	C	C	C	VC	C	C	C	C	C	C	C	C	C	C
24.	Yellow-eyed Babbler	C	VC	C	C	VC	VC	VC	C	VC	C	C	C	C	C
25.	Common Babbler	C	C	LC	C	LC	C	LC	C	LC	C	LC	R	LC	LC
26.	Large Grey Babbler	LC	LC	LC	LC	LC	LC	LC	C	LC	LC	LC	LC	LC	LC
27.	Jungle Babbler	R	R	R	R	R	R	R	R	R	R	R	R	R	R
28.	Common Tailor bird	C	C	LC	LC	LC	C	LC	LC	R	LC	LC	LC	LC	LC
29.	Indian Robin	LC	LC	LC	C	LC	LC	R	LC	R	R	LC	LC	R	R
30.	White Wagtail	LC	R	R	LC	R	R	R	LC	R	R	R	-	R	R
31.	Purple Sunbird	LC	LC	LC	C	LC	C	LC	LC	LC	LC	LC	LC	LC	LC
32.	Baya Weaver	VC	C	VC	VC	VC	C	C	VC	C	C	C	VC	C	C
33.	Black-	R	R	R	R	LC	LC	LC	R	LC	LC	LC	R	R	R

	Headed Bunting														
34.	Red- Headed Bunting	R	R	R	R	R	R	R	R	R	C	R	-	R	-
35.	Black-Headed Munia	LC	LC	LC	LC	C	LC	C	LC	C	LC	LC	R	LC	R
36.	Red-Munia	R	R	R	R	-	R	-	R	R	R	R	-	R	-
37.	White-throated Munia	LC	C	LC	LC	C	LC	C	LC	C	LC	LC	LC	C	LC
38.	Spotted Munia	R	LC	R	R	R	R	LC	R	R	R	R	-	R	LC
39.	House Sparrow	C	C	LC	C	LC	C	C	C	LC	C	C	C	C	LC

Abbreviations used are:

R= Rare= seen in single or in few in numbers occasionally

S1= RAJPUR

S2 = GANESHPUR

P1 = ANAVADA

P2 = HANSAPUR

Sa1 = JORAVARGADH

Sa2 = SANTALPUR

LC= Less Common= seen in less numbers and only in certain places

CH1 = KHORSAM

CH2 = LANVA

H1 = HARIJ

H2 = JAMANPUR

C= Common = seen in less numbers

VC= Very Common=seen in large numbers

Sm1 = SAMI

Sm2 = BASPA

R1 = PREMNAGAR

R2 = SABDALPUR